The value of tailored communication in promoting medication intake behavior

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Chapter 5

Understanding patients' medication beliefs: the importance of patient satisfaction

Nurse: "First, I will tell you how and why the medication works." Patient: "IF it works." Nurse: "Are you cynical about that?" Patient: "YES, I have used as much medication as there seems to exists on this planet and nothing has helped so far, so no, I am not convinced" (male, 25 years old, Crohn's disease).

Patient: "Well, yes.. cancer is a side effect that frightens me. [...] Yes, the word cancer has been on my mind a lot lately" (female, 26 years old, Crohn's disease).

Abstract

Background: To gain more insight into patients' beliefs that are held about maintenance medication prescribed for inflammatory bowel disease (IBD) at start of the treatment and after six months, and to explore the relation between patients' satisfaction with providers' communication concerning the newly prescribed medication and patients' beliefs.

Methods: This is a longitudinal study in which telephone interviews were conducted with 84 IBD patients. The questionnaire included the Beliefs about Medicines Questionnaire (BMQ-specific) and measurements of patients' satisfaction with their providers' communication. In addition, patients were asked to indicate to what extent the information was tailored to their needs.

Results: More than half of the patients perceived concerns about, or little personal need for the prescribed medication. Especially concerns were salient. Their beliefs remained stable after six months. A higher level of patient satisfaction with provider's communication and the perceived level of tailoredness was significantly related to more positive beliefs about the medication.

Conclusions: This study provides valuable insights into the beliefs held by IBD patients about their maintenance therapy. The results of this study highlight the significant role of patient satisfaction with provider communication and the perceived level of tailoredness in relation to medication beliefs.

Introduction

The importance of positive beliefs towards the desired behavior has been emphasized in a number of health psychology theories such as the theory of planned behavior (Ajzen, 1991; Fishbein & Yzer, 2006), the integrative model of behavior prediction (Fishbein & Yzer, 2006) and the behavioral model for medication adherence (Bruin, Hospers, Borne, Kok, & Prins, 2005). Empirical research also revealed that beliefs about medication are significantly related to medication intake behavior (Clifford et al., 2008; Ediger et al., 2007; Horne & Weinman, 1999; Horne, 2003; Horne et al., 2004; Horne et al., 2009).

Research involving beliefs about medication suggests the use of the necessity-concerns framework (NCF) in predicting medication intake behavior (Clifford et al., 2008; Horne et al., 1999; Horne & Weinman, 2002; Horne, Cooper, Gellaitry, Date, & Fisher, 2007). According to the NCF, patients' willingness to start and continue to take prescribed medication is influenced by the way in which they judge their personal need for the treatment relative to potential adverse consequences of taking it (Clifford et al., 2008). Necessity is a summative belief representing the individuals' evaluation of the importance of the perceived beliefs. It can be thought of the answer to two questions: 'How much do I need this potential benefit?' and 'Can I manage without it?'. Concerns are a measure of the perceived relevance of the costs and their emotional impact (e.g., how much they worry about potential side effects; Horne, 2003). A meta-analysis spanning 17 long-term conditions involving over 10,000 patients showed that poor medication intake behavior was related to necessity beliefs and concerns. This meta-analysis also showed that the framework had good exploratory value in both cross-sectional and prospective studies. However, relatively few studies have used prospective designs measuring beliefs when starting the treatment (Horne et al., under review).

Providers have a key position in understanding and addressing patients' specific concerns and beliefs about the necessity of medication intake (Latter, Maben, Myall, Young, & Baileff, 2007). The link between communication and medication intake behavior has been studied extensively (Hulka et al., 1976; Latter et al., 2010; Zolnierek & DiMatteo, 2009). There is accumulating evidence that providers' communication can play a crucial role in influencing satisfaction (Bartlett et al., 1984), and medication intake behavior (Bartlett et al., 1984; Hulka et al., 1976; Korsch, Gozzi, & Francis, 1968; Ley, 1988; Zolnierek & DiMatteo, 2009). For example, Bartlett and colleagues (1984) found a positive effect of providers' communication skills on medication intake behavior, and this effect was mediated by patient satisfaction. Although patient satisfaction with the providers' communication is positively related to medication intake behavior (Bartlett et al., 1984), the relation between satisfaction with providers' communication and medication beliefs is still unexplored. To our knowledge there is one study that concluded that providers' collaborative communication style (e.g., a non-authoritarian manner of problem-solving

and conflict resolution) was positively related to beliefs about medication (Bultman & Svarstad, 2000). However, the researchers did not measure patients' satisfaction with providers' communication, and they suggest further research to unravel the relationship between satisfaction with providers' communication and beliefs about medication (Bultman & Svarstad, 2000). The aim of this study is to gain more insight into beliefs patients have about their newly prescribed medication at start of the treatment and after six months and into the relation between satisfaction with providers' communication concerning the newly prescribed medication and medication beliefs.

