


A systematic review and meta-analysis of the Brief Illness Perception Questionnaire

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Objective: This paper aims to systematically review the use and performance of the Brief Illness Perception Questionnaire (Brief IPQ).

Design: Electronic databases were searched for papers administering the Brief IPQ published in peer-reviewed journals. Data were extracted from the results for meta-analysis.

Main outcome measures: Use by illness population, country, language and study design. The questionnaire's concurrent validity, predictive validity, sensitivity to change, discriminant validity and mean scores for different populations were summarised.

Results: The review included 188 papers. The Brief IPQ has been administered to patients from age 8 to over 80, with a wide range of illnesses, in 26 languages from 36 countries. Pooled correlations between illness perceptions and depression, anxiety, blood glucose levels and quality of life were consistent with previous research and theory (range .25–.49 for consequences, identity and emotional representations; $-.12$ to $-.27$ for personal control). All items were able to predict some outcomes up to one-year follow-up. Each subscale demonstrated sensitivity to change after intervention in randomised controlled trials with the personal control and causal items showing most frequent change.

Conclusions: The Brief IPQ is widely used and has good psychometric properties. More studies should include and analyse the causal item.

Keywords: illness cognitions; validity; measurement; Brief Illness Perception Questionnaire; self-regulation model; illness perceptions

This paper provides a systematic review of the use of the Brief Illness Perception Questionnaire (Brief IPQ), a measure of illness perceptions (Broadbent, Petrie, Main, & Weinman, 2006). The aim is to synthesise data across a number of studies to add information about the scale's use and psychometric properties. It is hoped that this will inform and guide researchers and clinicians in the use of the questionnaire and interpretation of scores.

The questionnaire assesses patients' perceptions of illness, which were first examined in research on health threat communication in the 1960s. Subsequent research led

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to the development of the Common-Sense Model (CSM) (Leventhal et al., 1997). The theory describes a parallel response model, in which people process emotional responses to illness and cognitive representations of illness relatively independently. These cognitions and emotional responses provide motivation for people to take specific behaviours to regulate their emotions and improve the outcome of their illness. Following adoption of these procedures, people appraise the effects on the illness and the self system, and this can then result in changes to their cognitive representations and emotional responses in a feedback loop. 'Illness perceptions' is a term used to refer to the mental representations and personal ideas that people have about an illness. Patients' ideas tend to fall along at least five dimensions that include beliefs about the *identity* of the illness (its name and symptoms), the *causes* of the illness, its *consequences* (impact on life domains), the course or *timeline* of the illness and how the illness can be cured or *controlled* (Lau, Bernard, & Hartman, 1989; Petrie & Weinman, 2012).

Hundreds of studies have investigated associations between illness perceptions, coping and illness outcomes in many different patient populations. A meta-analytic review of 45 studies showed that worse consequence and identity beliefs were consistently associated with worse physical, role and social functioning, higher distress, lower well-being and vitality, with pooled correlations ranging between .18 and .67, while correlations with disease state were $-.06$ to $.08$ (Hagger & Orbell, 2003). Higher control beliefs were associated with better social functioning and well-being, lower distress, higher vitality and better disease state with correlations between $.13$ and $.24$, while correlations with physical and role functioning were $.03$ – $.04$. Longer timeline beliefs were associated with higher distress, lower role and social functioning and lower vitality, with correlations from $.11$ to $.20$, and correlations with physical function, well-being and disease state ranged from $-.03$ to $-.10$. In addition to these associations with behavioural and quality-of-life outcomes, there is growing evidence that illness perceptions are associated with important physical health outcomes, including survival/mortality (e.g. Parfeni, Nistor, & Covic, 2013). Experimental studies provide the strongest evidence that illness perceptions can modify behaviours, and several studies have shown that interventions designed to change illness perceptions can improve health outcomes (Broadbent, Ellis, Thomas, Gamble, & Petrie, 2009a; Cunningham, Swanson, O'Carroll, & Holdsworth, 2012; Davies et al., 2008; Keogh et al., 2011; Petrie, Cameron, Ellis, Buick, & Weinman, 2002; Petrie, Perry, Broadbent, & Weinman, 2012).

Initial studies used interviews to assess patients' perceptions but as the volume of research using the CSM has increased, scales have been developed to aid assessment. The original Illness Perception Questionnaire (Weinman, Petrie, Moss-Morris, & Horne, 1996) combined 38 items rated on Likert scales to form subscales that assess each illness perception dimension. The Illness Perception Questionnaire-Revised (IPQ-R) (Moss-Morris et al., 2002) added 48 more items and new subscales to assess illness coherence, emotional response, cyclical timeline perceptions, and divided the control/cure dimension into personal control and treatment control.

The Brief IPQ (Broadbent, Petrie, Main, & Weinman 2006) was designed to provide simple and rapid assessment of illness perceptions. In contrast to the more traditional method of constructing dimensions by forming subscales from multiple statements rated on Likert scales, the Brief IPQ uses one single item on a scale from 0 to 10 to assess each dimension, where higher scores indicate stronger perceptions along that dimension. The items include perceived consequences, timeline (acute-chronic), amount of perceived

personal control, treatment control, identity (symptoms), concern about the illness, coherence of the illness and emotional representation. The last item assesses causal perceptions by asking patients to list the three most likely causes for their illness. This short scale has advantages in terms of brevity and lower participant burden, especially in clinical settings and where repeated follow-up assessments are needed. While internal reliability cannot be assessed for single-item measures, they can produce acceptable reliability based on convergent validation measures, and can be more robust than scale measures of an overall construct (Wanous, Reichers, & Hudy, 1997). The original evaluation of the Brief IPQ found that it demonstrated good psychometric properties, including concurrent, predictive and discriminant validity. It showed similar associations with medication beliefs, disease severity and quality of life as previous research with other illness perception measures (Broadbent et al., 2006). Since publication, the Brief IPQ has been widely used which has made more data available to assess its performance.

The aims of this paper were: (1) to systematically review the use of the Brief IPQ since its publication to indicate when, where and how it has been used, (2) to provide further information regarding its concurrent and predictive validity with illness outcomes, and its sensitivity to change (3) to aggregate data to provide mean scores and predominant causal perceptions across various illness populations. Whereas Hagger and Orbell were concerned with testing CSM theory, the present study focuses on tests derived from the use of a single measure, thereby controlling for one source of method variance. Based on theory, the results of that meta-analysis and other research with the longer versions of the IPQ, we hypothesised that:

- (1) Greater perceived consequences, identity, emotional response and concern would be associated with worse psychological, social, and physical functioning, and worse illness outcomes.
- (2) Greater perceived control would be associated with better psychological, social and physical functioning, and better illness outcomes.
- (3) Longer perceived timeline would be associated with worse psychological outcomes and quality of life with smaller effect sizes.

Method

This review focuses on journal papers that have reported the administration of the Brief IPQ to participants, and have been published between June 2006 and the end of June 2013. This systematic review has been conducted in accordance with a defined set of criteria, consulting the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, & Altman, 2009).

Search strategy

A comprehensive search of the electronic database GoogleScholar was conducted to identify papers citing the original paper on the development and validation of the Brief IPQ, as of 30th June 2013. The databases Science Citation Index, Social Sciences Citation Index, PsycINFO, Embase (2006 onwards), and Medline (2006 onwards) were then searched using the search terms 'Brief Illness Perception Questionnaire'; 'Brief IPQ'; 'BIPQ'; 'Brief-IPQ'; 'B-IPQ'; 'IPQ-Brief'; and 'IPQ-B'.

Inclusion and exclusion criteria

The inclusion criteria were papers in all languages that have reported administering the Brief IPQ or a modified version of the Brief IPQ, and were published in peer-reviewed journals. Exclusion criteria were papers not administering the Brief IPQ, duplicate papers, commentaries, book chapters, literature reviews, clinical guidelines, conference proceedings or abstracts, study protocols and university theses.

Review strategy and procedure

The search identified 579 publications. Once duplicates were removed, 474 publications were included. The titles and abstracts of the publications were inspected using the inclusion and exclusion criteria and 254 were excluded. A further 32 were excluded after accessing the full articles, leaving 188 papers in the review (see Table S1 and Figure S1).

A detailed procedure for extracting relevant information from the journal papers included: the name of the paper; author(s); year of publication; number of participants; language(s) that the study was conducted in; patient or condition population; participant ages; study design; language(s) of the abstract and paper; country the study was conducted in; text that referred to the results relating to the Brief IPQ; and Brief IPQ items administered. The abstraction included results that contained information that met criteria for predictive, construct validity and sensitivity to change. Foreign-language papers were included in the summaries of countries, languages and illnesses, although not in the construct validity, predictive validity, sensitivity to change or means tables, due to limited information. Where possible, they were translated in English to help with this process.

Statistical analysis

Random effects meta-analysis was conducted using the metan package in Stata (Harris et al., 2008). Where quality-of-life scales were scored such that higher scores indicated better quality of life (e.g. SF-36), the sign of the correlation coefficient was changed to ensure consistency with other measures of quality of life, and measures of psychological distress. Pooling was undertaken based on the Fisher's z transformation of the correlation coefficient, where the standard error was calculated as $1/\sqrt{(n-3)}$ (Cox, 2008). Back transformed correlations are displayed. Where there were fewer than three samples reporting correlation coefficients no pooling of the correlations was undertaken.

Results

Illness populations, countries and languages

The results of this review show that the Brief IPQ is a versatile measure of illness perceptions. The scale has been used in many illness populations: cancer (23 studies); endocrine, nutritional and metabolic diseases (28); mental and behavioural disorders (22); diseases of the nervous system (14); eye diseases (4); diseases of the circulatory system (36); respiratory diseases (19); diseases of the digestive system (10); skin diseases (1) diseases of the musculoskeletal system and connective tissue (27); diseases of

the genitourinary system (8); infectious diseases (16); accidents, injuries and burns (6); organ transplantation (2); allergies and sensitivities (2); and factors affecting health status and contact with health services (2). The Brief IPQ has also been used in 36 countries across many continents: North America (19 studies); Central and South America (5); the UK (42); Rest of Europe (64); Australasia (38); and Asia (25). It has been used in 26 languages (Chinese, Croatian, Czechoslovakian, Danish, Dutch, English, French, German, Greek, Gujarati, Hebrew, Hindi, Indonesian, Italian, Japanese, Kannada, Norwegian, Persian–Farsi, Polish, Portuguese, Samoan, Slovene, Spanish, Telegu, Tongan and Urdu). The ages of the participants have ranged from eight to over 80 years. Its use has grown steadily over time (see Figure S2). While many researchers have used the full version (38 studies), most (101 studies) have omitted the causal item, and others (32 studies) have chosen a selection of items, most commonly the personal and treatment control and consequences items. Most studies (137) used items individually in analyses but 43 created composite scores by adding the scores of between 2 and 8 items together. The scale has been employed in a range of study designs, including 116 cross-sectional and 31 longitudinal studies as well as 24 interventions and a handful of vignette-based studies.

Validation studies of translated versions and new measures

Four papers validated translated versions of the Brief IPQ for the Dutch (de Raaij, Schröder, Maissan, Pool, & Wittink, 2012), Iranian (Farsi translation) (Bazzazian & Besharat, 2010), Spanish (Pacheco-Huergo et al., 2012) and Taiwanese (Chinese translation) populations (Lin, Chiu, & Wang, 2011). The results supported the validity of the translations. Six studies used the Brief IPQ for validating new measures, including the Beliefs about Depression Questionnaire (Lynch, Moore, Moss-Morris, & Kendrick, 2011), the Adult Eosinophilic Oesophagitis Quality of Life questionnaire (Taft et al., 2011), the Czech translation of the Beliefs about Medicines Questionnaire (Matoulkova et al., 2013), the Norwegian Core Outcome Measures Index (Storheim, Brox, Løchting, Werner, & Grotle, 2012), the Satisfaction With Cancer Information Profile (Llewellyn, Horne, McGurk, & Weinman, 2006) and the Personal Perception Questionnaire and the Health Behaviour Questionnaire (Brehmer-Rinderer, Zigrovic, & Weber, 2013). In addition, the Brief IPQ was validated for use in assessing beliefs about mood swings in bipolar disorder (Lobban et al., 2013).

Concurrent validity

To examine concurrent validity, we concentrated on associations reported in cross-sectional studies between the Brief IPQ and anxiety, depression, HbA1c and quality of life. Table 1 and Figure 1 report the pooled correlation coefficients where a minimum of three samples was available for pooling. Heterogeneity as indicated by I^2 varied substantially across items and constructs.

As hypothesised, higher consequences, emotional representation and identity, were moderately to strongly associated with higher depression and anxiety, higher HbA1c (worse control) and lower quality-of-life dimensions according to Cohen's criteria (Cohen, 1992). Concern perceptions had similar but slightly less consistent associations. Personal control and treatment control had small negative correlations with anxiety and

Table 1. Results of meta-analysis between items of the Brief IPQ and outcomes to examine concurrent validity.

Brief IPQ items	<i>k</i>	<i>r</i>	95% CI		<i>I</i> ²
			Lower	Upper	
<i>Quality of life social</i>					
Consequences	4	.17	-.01	.33	76.5
Timeline	2				
Personal control	2				
Treatment control	2				
Identity	3	.19	-.11	.45	89.4
Concern	2				
Coherence	2				
Emotional response	3	.18	-.08	.42	86.3
<i>Quality of life psychological</i>					
Consequences	13	.41	.29	.52	92.0
Timeline	11	.07	-.03	.16	80.6
Personal control	11	-.22	-.33	-.10	88.0
Treatment control	11	-.07	-.13	0	59.2
Identity	12	.34	.25	.42	82.2
Concern	12	.33	.2	.45	91.6
Coherence	10	-.08	-.16	0	69.9
Emotional response	12	.47	.39	.55	86.4
<i>Quality of life physical</i>					
Consequences	13	.49	.41	.56	83.8
Timeline	10	.19	.12	.25	60.5
Personal control	10	-.19	-.28	-.10	73.6
Treatment control	11	-.07	-.16	.01	74.0
Identity	12	.43	.38	.48	60.6
Concern	12	.34	.26	.41	75.4
Coherence	10	-.06	-.13	.02	59.3
Emotional response	12	.39	.29	.47	87.3
<i>Quality of life fatigue</i>					
Consequences	3	.37	.28	.45	32.6
Timeline	3	.12	.01	.23	36.2
Personal control	3	-.18	-.40	.05	84.1
Treatment control	3	-.16	-.21	-.10	0
Identity	3	.35	.25	.43	31.9
Concern	3	.23	.02	.43	80.6
Coherence	3	-.20	-.25	-.15	0
Emotional response	3	.37	.19	.52	74.4
<i>HbA1c</i>					
Consequences	6	.26	.01	.48	93.3
Timeline	6	.05	-.02	.11	0
Personal control	7	-.27	-.47	-.05	93.2
Treatment control	7	-.05	-.15	.04	58.4
Identity	6	.28	-.08	.58	96.8
Concern	6	.17	.07	.26	54.5
Coherence	6	-.07	-.14	0	15.2
Emotional response	6	.27	.07	.45	89.7
<i>Depression</i>					
Consequences	5	.41	.32	.49	48.4

(Continued)

Table 1. (Continued).

Brief IPQ items	<i>k</i>	<i>r</i>	95% CI		<i>I</i> ²
			Lower	Upper	
Timeline	4	.13	.05	.2	7.1
Personal control	4	-.15	-.24	-.06	40.3
Treatment control	4	-.11	-.29	.07	83.9
Identity	5	.32	.26	.38	0
Concern	4	.27	.11	.41	80
Coherence	4	-.01	-.1	.08	30.1
Emotional response	4	.39	.25	.51	75.8
<i>Anxiety</i>					
Consequences	8	.36	.24	.47	82.2
Timeline	7	.12	0	.24	78.3
Personal control	7	-.12	-.22	-.02	66.6
Treatment control	7	-.06	-.12	0	21.1
Identity	7	.25	.14	.36	78.0
Concern	7	.42	.24	.58	92.8
Coherence	7	-.05	-.12	.02	32.4
Emotional response	7	.46	.38	.54	68.8

depression and small to moderate correlations with better quality of life. Personal control had moderate negative correlations with HbA1c (better control).

The studies that included the causal item typically categorised and described the most frequent responses, and some also investigated associations with diagnostic/demographic factors or outcomes. These associations largely support the validity of the causal item (see Table S2).

Predictive validity

Twenty longitudinal studies reported using the Brief IPQ at baseline to predict outcomes over time, and these are summarised in Table S3. More threatening composite scores were associated with worse adherence in sleep apnea patients, persistence of medically unexplained symptoms, anxiety after cardiac events and slower healing from burns. Perceptions of more negative consequences were one of the strongest predictors of outcomes, predicting disability in gout, lower reassurance following normal test results, higher depression after cardiac evaluation and in patients with bipolar disorder, post-concussion syndrome, slower return to work in cancer patients and in workers after sickness absence.

Higher identity beliefs were another strong predictor of outcomes, predicting lower quality of life in CHD, PTSD scores, post-concussion syndrome, lower chance of returning to work, lower reassurance, more depression and mood episodes. Similarly, longer timeline beliefs predicted reduced odds of preterm birth, slower recovery from surgery and from injury, slower return to work, post-concussion syndrome and lower reassurance.

Both higher personal and treatment control beliefs predicted lower disability in gout patients, and return to work following illness absence. In addition, higher treatment control predicted better recovery from surgery, more weight loss and higher reassurance, while higher personal control predicted less chance of post-concussion syndrome.

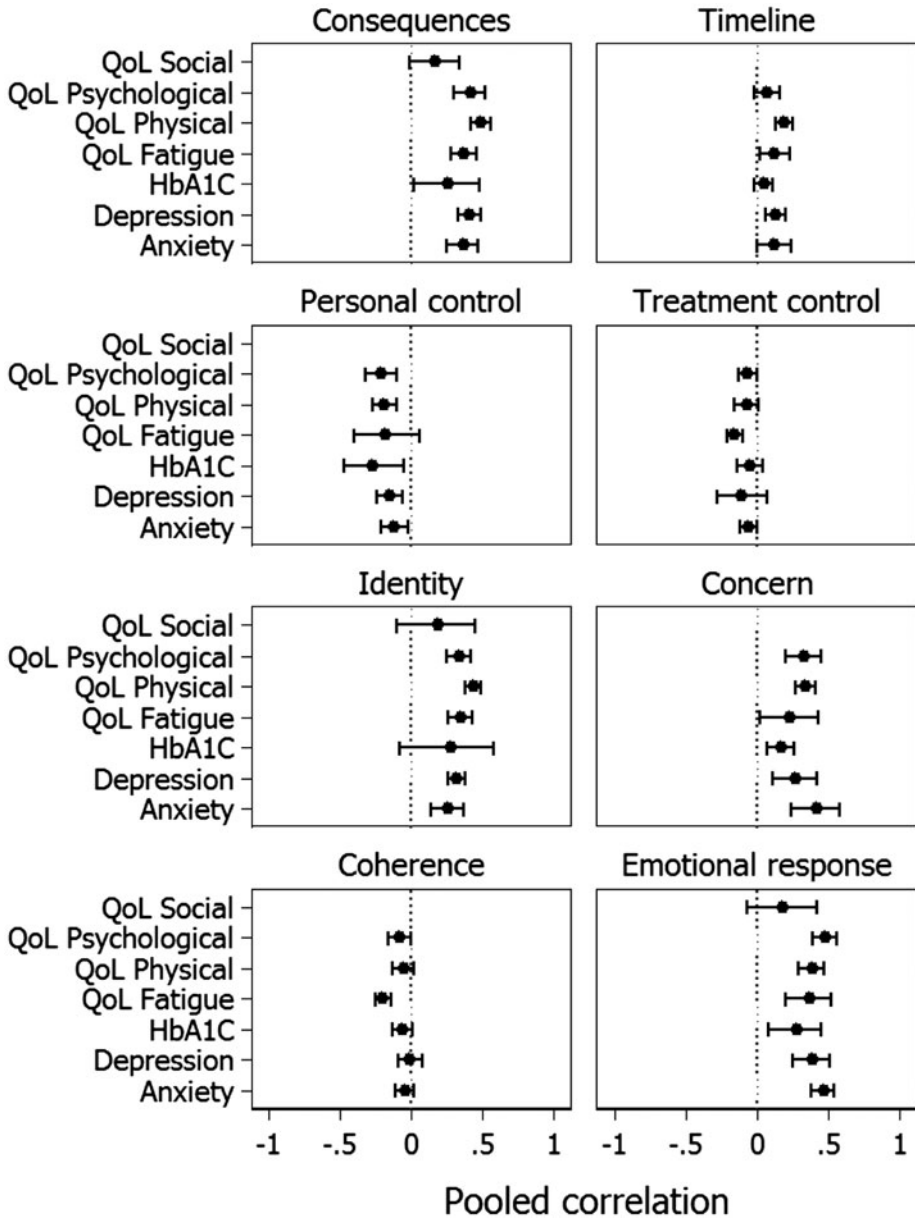


Figure 1. Results of meta-analysis showing pooled correlations between illness perception items and outcome measures. Note: Higher outcome scores indicate worse function.

Stronger emotional representations predicted lower quality of life, lack of return to work and lower reassurance. The concern item was added to the Brief IPQ in an attempt to assess how worried people were about their illness, as part of emotional representations, and higher concern was found to predict higher post-traumatic stress scores, worse recovery from surgery, less chance of returning to work, lower reassurance, more frequent

depression and more relapses of mood episodes. Better coherence predicted the fewest outcomes: post-traumatic stress scores and caregiver gains.

Discriminant validity

An additional five longitudinal studies administered the Brief IPQ at baseline and examined differences between groups (Devcich, Ellis, Broadbent, Gamble, & Petrie, 2012; Dickson, Toft, & O'Carroll, 2009; Kaptein et al., 2011, 2013; Pacey et al., 2013). Compared to patients with autoimmune thyroid disease, individuals with chronic fatigue syndrome reported shorter timeline beliefs, greater illness concerns and lower treatment control perceptions (Dickson et al., 2009). Kaptein and colleagues conducted two studies to investigate quality of life and illness perceptions in Dutch and Japanese patients with non-small cell lung cancer (2011) and breast cancer (2013), respectively. Japanese and Dutch cancer patients shared similar illness perception beliefs; however, some differences were observed. Compared to Dutch patients with non-small cell lung cancer, Japanese patients scored higher on personal control and treatment control perceptions suggesting Japanese patients had stronger beliefs in the success of their cancer treatment. Also, compared to Dutch breast cancer patients, Japanese patients expressed higher concern about their breast cancer.