Methods

Design
Between December 2008 and March 2012, inflammatory bowel disease (IBD) patients and eight nurses from six hospitals in the Netherlands were recruited. In the Netherlands, nurses have a key role in IBD management and educating IBD patients about newly prescribed medication such as immunosuppressive and biological therapy. Nurses are expected to inform the patients about the prescribed medication (e.g., about possible side effects, and to give instructions on how to take the medication). Therefore, this study focuses on nurse consultations around IBD immunosuppressive or biological therapy. Moreover, we focused on IBD patients because only a few studies have measured beliefs about medication among IBD patients (Hall, Rubin, Hungin, & Dougall, 2007; Horne et al., 2009). These studies did not, however, investigate changes in beliefs over time.

To be eligible for this study, patients had to meet the following inclusion criteria: (1) diagnosed with Crohn's disease or Ulcerative Colitis according to classical clinical, endoscopic, radiographic and/or path histological criteria as determined by an experienced gastroenterologist, (2) going to start with immunosuppressive or biological therapy (i.e., Azathioprine, 6-mercaptopurine, Infliximab, Methotrexaat, 6-thioguanine, and Adalimumab) for the first time and, (3) being able to read and write in Dutch. All patients (N = 84) gave written informed consent. The Medical Ethical Committee of the VU University Medical Centre Amsterdam granted permission for this study, which was supplemented with local feasibility statements (trial number NTR2892).

Measurements
The Beliefs about Medicines Questionnaire
The Beliefs about Medicines Questionnaire (BMQ-Specific) was used to assess patients' beliefs and attitudes towards immunosuppressive or biologic therapy prescribed for IBD (Heijmans, 2006; Horne et al., 1999). The BMQ-Specific was administered during telephone interviews when patients started taking their medication; three weeks after the consultation (T1) and 6 months after (T2; see Figure 1). The BMQ-Specific comprises two subscales, a 5-item Necessity scale measuring patients' beliefs about the *necessity* of

taking the medication (5-item scale, α = .75), and a 5-item Concerns scale measuring patients' *concerns* about the potential adverse consequences of taking the medication (5-item scale, α = .67). Examples of the Necessity scale included: 'My health at present depends on my medication' or 'My medication protects me from getting worse'. Examples of the Concerns scale included: 'I sometimes worry about becoming too dependent on my medication' or 'Having to take medication worries me'. Patients were able to indicate their level of agreement on a 5-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (5). Higher scores on the scales indicate stronger beliefs (i.e., high perceived necessity and more concerns, respectively). The patients' scores on each scale were summed, resulting in a scale ranging from 5 to 25 for necessity and concerns. Based on the mid-point (15) of the two BMQ-Specific subscales, we divided patients in four different groups: ambivalent (high necessity, high concerns), sceptical (low necessity, high concerns), indifferent (low necessity, low concerns), and accepting (high necessity, low concerns; Clifford et al., 2008; Horne et al., 1999; Horne et al., 2009; Menckeberg et al., 2008). A necessity-concerns differential (NCD) was calculated per patient by subtracting his/her concerns score from his/her necessity score, resulting in a range from -20 to 20. The NCD provides a numerical assessment of how the patient judges their perceived need for treatment, relative to their concerns. Positive scores indicate that necessity was valued higher then concerns and negative scores indicate that concerns were rated higher than perceived need (Clifford et al., 2008; Horne et al., 1999; Menckeberg et al., 2008).
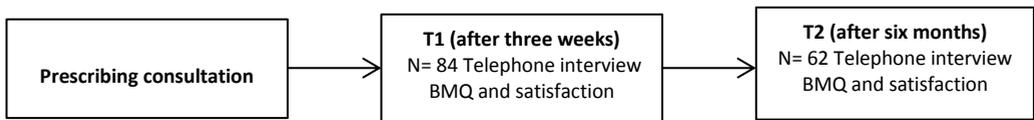
| Prescribing consultation | → | T1 (after three weeks) N= 84 Telephone interview BMQ and satisfaction | → | T2 (after six months) N= 62 Telephone interview BMQ and satisfaction |