Sensitivity to change

Table S4 summarises the 13 randomised controlled trials that have measured change in illness perceptions. The results show that all of the items have demonstrated changes over time in at least one trial. The personal control item has shown change most frequently, and treatment control, concern and coherence have also shown change in a number of studies. Causal beliefs have shown change in all three studies they were measured in.

There have also been several longitudinal studies that have shown changes in illness perceptions over time including: intensive care patients (Aitken, Chaboyer, Schuetz, Joyce, & Macfarlane, 2014); cardiac rehabilitation (Janssen, De Gucht, van Exel, & Maes, 2013); young adults with cancer (de Castro, Kreling, Ponciano, Meneghetti, & Chem, 2012); dialysis (Jansen et al., 2012); and following coronary computed tomography angiography (Devcich et al., 2012).

Means

Table S5 provides a list of the means and standard deviations of the items and the causal categories. The most prevalent causal beliefs were psychological stress, genetics and illness behaviours.

Discussion

Psychometric properties

This review has demonstrated that the Brief IPQ has been widely used in diverse ages including children from the age of eight, illness types, countries and languages.

Meta-analysis showed the scale has good concurrent validity, as the associations shown were consistent with theory and with previous literature (Hagger & Orbell, 2003). A belief in serious consequences, a strong illness identity, stronger emotional representations and concern were moderately to strongly associated with depression, anxiety, low quality of life, and worse blood glucose levels (range .17–.49). Higher perceived personal control (and to a lesser extent treatment control and coherence) had small to moderate correlations with better quality of life, lower depression and anxiety, and better blood glucose control (range .12–.27). A longer perceived timeline showed weaker associations with these outcomes (range .05–.19) and this is likely due to differences in the adaptiveness of a chronic timeline perception between different illnesses.

Predictive validity was demonstrated in 19 of 20 longitudinal studies for a number of mental and physical health outcomes. The coherence item predicted the fewest outcomes. Illness coherence was not one of the original dimensions of illness perceptions described in early research, and was added by the authors of the IPQ-R as a meta-cognition to assess the extent to which patients' illness perceptions provided a coherent understanding of the illness. This dimension was not included in the published meta-analysis by Hagger and Orbell (2003) and less data exist regarding the validity of this dimension in illness perception research. The dimension can be seen as a summary of how the other perceptions fit together to provide a coherent model rather than being an independent illness perception per se.

Randomised controlled trials have shown that all of the items can assess changes in illness perceptions after an intervention relative to a control group. Personal control and causal beliefs have been shown to change the most frequently in response to interventions. These are critical illness perceptions to modify for behaviour change to occur. Longitudinal studies have demonstrated the ability of the total Brief IPQ score as well as individual items to assess changes in illness perceptions over time. Other longitudinal studies have provided evidence that Brief IPQ scores are different between groups, including different illnesses, different cultures and between patients with diseased and non-diseased arteries. The Brief IPQ has been translated into 25 other languages and studies have largely supported the validity of the translations. Data from studies using the Brief IPQ for the validation of other questionnaires also support its validity.

The majority of studies have analysed the items as single-item scales, but 43 studies have combined various items in a range of ways to create composite scores or subscales. Such combinations have tended to either sum all of the items or to form subscales of the cognitive items and the emotion/concern items separately. Grouping the items this way is in line with the CSM's separation of the cognitive and emotional representations. The CSM proposes that illness perception dimensions are not independent and yet they will be related in different ways depending on the characteristics of illness concerned, such as chronicity and treatment. Composite scores may be valid in certain illnesses, depending on how the dimensions are related. Caution must be applied when forming subscales because the items will not necessarily form a coherent cluster and this will vary greatly among diseases. Combining items should be considered only after carefully checking correlations between the items in the study population. In addition, summing items together loses information about which perceptions are most strongly linked to outcomes. It reduces the scale to a general measure of threat and is less useful for clinical applications. It can also make comparisons across studies difficult.

Limitations

Limitations of the work using the Brief IPQ to date include a predominance of cross-sectional studies over longitudinal studies. Cross-sectional studies are easier to perform but longitudinal studies are more valuable. Fewer studies included the causal item and this is likely because it is more time consuming to analyse. Studies that did assess causal attributions typically categorised and listed the most common responses, while a small number attempted to analyse how causal beliefs were associated with outcomes. While a number of translations have been published and successfully used, it is not clear that they are all semantically equivalent to the English version. There has been a lot of variation in the use of items and response scales across studies. This may be because the authors of the IPQ scales encourage researchers to modify wording to suit their illness populations. However, altering the instructions and using a confusing translation has drawn criticism, so taking care in wording is advised (Broadbent, Kaptein, & Petrie, 2011). The review does not include internal reliability because this is not applicable to single-item scales, which is a limitation of the Brief IPQ. Single items must capture the content of the dimension succinctly. One criticism of the original Brief IPQ was that it developed from the items of the IPQ-R rather than from patient interviews (van Oort, Schroder, & French, 2011). Intercorrelations between items were very rarely provided in publications and in each instance these were in foreign-language versions, so were not considered sufficient to include in this review. It is acknowledged that some of the correlations between Brief IPQ items and other self-reported variables might involve elements of common measurement. For example, the correlation between the consequences perception and quality-of-life measures are because both are asking people to rate how much the illness affects aspects of their lives – i.e. they are measuring something very similar, which is good as a form of construct validation but not as good for predictive validity. This same point can be made with regards to the concern item and measures of anxiety.

Future research

It is suggested that future research employs longitudinal rather than cross-sectional designs. This will allow stronger conclusions to be made regarding changes in illness perceptions and associations with outcomes over time. Future research should also include the causal dimension more often. Researchers are advised to code answers into causal categories, and use categorical analysis. Further validation studies with foreign-language translations are required. More research could investigate whether the coherence dimension adds anything to the other illness cognitions assessed and if it belongs in the CSM. Researchers are encouraged to use the original instructions and response scales, and to analyse the items individually in order to allow easy comparisons across studies. More research could be done into whether the illness perception items should be combined into composite scores to predict outcomes.

It is anticipated that the table of mean scores (Table S5) will provide a useful reference for researchers and clinicians interested in what constitutes a ‘normal’ illness perception for a particular group. However, care needs to be taken as different studies have used different response scales, items and languages, and have studied patients at different stages of disease. This needs to be kept in mind when considering the scores.

Conclusion

This review has shown the Brief IPQ is useful across many applications and has provided further evidence for its validity. The items most predictive of outcomes were consequences, identity, timeline and control, which is consistent with theory because they are the core cognitive dimensions in the CSM. The most modifiable perceptions were personal control and causal beliefs and these are central perceptions to assess and target to create behaviour change.

Disclosure statement

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Supplemental data

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References

Papers with an asterisk indicate studies included in the review.

- *Afshar, H., Bagherian, R., Foroozandeh, N., Khorramian, N., Daghighzadeh, H., Maracy, M. R., & Adibi, P. (2011). The relationship between illness perception and symptom severity in patients with Irritable Bowel Syndrome. *Journal of Isfahan Medical School*, *29*, 526–536.
- *Aitken, L. M., Chaboyer, W., Schuetz, M., Joyce, C., & Macfarlane, B. (2014). Health status of critically ill trauma patients. *Journal of Clinical Nursing*, *23*, 704–715. doi:10.1111/jocn.12026
- *Andrykowski, M. A., Aarts, M. J., Poll-Franse, L. V., Mols, F., Slooter, G. D., & Thong, M. S. (2013). Low socioeconomic status and mental health outcomes in colorectal cancer survivors: Disadvantage? advantage? ... or both? *Psycho-Oncology*, *22*, 2462–2469. doi:10.1002/pon.3309
- *Applebaum, M. A., Lawson, E. F., & von Scheven, E. (2013). Perception of transition readiness and preferences for use of technology in transition programs: Teens' ideas for the future. *International Journal of Adolescent Medicine and Health*, *25*, 119–125.
- *Baars, J. E., Siegel, C. A., van't Spijker, A., Markus, T., Kuipers, E. J., & van der Woude, C. J. (2010). Inflammatory bowel disease-patients are insufficiently educated about the basic characteristics of their disease and the associated risk of colorectal cancer. *Digestive and Liver Disease*, *42*, 777–784.
- *Bazzazian, S., & Besharat, M. A. (2010). Reliability and validity of a Farsi version of the brief illness perception questionnaire. *Procedia-Social and Behavioral Sciences*, *5*, 962–965.

- *Bazzazian, S., & Besharat, M. A. (2012). An explanatory model of adjustment to type I diabetes based on attachment, coping, and self-regulation theories. *Psychology Health & Medicine*, *17*, 47–58. doi:10.1080/13548506.2011.575168
- *Bean, D., Cundy, T., & Petrie, K. J. (2007). Ethnic differences in illness perceptions, self-efficacy and diabetes self-care. *Psychology & Health*, *22*, 787–811. doi:10.1080/14768320600976240
- *Benyamini, Y., Goner-Shilo, D., & Lazarov, A. (2012). Illness perception and quality of life in patients with contact dermatitis. *Contact Dermatitis*, *67*, 193–199. doi:10.1111/j.1600-0536.2012.02071.x
- *Berry, K., Barrowclough, C., & Wearden, A. (2010). A pilot study investigating the use of psychological formulations to modify psychiatric staff perceptions of service users with psychosis. *Behavioural and Cognitive Psychotherapy*, *37*, 39–48.
- *Bethge, M., Bartel, S., Streibelt, M., Lassahn, C., & Thren, K. (2010). Illness perceptions and functioning following total knee and hip arthroplasty. *Zeitschrift für Orthopädie und Unfallchirurgie*, *148*, 387–392. doi:10.1055/s-0030-1250149
- *Blair, J., Angus, N. J., Lauder, W. J., Atherton, I., Evans, J., & Leslie, S. J. (2013). The influence of non-modifiable illness perceptions on attendance at cardiac rehabilitation. *European Journal of Cardiovascular Nursing*, *13*, 55–62. doi:10.1177/1474515113477272
- *Bonsaksen, T., Lerdal, A., & Fagermoen, M. A. Y. S. (2012). Factors associated with self-efficacy in persons with chronic illness. *Scandinavian Journal of Psychology*, *53*, 333–339.
- *Brehmer-Rinderer, B., Zigrovic, L., & Weber, G. (2013). Evaluating a health behaviour model for persons with and without an intellectual disability. *Journal of Intellectual Disability Research*, *58*, 495–507. doi:10.1111/jir.12046
- *Brezinova, P., Englbrecht, M., Lovric, S., Samann, A., Strauss, B., Wolf, G., ... Schett, G. (2013). Coping strategies and depressiveness in primary systemic vasculitis – What is their impact on health-related quality of life? *Rheumatology*, *52*, 1856–1864. doi:10.1093/rheumatology/ket237
- *Broadbent, E., Donkin, L., & Stroh, J. C. (2011). Illness and treatment perceptions are associated with adherence to medications, diet, and exercise in diabetic patients. *Diabetes Care*, *34*, 338–340.
- *Broadbent, E., Ellis, C. J., Thomas, J., Gamble, G., & Petrie, K. J. (2009a). Can an illness perception intervention reduce illness anxiety in spouses of myocardial infarction patients? A randomized controlled trial. *Journal of Psychosomatic Research*, *67*, 11–15. doi:10.1016/j.jpsychores.2008.11.006
- *Broadbent, E., Ellis, C. J., Thomas, J., Gamble, G., & Petrie, K. J. (2009b). Further development of an illness perception intervention for myocardial infarction patients: A randomized controlled trial. *Journal of Psychosomatic Research*, *67*, 17–23. doi:10.1016/j.jpsychores.2008.12.001
- Broadbent, E., Kaptein, A. A., & Petrie, K. J. (2011). Double Dutch: The ‘think-aloud’ Brief IPQ study uses a Dutch translation with confusing wording and the wrong instructions. *British Journal of Health Psychology*, *16*, 246–249.
- *Broadbent, E., Kydd, R., Sanders, D., & Vanderpyl, J. (2008). Unmet needs and treatment seeking in high users of mental health services: Role of illness perceptions. *Australian and New Zealand Journal of Psychiatry*, *42*, 147–153. doi:10.1080/00048670701787503
- *Broadbent, E., Leggat, A., McLachlan, A., & Kerr, A. (2013). Providing cardiovascular risk management information to acute coronary syndrome patients: A randomized trial. *British Journal of Health Psychology*, *18*, 83–96. doi:10.1111/j.2044-8287.2012.02081.x
- *Broadbent, E., Niederhoffer, K., Hague, T., Corter, A., & Reynolds, L. (2009). Headache sufferers’ drawings reflect distress, disability and illness perceptions. *Journal of Psychosomatic Research*, *66*, 465–470. doi:10.1016/j.jpsychores.2008.09.006

- *Broadbent, E., Petrie, K. J., Ellis, C. J., Anderson, J., Gamble, G., Anderson, D., & Benjamin, W. (2006). Patients with acute myocardial infarction have an inaccurate understanding of their risk of a future cardiac event. *Internal Medicine Journal*, *36*, 643–647.
- Broadbent, E., Petrie, K. J., Main, J., & Weinman, J. (2006). The brief illness perception questionnaire. *Journal of Psychosomatic Research*, *60*, 631–637. doi:10.1016/j.jpsychores.2005.10.020
- *Brooks, S., Rowley, S., Broadbent, E., & Petrie, K. J. (2012). Illness perception ratings of high-risk newborns by mothers and clinicians: Relationship to illness severity and maternal stress. *Health Psychology*, *31*, 632–639. doi:10.1037/a0027591
- *Brown, I., Sheeran, P., & Reuber, M. (2009). Enhancing antiepileptic drug adherence: A randomized controlled trial. *Epilepsy & Behavior*, *16*, 634–639. doi:10.1016/j.yebeh.2009.09.014
- *Brown, J. S., Casey, S. J., Bishop, A. J., Prytys, M., Whittinger, N., & Weinman, J. (2011). How black african and white british women perceive depression and help-seeking: A pilot vignette study. *International Journal of Social Psychiatry*, *57*, 362–374.
- *Brown, M., Dean, S., Hay-Smith, E. J., Taylor, W., & Baxter, G. D. (2010). Musculoskeletal pain and treatment choice: An exploration of illness perceptions and choices of conventional or complementary therapies. *Disability and Rehabilitation*, *32*, 1645–1657.
- *Cates, J. R., Brewer, N. T., Fazekas, K. I., Mitchell, C. E., & Smith, J. S. (2009). Racial differences in HPV knowledge, HPV vaccine acceptability, and related beliefs among rural, southern women. *The Journal of Rural Health*, *25*, 93–97.
- *Chittam, M., Norman, P., & Harris, P. R. (2012). Relationships between perceived diagnostic disclosure, patient characteristics, psychological distress and illness perceptions in Indian cancer patients. *Psycho-Oncology*, *22*, 1375–1380.
- *Chong, J., Mackey, A. H., Broadbent, E., & Stott, N. S. (2012). Children's perceptions of their cerebral palsy and their impact on life satisfaction. *Disability & Rehabilitation*, *34*, 2053–2060.
- *Chong, J., Mackey, A. H., Stott, N. S., & Broadbent, E. (2013). Walking drawings and walking ability in children with cerebral palsy. *Health Psychology*, *32*, 710–713.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155–159.
- *Connolly, F. R., Aitken, L. M., Tower, M., & Macfarlane, B. (2014). Factors associated with self-efficacy for managing recovery in the trauma intensive care population: A prospective cohort study. *Injury*, *45*, 272–278. doi:10.1016/j.injury.2013.05.005
- *Cooper, A. F., Hankins, M., Rixon, L., Eaton, E., & Grunfeld, E. A. (2013). Distinct work-related, clinical and psychological factors predict return to work following treatment in four different cancer types. *Psycho-Oncology*, *22*, 659–667. doi:10.1002/pon.304
- *Corter, A. L., Findlay, M., Broom, R., Porter, D., & Petrie, K. J. (2013). Beliefs about medicine and illness are associated with fear of cancer recurrence in women taking adjuvant endocrine therapy for breast cancer. *British Journal of Health Psychology*, *18*, 168–181. doi:10.1111/bjhp.12003
- Cox, N. J. (2008). Speaking Stata: Correlation with confidence, or Fisher's z revisited. *Stata Journal*, *8*, 413–439.
- Cunningham, M. A., Swanson, V., O'Carroll, R. E., & Holdsworth, R. J. (2012). Randomised clinical trial of a brief psychological intervention to increase walking in patients with intermittent claudication. *British Journal of Surgery*, *99*, 49–56.
- *Dalbeth, N., Petrie, K. J., House, M., Chong, J., Leung, W., Chegudi, R., ... Taylor, W. J. (2011). Illness perceptions in patients with gout and the relationship with progression of musculoskeletal disability. *Arthritis Care and Research*, *63*, 1605–1612. doi:10.1002/acr.20570
- *Daleboudt, G., Broadbent, E., Berger, S. P., & Kaptein, A. A. (2011). Illness perceptions in patients with systemic lupus erythematosus and proliferative lupus nephritis. *Lupus*, *20*, 290–298. doi:10.1177/0961203310385552

- *Daleboudt, G., Broadbent, E., McQueen, F., & Kaptein, A. A. (2011). Intentional and unintentional treatment nonadherence in patients with systemic lupus erythematosus. *Arthritis Care & Research*, *63*, 342–350.
- *Daleboudt, G., Broadbent, E., McQueen, F., & Kaptein, A. A. (2013). The impact of illness perceptions on sexual functioning in patients with systemic lupus erythematosus. *Journal of Psychosomatic Research*, *74*, 260–264.
- Davies, M. J., Heller, S., Skinner, T. C., Campbell, M. J., Carey, M. E., Craddock, S., ... Khunti, K. (2008). Effectiveness of the diabetes education and self management for ongoing and newly diagnosed (DESMOND) programme for people with newly diagnosed type 2 diabetes: Cluster randomised controlled trial. *BMJ*, *336*, 491–495. doi:10.1136/bmj.39474.922025.BE
- *Davoudi, I., Honarmand, M. M., Shirvanian, E., & Bagherian-Sararoudi, R. (2012). Investigating psychological variables as predictors of treatment adherence and quality of life in hemodialysis patients. *Journal of the Mazandaran University of Medical Sciences*, *21*, 294–305.
- *de Castro, E. K., Kreling, M., Ponciano, C., Meneghetti, B. M., & Chem, C. M. (2012). Longitudinal assessment of illness perceptions in young adults with cancer. *Psicologia-Reflexao E Critica*, *25*, 671–678.
- *de Raaij, E. J., Schröder, C., Maissan, F. J., Pool, J. J., & Wittink, H. (2012). Cross-cultural adaptation and measurement properties of the brief illness perception questionnaire-Dutch language version. *Manual Therapy*, *17*, 330–335. doi:10.1016/j.math.2012.03.001
- *Dean, S. G., Hudson, S., Hay-Smith, E., & Milosavljevic, S. (2011). Rural workers' experience of low back pain: Exploring why they continue to work. *Journal of Occupational Rehabilitation*, *21*, 395–409. doi:10.1007/s10926-010-9275-z
- *Dediol, I., Buljan, M., Vurnek-Živković, M., Bulat, V., Šitum, M., & Čubrilović, Z. (2009). Psychological burden of anogenital warts. *Journal of the European Academy of Dermatology and Venereology*, *23*, 1035–1038. doi:10.1111/j.1468-3083.2009.03242.x
- *Dennison, L., Moss-Morris, R., Silber, E., Galea, I., & Chalder, T. (2010). Cognitive and behavioural correlates of different domains of psychological adjustment in early-stage multiple sclerosis. *Journal of Psychosomatic Research*, *69*, 353–361. doi:10.1016/j.jpsychores.2010.04.009
- *Devcich, D. A., Ellis, C. J., Broadbent, E., Gamble, G., & Petrie, K. J. (2012). The psychological impact of test results following diagnostic coronary CT angiography. *Health Psychology*, *31*, 738–744. doi:10.1037/a0026502
- *Devcich, D. A., Ellis, C. J., Gamble, G., & Petrie, K. J. (2008). Psychological responses to cardiac diagnosis: Changes in illness representations immediately following coronary angiography. *Journal of Psychosomatic Research*, *65*, 553–556. doi:10.1016/j.jpsychores.2008.07.003
- *Dibley, L. B., Norton, C., & Jones, R. (2010). Non-pharmacological intervention for gastro-oesophageal reflux disease in primary care. *British Journal of General Practice*, *60*, 891–896. doi:10.3399/bjgp10X544050
- *Dickens, C., Cherrington, A., & McGowan, L. (2011). Do cognitive and behavioral factors mediate the impact of depression on medical outcomes in people with coronary heart disease? *Journal of Cardiopulmonary Rehabilitation and Prevention*, *31*, 105–110. doi:10.1097/HCR.0b013e318207d32b
- *Dickson, A., Toft, A., & O'Carroll, R. (2009). Neuropsychological functioning, illness perception, mood and quality of life in chronic fatigue syndrome, autoimmune thyroid disease and healthy participants. *Psychological Medicine*, *39*, 1567–1576. doi:10.1017/S0033291708004960
- *Donkin, L., Ellis, C. J., Powell, R., Broadbent, E., Gamble, G., & Petrie, K. J. (2006). Illness perceptions predict reassurance following a negative exercise stress testing result. *Psychology & Health*, *21*, 421–430. doi:10.1080/14768320500329292