Figure 1. *Procedure.*

Patient satisfaction

To measure satisfaction, we used 29 statements belonging to three scales concerning satisfaction with the general information about one's disease and treatment (12 items, α = .85 Range 12-48), support regarding medication use (7 items, α = .67 Range 12-28), and the affective communication (9 items, α = .82 Range 9-36). Examples of statements concerning general information about disease and treatment were: 'The nurse educates me about my disease' and 'The nurse informs me about the potential side effects'. Examples of the medication use scale were: 'The nurse asks whether I experience adverse reactions' and 'The nurse discusses whether the treatment is effective'. Examples of the affective communication scale were: 'The nurse takes me seriously' and 'The nurse treats me with respect'. The possible answers ranged from '1 = poor' to '4 = very good' (Hendriks, Vervloet, & van Dijk, 2005). Thus, a higher score on this scale indicated that a patient was more satisfied. In addition, we asked patients to assess the consultation on a scale of 1 to 10, to indicate to what extent the consultation was tailored to their specific needs.

Demographic characteristics

Participants were asked to specify their age, gender, and education. Education was divided into low level of education, middle level of education and high level of education.

Statistical analyses

For the non-response analysis, Chi-square (χ^2) tests and independent sample *t*-tests were conducted to determine differences between participants and non-participants. Descriptive statistics were used to describe the sample. To address our aims, mean scores and standard deviation (*SD*) for BMQ-specific Necessity and Concerns scale and the NCD were calculated at T1 and T2 and compared at the two time points using paired samples *t*-tests. Moreover, differences within the attitudinal groups between patients who continued the treatment and patients who stopped taking the medication (drop-out) were calculated using paired sample *t*-tests. Repeated measures were used for within comparison to compare attitudinal beliefs and satisfaction ratings at T1 and T2. Multiple regression analysis was used to examine the relationship between satisfaction and beliefs. Since there was a moderate positive relationship between the different components of satisfaction with the perceived level of tailoredness (mean *r* = .496, range= .362-.651 *p* < .001) at T1 and a strong positive relationship between the different components of satisfaction with the perceived level of tailoredness (mean *r* = .661, range = .605-.728 *p* < .001) at T2, we conducted separate regressions. Multiple regressions were conducted with the NCD at T1 resp. T2 as dependent variable and the following two sets of variables as independent variables, entered as separate blocks: (i) background characteristics, (ii) satisfaction with the general information or satisfaction with support regarding medication use or satisfaction with affective communication or the perceived level of tailoredness. For the regression analyses, we dummy coded the three levels of education with high education as a reference group.

Results

Non response

Of the 114 eligible patients, 20 (17.5%) refused to participate in the study. Seven did not want their consultation to be videotaped, five felt too sick or too tired, and eight felt overwhelmed or were too busy. Afterwards, we excluded ten participants because they decided not to start with the medication, or because they stopped with their medication within three weeks. Three weeks and six months after the consultation, the patients were contacted for a telephone interview. A total of 84 patients filled out the questionnaire at the start of their treatment (T1). If patients indicated during the follow-up telephone interview in the next measurement (survey at T2) that they had stopped with their medication (n = 22), they were excluded. Reasons mentioned for drop-out were side

effects, ineffectiveness of the medication or pregnancy. This resulted in a total of 62 of 110 patients who completed both questionnaires (see Figure 2). Non-participating patients (n = 20) or patients who stopped taking their medication (n = 22) did not differ significantly in terms of age and gender from participating patients (n = 84).
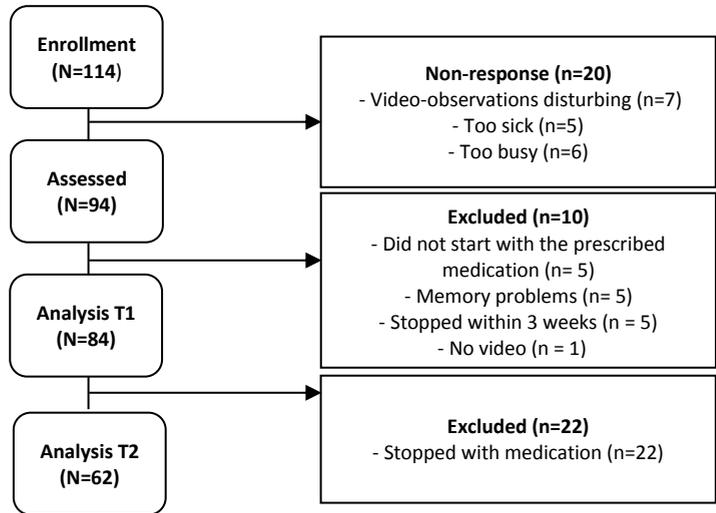
Figure 2. *Flow chart.*