- *Edwards, S., Tinning, L., Brown, J. S., Boardman, J., & Weinman, J. (2007). Reluctance to seek help and the perception of anxiety and depression in the United Kingdom – A pilot vignette study. *The Journal of Nervous and Mental Disease*, *195*, 258–261. doi:10.1097/01.nmd.0000253781.49079.53
- *Endley, L., & Berry, K. (2011). Increasing awareness of expressed emotion in schizophrenia: An evaluation of a staff training session. *Journal of Psychiatric and Mental Health Nursing*, *18*, 277–280. doi:10.1111/j.1365-2850.2010.01683.x
- *Evans, J. M., Mackison, D., Swanson, V., Donnan, P. T., Emslie-Smith, A., & Lawton, J. (2013). Self-monitoring among non-insulin treated patients with type 2 diabetes mellitus: Patients' behavioural responses to readings and associations with glycaemic control. *Diabetes Research and Clinical Practice*, *100*, 235–242.
- *Fan, S. Y., Eiser, C., Ho, M. C., & Lin, C. Y. (2012). Health-related quality of life in patients with hepatocellular carcinoma: The mediation effects of illness perceptions and coping. *Psycho-Oncology*, *22*, 1353–1360. doi:10.1002/pon.3146
- *Fazekas, K. I., Brewer, N. T., & Smith, J. S. (2008). HPV vaccine acceptability in a rural southern area. *Journal of Women's Health*, *17*, 539–548. doi:10.1089/jwh.2007.0489
- *Federman, A. D., Wisnivesky, J. P., Wolf, M. S., Leventhal, H., & Halm, E. A. (2010). Inadequate health literacy is associated with suboptimal health beliefs in older asthmatics. *Journal of Asthma*, *47*, 620–626. doi:10.3109/02770901003702816
- *Figueiras, M., Marcelino, D. S., Claudino, A., Cortes, M. A., Maroco, J., & Weinman, J. (2010). Patients' illness schemata of hypertension: The role of beliefs for the choice of treatment. *Psychology and Health*, *25*, 507–517. doi:10.1080/08870440802578961
- *Figueiras, M., Monteiro, R., & Caeiro, R. (2012). Misconceptions and illness perceptions in cardiac patients and their spouses: A pilot study [Crenças errôneas e percepção da doença em pacientes cardíacos e seus cônjuges: Um estudo piloto]. *Psychology, Community & Health*, *1*, 232–245. doi:10.5964/pch.v1i3.24
- *Foo, R. C. M., Lamoureux, E. L., Wong, R. C., Ho, S.-W., Chiang, P. P., Rees, G., ... Wong, T. T. (2012). Acceptance, attitudes, and beliefs of Singaporean Chinese toward an ocular implant for glaucoma drug delivery. *Investigative Ophthalmology & Visual Science*, *53*, 8240–8245.
- *Gercovich, D., López, P. L., Bortolato, D., Margiolakis, P., Morgenfeld, M., Rosell, L., & Deza, E. G. (2012). Rol del distrés psicológico en la relación entre percepción de enfermedad y calidad de vida en pacientes con cáncer de mama [Role of psychological distress in the relationship between perception of disease and quality of life in patients with breast cancer]. *Psicooncología*, *9*, 403–414.
- *Giardini, A., Pierobon, A., Majani, G., Bernocchi, M., Corbellini, D., & Febo, O. (2012). Perception of illness and dispositional optimism in a sample of patients with chronic heart failure. *Giornale Italiano di Medicina del Lavoro ed Ergonomia*, *34*, B38–B44.
- *Giri, P., Poole, J., Nightingale, P., & Robertson, A. (2009). Perceptions of illness and their impact on sickness absence. *Occupational Medicine*, *59*, 550–555. doi:10.1093/occmed/kqp123
- *Gómez-de-Regil, L., Kwapil, T. R., & Barrantes-Vidal, N. (2014). Illness perception mediates the effect of illness course on the quality of life of mexican patients with psychosis. *Applied Research in Quality of Life*, *9*, 99–112. doi:10.1007/s11482-013-9211-4
- *Goodridge, D., Nicol, J. J., Horvey, K. J., & Butcher, S. (2013). Therapeutic singing as an adjunct for pulmonary rehabilitation participants with COPD: Outcomes of a feasibility study. *Music and Medicine*, *5*, 169–176. doi:10.1177/1943862113493012
- *Goodwin, L., Lee, W., Price, A., Rayner, L., Monroe, B., Sykes, N., ... Hotopf, M. (2012). Predictors of non-remission of depression in a palliative care population. *Palliative Medicine*, *26*, 683–695. doi:10.1177/0269216311412230.
- *Greco, A., Steca, P., Pozzi, R., Monzani, D., D'Addario, M., Villani, A., ... Parati, G. (2013). Predicting depression from illness severity in cardiovascular disease patients: Self-efficacy

- beliefs, illness perception, and perceived social support as mediators. *International Journal of Behavioral Medicine*, 21, 221–229. doi: [10.1007/s12529-013-9290-5](https://doi.org/10.1007/s12529-013-9290-5)
- *Grunfeld, E. A., Low, E., & Cooper, A. F. (2010). Cancer survivors' and employers' perceptions of working following cancer treatment. *Occupational Medicine*, 60, 611–617. doi:[10.1093/ocmed/kqq143](https://doi.org/10.1093/ocmed/kqq143)
- Hagger, M. S., & Orbell, S. (2003). A meta-analytic review of the Common-Sense model of illness representations. *Psychology & Health*, 18, 141–184.
- *Hallegraeff, J. M., van der Schans, C. P., Krijnen, W. P., & de Greef, M. H. (2013). Measurement of acute nonspecific low back pain perception in primary care physical therapy: Reliability and validity of the brief illness perception questionnaire. *BMC Musculoskeletal Disorders*, 14, 53.
- Harris, R., Bradburn, M., Deeks, J., Harbord, R., Altman, D., & Sterne, J. (2008). Meta-analysis: Fixed-and random-effects meta-analysis. *Stata Journal*, 8, 3–28.
- *Hollywood, A., & Ogden, J. (2011). Taking orlistat: Predicting weight loss over 6 months. *Journal of Obesity*, 1–7, article number 806896. doi: [10.1155/2011/806896](https://doi.org/10.1155/2011/806896)
- *Hoogerwerf, M. A., Ninaber, M. K., Willems, L. N. A., & Kaptein, A. A. (2012). “Feelings are facts”: Illness perceptions in patients with lung cancer. *Respiratory Medicine*, 106, 1170–1176. doi:[10.1016/j.rmed.2012.04.006](https://doi.org/10.1016/j.rmed.2012.04.006)
- *Hou, R., Moss-Morris, R., Peveler, R., Mogg, K., Bradley, B. P., & Belli, A. (2012). When a minor head injury results in enduring symptoms: A prospective investigation of risk factors for postconcussional syndrome after mild traumatic brain injury. *Journal of Neurology, Neurosurgery and Psychiatry*, 83, 217–223. doi:[10.1136/jnnp-2011-300767](https://doi.org/10.1136/jnnp-2011-300767)
- *Hu, X., Bell, R. A., Kravitz, R. L., & Orrange, S. (2012). The prepared patient: Information seeking of online support group members before their medical appointments. *Journal of Health Communication*, 17, 960–978.
- *Husson, O., Thong, M. S., Mols, F., Smilde, T. J., Creemers, G.-J., & van de Poll-Franse, L. V. (2013). Information provision and patient reported outcomes in patients with metastasized colorectal cancer: Results from the PROFILES registry. *Journal of Palliative Medicine*, 16, 281–288.
- *Hyphantis, T., Kotsis, K., Tsifetaki, N., Creed, F., Drosos, A. A., Carvalho, A. F., & Voulgari, P. V. (2013). The relationship between depressive symptoms, illness perceptions and quality of life in ankylosing spondylitis in comparison to rheumatoid arthritis. *Clinical Rheumatology*, 32, 635–644. doi:[10.1007/s10067-012-2162-6](https://doi.org/10.1007/s10067-012-2162-6)
- *Iskandarsyah, A., de Klerk, C., Suardi, D. R., Soemitro, M. P., Sadarjoen, S. S., & Passchier, J. (2013). Satisfaction with information and its association with illness perception and quality of life in Indonesian breast cancer patients. *Supportive Care in Cancer*, 21, 2999–3007.
- *Jansen, D. L., Grootendorst, D. C., Rijken, M., Heijmans, M., Kaptein, A. A., Boeschoten, E. W., & Dekker, F. W. (2010). Pre-dialysis patients' perceived autonomy, self-esteem and labor participation: Associations with illness perceptions and treatment perceptions. A cross-sectional study. *BMC Nephrology*, 11, article number 35.
- *Jansen, D. L., Heijmans, M. J., Rijken, M., Spreeuwenberg, P., Grootendorst, D. C., Dekker, F. W., ... Groenewegen, P. P. (2012). Illness perceptions and treatment perceptions of patients with chronic kidney disease: Different phases, different perceptions? *British Journal of Health Psychology*, 18, 244–262.
- *Jansen, D. L., Rijken, M., Heijmans, M., & Boeschoten, E. W. (2010). Perceived autonomy and self-esteem in Dutch dialysis patients: The importance of illness and treatment perceptions. *Psychology & Health*, 25, 733–749. doi:[10.1080/08870440902853215](https://doi.org/10.1080/08870440902853215)
- *Janssen, V., De Gucht, V., van Exel, H., & Maes, S. (2013). Changes in illness perceptions and quality of life during participation in cardiac rehabilitation. *International Journal of Behavioral Medicine*, 20, 582–589. doi:[10.1007/s12529-012-9260-3](https://doi.org/10.1007/s12529-012-9260-3)

- *Jonsbu, E., Martinsen, E. W., Morken, G., Moum, T., & Dammen, T. (2012). Illness perception among patients with chest pain and palpitations before and after negative cardiac evaluation. *BioPsychoSocial Medicine*, 6, 19.
- *Jonsbu, E., Martinsen, E. W., Morken, G., Moum, T., & Dammen, T. (2013). Change and impact of illness perceptions among patients with non-cardiac chest pain or benign palpitations following three sessions of CBT. *Behavioural & Cognitive Psychotherapy*, 41, 398–407.
- *Kalantari, H., Bagherian Sararoodi, R., Afshar, H., Khoramian, N., Forouzandeh, N., Zadeh, H. D., ... Adibi, P. (2012). Relationship between illness perceptions and quality of life in patients with Irritable Bowel Syndrome. *Journal of Mazandaran University of Medical Sciences*, 22, 33–41.
- *Kaptein, A. A., Hughes, B., Scharloo, M., Hondebrink, N., & Langeveld, T. (2010). Psychological aspects of adductor spasmodic dysphonia: A prospective population controlled questionnaire study. *Clinical Otolaryngology*, 35, 31–38.
- *Kaptein, A. A., Yamaoka, K., Snoei, L., Kobayashi, K., Uchida, Y., van der Kloot, W. A., ... Rabe, K. (2011). Illness perceptions and quality of life in Japanese and Dutch patients with non-small-cell lung cancer. *Lung Cancer*, 72, 384–390. doi:10.1016/j.lungcan.2010.09.010
- Kaptein, A. A., Yamaoka, K., Snoei, L., van der Kloot, W. A., Inoue, K., Tabei, T., ... Nortier, H. (2013). Illness perceptions and quality of life in Japanese and Dutch women with breast cancer. *Journal of Psychosocial Oncology*, 31, 83–102.
- *Karademas, E. C., Bakouli, A., Bastounis, A., Kallergi, F., Tamtami, P., & Theofilou, M. (2008). Illness perceptions, illness-related problems, subjective health and the role of perceived primal threat: Preliminary findings. *Journal of Health Psychology*, 13, 1021–1029. doi:10.1177/1359105308097967
- *Karademas, E. C., Karamvakalis, N., & Zarogiannos, A. (2009). Life context and the experience of chronic illness: Is the stress of life associated with illness perceptions and coping? *Stress and Health: Journal of the International Society for the Investigation of Stress*, 25, 405–412. doi:10.1002/smi.1252
- *Keogh, K., Smith, S. M., White, P., McGilloway, S., Kelly, A., Gibney, J., & O'Dowd, T. (2011). Psychological family intervention for poorly controlled type 2 diabetes. *The American Journal of Managed Care*, 17, 105–113.
- *Kesler, A., Kliper, E., Goner-Shilo, D., & Benyamini, Y. (2009). Illness perceptions and quality of life amongst women with pseudotumor cerebri. *European Journal of Neurology*, 16, 931–936. doi:10.1111/j.1468-1331.2009.02625.x
- *Kibbey, K., Speight, J., Wong, J., Smith, L., & Teede, H. (2013). Diabetes care provision: Barriers, enablers and service needs of young adults with Type 1 diabetes from a region of social disadvantage. *Diabetic Medicine*, 30, 878–884.
- *Klok, T., Kaptein, A. A., Duiverman, E. J., & Brand, P. L. (2012). High inhaled corticosteroids adherence in childhood asthma: The role of medication beliefs. *The European Respiratory Journal*, 40, 1149–1155. doi:10.1183/09031936.00191511
- *Knoop, H., van Kessel, K., & Moss-Morris, R. (2012). Which cognitions and behaviours mediate the positive effect of cognitive behavioural therapy on fatigue in patients with multiple sclerosis? *Psychological Medicine*, 42, 205–213. doi:10.1017/S0033291711000924
- *Knowles, S., Cook, S., & Tribbick, D. (2013). Relationship between health status, illness perceptions, coping strategies and psychological morbidity: A preliminary study with IBD stoma patients. *Journal of Crohn's and Colitis*, 7, e471–e478. doi:10.1016/j.crohns.2013.02.022
- *Knowles, S., Gass, C., & Macrae, F. (2013). Illness perceptions in IBD influence psychological status, sexual health and satisfaction, body image and relational functioning: A preliminary exploration using structural equation modeling. *Journal of Crohn's and Colitis*, 7, e344–e350. doi:10.1016/j.crohns.2013.01.018
- *Knowles, S., Wilson, J. L., Connell, W. R., & Kamm, M. A. (2011). Preliminary examination of the relations between disease activity, illness perceptions, coping strategies, and psychological

- morbidity in Crohn's disease guided by the common sense model of illness. *Inflammatory Bowel Diseases*, 17, 2551–2557. doi:10.1002/ibd.21650
- *Kok, L. M., Vliet Vlieland, T., Fiocco, M., Kaptein, A. A., & Nelissen, R. (2013). Musicians' illness perceptions of musculoskeletal complaints. *Clinical Rheumatology*, 32, 487–492. doi:10.1007/s10067-013-2199-1
- *Kotsis, K., Voulgari, P. V., Tsifetaki, N., Machado, M. O., Carvalho, A. F., Creed, F., ... Hyphantis, T. (2012). Anxiety and depressive symptoms and illness perceptions in psoriatic arthritis and associations with physical health-related quality of life. *Arthritis Care & Research*, 64, 1593–1601. doi:10.1002/acr.21725
- *Kung, M., Koschwanez, H. E., Painter, L., Honeyman, V., & Broadbent, E. (2012). Immunosuppressant nonadherence in heart, liver, and lung transplant patients: Associations with medication beliefs and illness perceptions. *Transplantation Journal*, 93, 958–963. doi:10.1097/TP.0b013e31824b822d
- *Lally, R. M., & Underhill, M. L. (2012). Transition to breast cancer survivorship: A longitudinal qualitative follow-up study of two-year survivors. *Journal of Psychosocial Oncology*, 30, 97–127. doi:10.1080/07347332.2011.633983
- *Lanteri-Minet, M., Massiou, H., Nachit-Ouinekh, F., Lucas, C., Pradalier, A., Radat, F., ... El Hasnaoui, A. (2007). The GRIM2005 study of migraine consultation in France I. Determinants of consultation for migraine headache in France. *Cephalgia*, 27, 1386–1397. doi:10.1111/j.1468-2982.2007.01426.x
- Lau, R. R., Bernard, T. M., & Hartman, K. A. (1989). Further exploration of the common sense representations of common illnesses. *Health Psychology*, 8, 195–219.
- *Lawson, E. F., Hersh, A. O., Applebaum, M. A., Yelin, E. H., Okumura, M. J., & von Scheven, E. (2011). Self-management skills in adolescents with chronic rheumatic disease: A cross-sectional survey. *Pediatric Rheumatology*, 9, 1–7.
- *Le Grande, M. R., Elliott, P. C., Worcester, M. U. C., Murphy, B. M., Goble, A. J., Kugathasan, V., & Sinha, K. (2012). Identifying illness perception schemata and their association with depression and quality of life in cardiac patients. *Psychology, Health & Medicine*, 17, 709–722. doi:10.1080/13548506.2012.661865
- Leventhal, H., Benyamini, Y., Brownlee, S., Diefenbach, M., Leventhal, E. A., Patrick-Miller, L., & Robitaille, C. (1997). Illness representations: Theoretical foundations. In K. Petrie & J. Weinman (Eds.), *Perceptions of health and illness* (pp. 1–19). Amsterdam: Harwood Academic.
- *Lin, Y. P., Chiu, K. M., & Wang, T. J. (2011). Reliability and validity of the Chinese version of the brief illness perception questionnaire for patients with coronary heart disease. *Journal of the Oriental Institute of Technology*, 31, 147–157.
- *Llewellyn, C. D., Horne, R., McGurk, M., & Weinman, J. (2006). Development and preliminary validation of a new measure to assess satisfaction with information among head and neck cancer patients: The satisfaction with cancer information profile (SCIP). *Head & Neck*, 28, 540–548.
- *Lobban, F., Solis-Trapala, I., Tyler, E., Chandler, C., Morriss, R. K., & ERP Group. (2013). The role of beliefs about mood swings in determining outcome in bipolar disorder. *Cognitive Therapy and Research*, 37, 51–60. doi:10.1007/s10608-012-9452-9
- *Lord, K., Ibrahim, K., Kumar, S., Rudd, N., Mitchell, A. J., & Symonds, P. (2012). Measuring trust in healthcare professionals—A study of ethnically diverse UK cancer patients. *Clinical Oncology*, 24, 13–21. doi:10.1016/j.clon.2011.05.010
- *Løvvik, C., Øverland, S., Hysing, M., Broadbent, E., & Reme, S. E. (2014). Association between illness perceptions and return-to-work expectations in workers with common mental health symptoms. *Journal of Occupational Rehabilitation*, 24, 160–170. doi:10.1007/s10926-013-9439-8

- *Lowe, R., Porter, A., Snooks, H., Button, L., & Evans, B. A. (2011). The association between illness representation profiles and use of unscheduled urgent and emergency health care services. *British Journal of Health Psychology*, *16*, 862–879. doi:10.1111/j.2044-8287.2011.02023.x
- *Lucas, C., Lanteri-Minet, M., Massiou, H., Nachit-Ouinekh, F., Pradalier, A., Mercier, F., ... Radat, F. (2007). The GRIM2005 study of migraine consultation in France II. Psychological factors associated with treatment response to acute headache therapy and satisfaction in migraine. *Cephalgia*, *27*, 1398–1407. doi:10.1111/j.1468-2982.2007.01446.x
- *Lynch, J., Moore, M., Moss-Morris, R., & Kendrick, T. (2011). Are patient beliefs important in determining adherence to treatment and outcome for depression? Development of the beliefs about depression questionnaire. *Journal of Affective Disorders*, *133*, 29–41. doi:10.1016/j.jad.2011.03.019
- *Makarewicz, W., Kaska, L., Kobiela, J., Stefaniak, T., Krajewski, J., Stankiewicz, M., ... Sledzinski, Z. (2007). Wernicke's syndrome after sleeve gastrectomy. *Obesity Surgery*, *17*, 704–706.
- *Marke, V., & Bennett, P. (2013). Predicting post-traumatic stress disorder following first onset acute coronary syndrome: Testing a theoretical model. *British Journal of Clinical Psychology*, *52*, 70–81.
- *Marques, M., De Gucht, V., Leal, I., & Maes, S. (2013). A cross-cultural perspective on psychological determinants of chronic fatigue syndrome: A comparison between a Portuguese and a Dutch patient sample. *International Journal of Behavioral Medicine*, *20*, 1–10.
- *Matoulkova, P., Krulichova, I. S., Macek, K., Vlcek, J., Bastecka, D., Prixova, M., & Horne, R. (2013). Chronically ill Czech patients' beliefs about medicines: The psychometric properties and factor structure of the BMQ-CZ. *Therapeutic Innovation & Regulatory Science*, *47*, 341–348.
- *McGrady, M. E., Cotton, S., Rosenthal, S. L., Roberts, Y. H., Britto, M., & Yi, M. S. (2010). Anxiety and asthma symptoms in urban adolescents with asthma: The mediating role of illness perceptions. *Journal of Clinical Psychology in Medical Settings*, *17*, 349–356. doi:10.1007/s10880-010-9214-3
- *Michel, G., Taylor, N., Absolom, K., & Eiser, C. (2010). Benefit finding in survivors of childhood cancer and their parents: Further empirical support for the benefit finding scale for children. *Child: Care, Health and Development*, *36*, 123–129. doi:10.1111/j.1365-2214.2009.01034.x
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Physical Therapy*, *89*, 873–880. doi:10.1371/journal.pmed.0040078
- *Molloy, G. J., Sniehotta, F., & Johnston, M. (2009). Two alternative models of health behaviour and recovery from activity limitations due to acute injury: A prospective study. *Psychology and Health*, *24*, 271–285. doi:10.1080/08870440701684548
- *Mols, F., Denollet, J., Kaptein, A. A., Reemst, P. H., & Thong, M. S. (2012). The association between Type D personality and illness perceptions in colorectal cancer survivors: A study from the population-based PROFILES registry. *Journal of Psychosomatic Research*, *73*, 232–239. doi:10.1016/j.jpsychores.2012.07.004
- *Moriarty, A., Jolley, S., Callanan, M. M., & Garety, P. (2012). Understanding reduced activity in psychosis: The roles of stigma and illness appraisals. *Social Psychiatry and Psychiatric Epidemiology*, *47*, 1685–1693. doi:10.1007/s00127-012-0475-z
- Moss-Morris, R., Weinman, J., Petrie, K. J., Horne, R., Cameron, L. D., & Buick, D. (2002). The revised illness perception questionnaire (IPQ-R). *Psychology & Health*, *17*, 1–16.
- *Netjes, J. E., & Rijken, M. (2013). Labor participation among patients with inflammatory bowel disease. *Inflammatory Bowel Diseases*, *19*, 81–91. doi:10.1002/ibd.22921

- *O'Carroll, R. E., McGregor, L. M., Swanson, V., Masterton, G., & Hayes, P. C. (2006). Adherence to medication after liver transplantation in Scotland: A pilot study. *Liver Transplantation*, *12*, 1862–1868.
- *Oliveira, D., & Pereira, M. G. (2012). Representações da doença, ajustamento conjugal e adesão aos auto-cuidados e controlo metabólico em diabéticos tipo 2 [Illness representations, marital adjustment and adherence to self-care and metabolic control in type 2 diabetes]. *Interamerican Journal of Psychology*, *46*, 357–364.
- *Pacey, A., Merrick, H., Arden-Close, E., Morris, K., Rowe, R., Stark, D., & Eiser, C. (2013). Implications of sperm banking for health-related quality of life up to 1 year after cancer diagnosis. *British Journal of Cancer*, *108*, 1004–1011. doi:10.1038/bjc.2013.57
- *Pacheco-Huergo, V., Viladrich, C., Pujol-Ribera, E., Cabezas-Pena, C., Nunez, M., Roura-Olmeda, P., ... Representacion Grp, I.-R. (2012). Perception in chronic illnesses: Linguistic validation of the revised illness perception questionnaire and the brief illness perception questionnaire for a Spanish population. *Atencion Primaria*, *44*, 280–287. doi:10.1016/j.aprim.2010.11.022
- Parfeni, M., Nistor, I., & Covic, A. (2013). A systematic review regarding the association of illness perception and survival among end-stage renal disease patients. *Nephrology Dialysis Transplantation*, *28*, 2407–2414.
- *Parveen, S., & Morrison, V. (2012). Predicting caregiver gains: A longitudinal study. *British Journal of Health Psychology*, *17*, 711–723. doi:10.1111/j.2044-8287.2012.02067.x
- *Pastor, M. A., Lopez-Roig, S., Johnston, M., Gracia, R., & Daza, P. (2012). Clinical self-efficacy and illness beliefs in ambiguous chronic pain conditions: General practitioners' management of Fibromyalgia. *Anales De Psicologia*, *28*, 417–425. doi:10.6018/analesps.28.2.135291
- *Petricek, G., Vrcic-Keglevic, M., Vuletic, G., Cerovecki, V., Ozvacic, Z., & Murgic, L. (2009). Illness perception and cardiovascular risk factors in patients with type 2 diabetes: Cross-sectional questionnaire study. *Croatian Medical Journal*, *50*, 583–593. doi:10.3325/cmj.2009.50.583
- Petrie, K. J., Cameron, L. D., Ellis, C. J., Buick, D., & Weinman, J. (2002). Changing illness perceptions after myocardial infarction: An early intervention randomized controlled trial. *Psychosomatic Medicine*, *64*, 580–586.
- *Petrie, K. J., Perry, K., Broadbent, E., & Weinman, J. (2012). A text message programme designed to modify patients' illness and treatment beliefs improves self-reported adherence to asthma preventer medication. *British Journal of Health Psychology*, *17*, 74–84.
- Petrie, K. J., & Weinman, J. (2012). Patients' perceptions of their illness: The dynamo of volition in health care. *Current Directions in Psychological Science*, *21*, 60–65. doi:10.1177/0963721411429456
- *Poliakoff, E., Galpin, A. J., McDonald, K., Kellett, M., Dick, J. P., Hayes, S., & Wearden, A. J. (2013). The effect of gym training on multiple outcomes in Parkinson's disease: A pilot randomised waiting-list controlled trial. *NeuroRehabilitation*, *32*, 125–134.
- *Powell, H., McCaffery, K., Murphy, V. E., Hensley, M. J., Clifton, V. L., Giles, W., & Gibson, P. G. (2011). Psychosocial outcomes are related to asthma control and quality of life in pregnant women with asthma. *Journal of Asthma*, *48*, 1032–1040. doi:10.3109/02770903.2011.631239
- *Powell, H., McCaffery, K., Murphy, V. E., Hensley, M. J., Clifton, V. L., Giles, W., & Gibson, P. G. (2013). Psychosocial variables are related to future exacerbation risk and perinatal outcomes in pregnant women with asthma. *Journal of Asthma*, *50*, 383–389. doi:10.3109/02770903.2012.757777
- *Price, A., Goodwin, L., Rayner, L., Shaw, E., Hansford, P., Sykes, N., ... Lee, W. (2012). Illness perceptions, adjustment to illness, and depression in a palliative care population. *Journal of Pain and Symptom Management*, *43*, 819–932. doi:10.1016/j.painsymman.2011.05.013

- *Prior, M., Burr, J. M., Ramsay, C. R., Jenkinson, D., Campbell, S., & Francis, J. J. (2012). Evidence base for an intervention to maximise uptake of glaucoma testing: A theory-based cross-sectional survey. *BMJ Open*, *2*, e000710. doi:10.1136/bmjopen-2011-000710
- *Proudfoot, J., Parker, G., Manicavasagar, V., Hadzi-Pavlovic, D., Whitton, A., Nicholas, J., ... Burckhardt, R. (2012). Effects of adjunctive peer support on perceptions of illness control and understanding in an online psychoeducation program for bipolar disorder: A randomised controlled trial. *Journal of Affective Disorders*, *142*, 98–105. doi:10.1016/j.jad.2012.04.007
- *Radat, F., Lanteri-Minet, M., Nachit-Ouinekh, F., Massiou, H., Lucas, C., Pradalier, A., ... El Hasnaoui, A. (2009). The GRIM2005 study of migraine consultation in France. III: Psychological features of subjects with migraine. *Cephalalgia*, *29*, 338–350. doi:10.1111/j.1468-2982.2008.01718.x
- *Raftery, M. N., Sarma, K., Murphy, A. W., De la Harpe, D., Normand, C., & McGuire, B. E. (2011). Chronic pain in the Republic of Ireland-Community prevalence, psychosocial profile and predictors of pain-related disability: Results from the prevalence, impact and cost of chronic pain (PRIME) study, Part 1. *Pain*, *152*, 1096–1103. doi:10.1016/j.pain.2011.01.019
- *Rahimi, J., Baljani, E., & Zadgasem, Z. (2012). The relationship between illness perceptions and quality of life in hemodialysis patients. *Iranian Journal of Critical Care Nursing*, *5*, 151–158.
- *Rajpura, J. R., & Nayak, R. (2014). Role of illness perceptions and medication beliefs on medication compliance of elderly hypertensive cohorts. *Journal of Pharmacy Practice*, *27*, 19–24. doi:10.1177/0897190013493806
- *Rakhshan, M., Hassani, P., Ashktorab, T., & Majd, H. A. (2013). The nature and course of illness perception following cardiac pacemaker implantation: A self-regulatory approach. *International Journal of Nursing Practice*, *19*, 318–325.
- *Rees, G., Chong, X. L., Cheung, C. Y., Aung, T., Friedman, D. S., Crowston, J. G., & Lamoureux, E. L. (2013). Beliefs and adherence to glaucoma treatment: A comparison of patients from diverse cultures. *Journal of Glaucoma*, *23*, 293–298. doi:10.1097/IJG.0-b013e3182741f1c
- *Rees, G., Lamoureux, E., Nicolaou, T., Weinman, J., & Speight, J. (2013). Feedback of personal retinal images appears to have a motivational impact in people with non-proliferative diabetic retinopathy and suboptimal HbA1c: Findings of a pilot study. *Diabetic Medicine*, *30*, 1122–1125. doi:10.1111/dme.12192
- *Rees, G., Leong, O., Crowston, J. G., & Lamoureux, E. L. (2010). Intentional and unintentional nonadherence to ocular hypotensive treatment in patients with glaucoma. *Ophthalmology*, *117*, 903–908. doi:10.1016/j.ophtha.2009.10.038
- *Reynolds, L., Broadbent, E., Ellis, C. J., Gamble, G., & Petrie, K. J. (2007). Patients' drawings illustrate psychological and functional status in heart failure. *Journal of Psychosomatic Research*, *63*, 525–532. doi:10.1016/j.jpsychores.2007.03.007
- *Ringlever, L., Otten, R., van Schayck, O. C., & Engels, R. C. (2012). The role of maternal illness perceptions in perceived asthma symptoms in school-aged children. *Journal of Asthma*, *49*, 1030–1036.
- *Sampaio, R., Pereira, M. G., & Winck, J. C. (2012). Psychological morbidity, illness representations, and quality of life in female and male patients with obstructive sleep apnea syndrome. *Psychology, Health & Medicine*, *17*, 136–149. doi:10.1080/13548506.2011.579986
- *Sampaio, R., Pereira, M. G., & Winck, J. C. (2014). Obstructive sleep apnea representations, self-efficacy and family coping regarding APAP adherence: A longitudinal study. *Psychology, Health & Medicine*, *19*, 59–69. doi:10.1080/13548506.2013.774430
- *Sanders, D., Kydd, R., Morunga, E., & Broadbent, E. (2011). Differences in patients' perceptions of Schizophrenia between Maori and New Zealand Europeans. *Australian and New Zealand Journal of Psychiatry*, *45*, 483–488. doi:10.3109/00048674.2011.561479

- *Schaefer, R., Honer, C., Salm, F., Wirsching, M., Leonhart, R., Yang, J., ... Fritzsche, K. (2013). Psychological and behavioral variables associated with the somatic symptom severity of general hospital outpatients in China. *General Hospital Psychiatry, 35*, 297–303.
- *Schroeder, S., Achenbach, S., Körber, S., Nowy, K., de Zwaan, M., & Martin, A. (2012). Cognitive-perceptual factors in noncardiac chest pain and cardiac chest pain. *Psychosomatic Medicine, 74*, 861–868.
- *Schuurs, A., & Green, H. J. (2013). A feasibility study of group cognitive rehabilitation for cancer survivors: Enhancing cognitive function and quality of life. *Psycho-Oncology, 22*, 1043–1049. doi:10.1002/pon.3102
- *Schuz, B., Wurm, S., Warner, L. M., & Ziegelmann, J. P. (2012). Self-efficacy and multiple illness representations in older adults: A multilevel approach. *Psychology & Health, 27*, 13–29. doi:10.1080/08870446.2010.541908
- *Scollan-Koliopoulos, M., Bleich, D., Rapp, K. J., Wong, P., Hofmann, C. J., & Raghuwansi, M. (2013). Health-related quality of life, disease severity, and anticipated trajectory of diabetes. *The Diabetes Educator, 39*, 83–91. doi:10.1177/0145721712467697
- *Scollan-Koliopoulos, M., Herrera, I., Romano, K., Gregory, C., Rapp, K., & Bleich, D. (2012). Healthcare technician delivered screening of adults with diabetes to improve primary care provider recognition of depression. *Journal of Family Medicine and Primary Care, 1*, 97–102.
- *Shibayama, T., Sato, E., Nishigaki, M., Ochiai, R., & Kazuma, K. (2011). Influence of dietary therapy appraisal on future perceived control of type 2 diabetes. *Journal of Health Psychology, 16*, 1141–1150. doi:10.1177/1359105311401770
- *Shiloh, S., Dagan, E., Friedman, I., Blank, N., & Friedman, E. (2013). A follow-up study on men tested for BRCA1/BRCA2 mutations: Impacts and coping processes. *Psycho-Oncology, 22*, 417–425. doi:10.1002/pon.2106
- *Silva, S. M., Moreira, H. C., & Canavarro, M. C. (2012). Examining the links between perceived impact of breast cancer and psychosocial adjustment: The buffering role of post-traumatic growth. *Psycho-Oncology, 21*, 409–418. doi:10.1002/pon.1913
- *Skovbjerg, S., Hauge, C., Rasmussen, A., Winkel, P., & Elberling, J. (2012). Mindfulness-based cognitive therapy to treat multiple chemical sensitivities: A randomized pilot trial. *Scandinavian Journal of Psychology, 53*, 233–238.
- *Sluiter, J. K., & Frings-Dresen, M. H. W. (2008). Quality of life and illness perception in working and sick-listed chronic RSI patients. *International Archives of Occupational and Environmental Health, 81*, 495–501. doi:10.1007/s00420-007-0222-z
- *Sofianou, A., Martynenko, M., Wolf, M. S., Wisnivesky, J. P., Krauskopf, M., Wilson, E. A. H., Goel, M. S., Halm, E. A., & Federman, A. D. (2013). Asthma beliefs are associated with medication adherence in older asthmatics. *Journal of General Internal Medicine, 28*, 67–73.
- *Stack, R. J., Bundy, C., Elliott, R. A., New, J. P., Gibson, J. M., & Noyce, P. R. (2011). Patient perceptions of treatment and illness when prescribed multiple medicines for co-morbid type 2 diabetes. *Diabetes, Metabolic Syndrome and Obesity Targets and Therapy, 4*, 127–135.
- *Steca, P., Greco, A., D'Addario, M., Monzani, D., Pozzi, R., Villani, A., ... Parati, G. (2013). Relationship of illness severity with health and life satisfaction in patients with cardiovascular disease: The mediating role of self-efficacy beliefs and illness perceptions. *Journal of Happiness Studies, 14*, 1585–1599.
- *Steca, P., Greco, A., Monzani, D., Politi, A., Gestra, R., Ferrari, G., ... Parati, G. (2013). How does illness severity influence depression, health satisfaction and life satisfaction in patients with cardiovascular disease? The mediating role of illness perception and self-efficacy beliefs. *Psychology & Health, 28*, 765–783. doi:10.1080/08870446.2012.759223
- *Steinbrecher, N., & Hiller, W. (2011). Course and prediction of somatoform disorder and medically unexplained symptoms in primary care. *General Hospital Psychiatry, 33*, 318–326. doi:10.1016/j.genhosppsych.2011.05.002.

- *Storheim, K., Brox, J. I., Løchting, I., Werner, E. L., & Grotle, M. (2012). Cross-cultural adaptation and validation of the Norwegian version of the core outcome measures index for low back pain. *European Spine Journal*, *21*, 2539–2549. doi:10.1007/s00586-012-2393-x
- *Taft, T., Kern, E., Kwiatek, M., Hirano, I., Gonsalves, N., & Keefer, L. (2011). The adult eosinophilic oesophagitis quality of life questionnaire: A new measure of health-related quality of life. *Alimentary Pharmacology & Therapeutics*, *34*, 790–798. doi:10.1111/j.1365-2036.2011.04791.x
- *Tahmasebi, R., Noroozi, A., & Tavafian, S. S. (2013). Determinants of self-management among diabetic patients: A path analysis. *Asia-Pacific Journal of Public Health*, *27*, NP524-34. doi:10.1177/1010539513475652
- *Taylor, R., Brown, J. S., & Weinman, J. (2013). A comparison of the illness perceptions of North Indian and white British women. *Journal of Mental Health*, *22*, 22–32.
- *van der Kloot, W. A., Hamdy, N. A. T., Hafkemeijer, L. C. S., den Dulck, F. M. C., Chotkan, S. A., van Emmerik, A. A. P., & Kaptein, A. A. (2010). The psychological burden of an initially unexplained illness: Patients with sternocostoclavicular hyperostosis before and after delayed diagnosis. *Health and Quality of Life Outcomes*, *8*, 97. doi:10.1186/1477-7525-8-97
- *van der Velde, J. L., Flokstra-de Blok, B. M. J., Hamp, A., Knibb, R. C., Duiverman, E. J., & Dubois, A. E. J. (2011). Adolescent-parent disagreement on health-related quality of life of food-allergic adolescents: Who makes the difference? *Allergy: European Journal of Allergy and Clinical Immunology*, *66*, 1580–1589. doi:10.1111/j.1398-9995.2011.02726.x
- van Oort, L., Schröder, C., & French, D. P. (2011). What do people think about when they answer the brief illness perception questionnaire? A ‘think-aloud’ study. *British Journal of Health Psychology*, *16*, 231–245. doi:10.1348/135910710X500819
- *Var, F. A., & Rajeswaran, J. (2012). Perception of illness in patients with traumatic brain injury. *Indian Journal of Psychological Medicine*, *34*, 223–226.
- *Vedhara, K., Beattie, A., Metcalfe, C., Roche, S., Weinman, J., Cullum, N., ... Chalder, T. (2012). Development and preliminary evaluation of a psychosocial intervention for modifying psychosocial risk factors associated with foot re-ulceration in diabetes. *Behaviour Research and Therapy*, *50*, 323–332. doi:10.1016/j.brat.2012.02.013
- *Verheul, W., Sanders, A., & Bensing, J. (2010). The effects of physicians’ affect-oriented communication style and raising expectations on analogue patients’ anxiety, affect and expectancies. *Patient Education and Counseling*, *80*, 300–306.
- *Vilchinsky, N., Dekel, R., Asher, Z., Leibowitz, M., & Mosseri, M. (2013). The role of illness perceptions in the attachment-related process of affect regulation. *Anxiety, Stress & Coping*, *26*, 14–29. doi:10.1080/10615806.2012.682649
- *Vinaccia, S., & Quiceno, J. M. (2011a). Health-related quality of life and psychological factors: A study from chronic obstructive pulmonary disease – COPD. *Terapia psicológica*, *29*, 65–75.
- *Vinaccia, S., & Quiceno, J. M. (2011b). Resilience and health-related quality of life in patients with chronic kidney disease. *Revista Argentina De Clinica Psicologica*, *20*, 201–211.
- *Vinaccia, S., Quiceno, J. M., & Remor, E. (2012). Resilience, illness perception of disease, beliefs and spiritual-religious coping in relation to the health-related quality of life in chronic colombian patients. *Anales De Psicologia*, *28*, 366–377. doi:10.6018/analesps.28.2.148821
- *Walton, D. M., Balsor, B., & Etruw, E. (2012). Exploring the causes of neck pain and disability as perceived by those who experience the condition: A mixed-methods study. *ISRN Rehabilitation*, *2012*, article number 971328. doi:10.5402/2012/971328.
- Wanous, J., Reichers, A., & Hudy, M. (1997). Overall job satisfaction: How good are single-item measures? *Journal of Applied Psychology*, *82*, 247–252.
- *Weekes, J. C., Cotton, S., & McGrady, M. E. (2011). Predictors of substance use among Black urban adolescents with asthma: A longitudinal assessment. *Journal of the National Medical Association*, *103*, 392–398.

- Weinman, J., Petrie, K. J., Moss-Morris, R., & Horne, R. (1996). The illness perception questionnaire: A new method for assessing the cognitive representation of illness. *Psychology & Health, 11*, 431–445. doi:[10.1080/08870449608400270](https://doi.org/10.1080/08870449608400270)
- *Welschen, L. M., Bot, S. D., Kostense, P. J., Dekker, J. M., Timmermans, D. R., van der Weijden, T., & Nijpels, G. (2012). Effects of cardiovascular disease risk communication for patients with type 2 diabetes on risk perception in a randomized controlled trial: The@ RISK Study. *Diabetes Care, 35*, 2485–2492.
- *Williams, L., O'Connor, R. C., Grubb, N. R., & O'Carroll, R. E. (2011). Type D personality and illness perceptions in myocardial infarction patients. *Journal of Psychosomatic Research, 70*, 141–144. doi:[10.1016/j.jpsychores.2010.07.015](https://doi.org/10.1016/j.jpsychores.2010.07.015)
- *Williams, L., Regagliolo, A., & Rasmussen, S. (2012). Predicting psychological responses to Influenza A, H1N1 (“Swine flu”): The role of illness perceptions. *Psychology Health & Medicine, 17*, 383–391.
- *Wilson, E. R. H., Wisely, J. A., Wearden, A. J., Dunn, K. W., Edwards, J., & Tarrier, N. (2011). Do illness perceptions and mood predict healing time for burn wounds? A prospective, preliminary study. *Journal of Psychosomatic Research, 71*, 364–366. doi:[10.1016/j.jpsychores.2011.05.009](https://doi.org/10.1016/j.jpsychores.2011.05.009)
- *Woolthuis, E. P. K., de Grauw, W. J., Cardol, M., van Weel, C., Metsemakers, J. F., & Biermans, M. C. (2013). Patients' and partners' illness perceptions in screen-detected versus clinically diagnosed type 2 diabetes: Partners matter! *Family Practice, 30*, 418–425. doi:[10.1093/fampra/cmt003](https://doi.org/10.1093/fampra/cmt003)
- *Wu, H., Zhao, X., Fritzsche, K., Salm, F., Leonhart, R., Jing, W., ... Schaefer, R. (2013). Negative illness perceptions associated with low mental and physical health status in general hospital outpatients in China. *Psychology, Health & Medicine, 19*, 273–285. doi:[10.1080/13548506.2013.802358](https://doi.org/10.1080/13548506.2013.802358)
- *Yates, T., Davies, M., Gorely, T., Bull, F., & Khunti, K. (2008). Rationale, design and baseline data from the pre-diabetes risk education and physical activity recommendation and encouragement (PREPARE) programme study: A randomized controlled trial. *Patient Education and Counseling, 73*, 264–271.
- *Yates, T., Davies, M., Gorely, T., Bull, F., & Khunti, K. (2009). Effectiveness of a pragmatic education program designed to promote walking activity in individuals with impaired glucose tolerance. *Diabetes Care, 32*, 1404–1410.
- *Yuniarti, K. W., Dewi, C., Ningrum, R. P., Widiastuti, M., & Asril, N. M. (2012). Illness perception, stress, religiosity, depression, social support, and self management of diabetes in Indonesia. *International Journal of Research Studies in Psychology, 2*, 25–41. doi:[10.5861/ijrsp.2012.185](https://doi.org/10.5861/ijrsp.2012.185)
- *Zivkovic, M. V., Dediol, I., Ljubicic, I., & Situm, M. (2012). Sun behaviour patterns and perception of illness among melanoma patients. *Journal of the European Academy of Dermatology and Venereology, 26*, 724–729. doi:[10.1111/j.1468-3083.2011.04154.x](https://doi.org/10.1111/j.1468-3083.2011.04154.x)
- *Zugelj, U., Zupancic, M., Komidar, L., Kenda, R., Varda, N. M., & Gregoric, A. (2010). Self-reported adherence behavior in adolescent hypertensive patients: The role of illness representations and personality. *Journal of Pediatric Psychology, 35*, 1049–1060. doi:[10.1093/jpepsy/jsq027](https://doi.org/10.1093/jpepsy/jsq027)