Sample characteristics

The characteristics of the patients are presented in Table 1. More than two-thirds (63.1%) of the sample was female, 62 patients (73.8%) were diagnosed with Crohn's disease and 22 patients (21.8%) with Ulcerative Colitis. The mean age was 40.6 years (SD = 14.5) and one third of the patients were moderately educated (34.2%).

All nurses were female with a mean age of 40.6 years (SD = 14.3). On average, they had worked as IBD nurses for approximately 4.7 years (SD = 2.9).

Table 1.
Patient characteristics

Patient characteristics		N = 84	%
Gender	Female	53	63.1%
Age	M (*SD*)	40.6 *(14.3)*	
	Range	19-81	
Type of disease	Crohn's disease	62	73.8%
	Colitis Ulcerosa	22	25.0%
Diagnosed in years	M*(SD)*	10.1	*(9.8)*
Educational level	Low	21	25.0%
	Moderate	31	36.9%
	Higher education	32	38.1%
Living arrangements	Alone	19	22.6%
	With partner	20	23.8%
	With partner and child(ren)	21	25.0%
	With child(ren)	10	11.9%
	Other	14	16.7 %
Children	Yes	44	52.4%
Employed	Yes	61	72.6%
Ethnicity	Dutch	73	86.9%
Religious	Yes	20	23.8%

Beliefs about immunosuppressive or biological therapy

Patients were categorized into four attitudinal groups based on their specific beliefs about immunosuppressive or biological therapy. Figure 3 shows that, at the start of their treatment with immunosuppressive or biological therapy, more than half of the patients accepted their treatment (55%; high necessity, low concerns). A third of the patients was ambivalent (27%; high necessity, high concerns). The smallest groups of patients were indifferent (16%; low necessity, low concerns) or sceptical (2%; low necessity, high concerns). After six months, the results largely remained the same. More than half of the patients accepted their treatment (55%) and a third of the patients was ambivalent (28%). The smallest groups were again indifferent (15%) and skeptical (2%; see Figure 3). A

within-subjects (GLM repeated measures) test showed that the difference in attitudinal beliefs was not significant, $F(1,61) = 0.110$, $p = .472$, $\eta^2 = .002$.

Results also showed that there was no significant difference within the attitudinal groups between patients who continued the treatment and patients' who stopped taking the medication (drop-out; see Table 2; n=22).
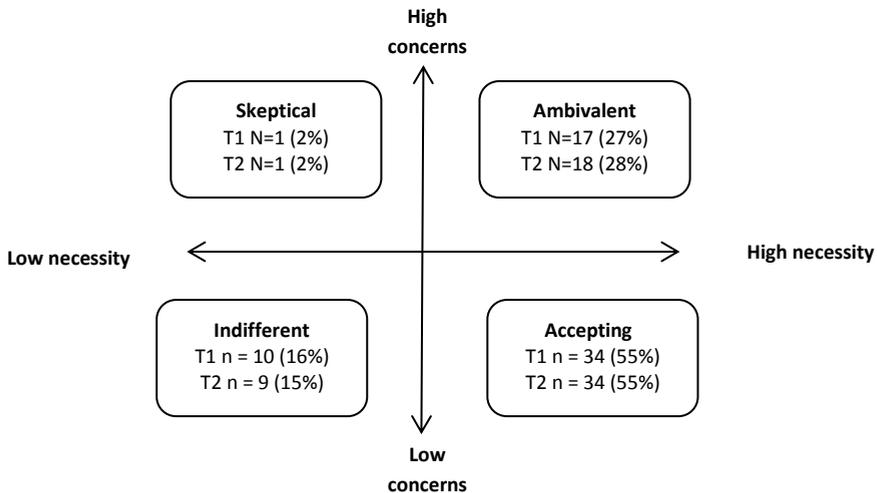

High concerns

Skeptical T1 N=1 (2%) T2 N=1 (2%)	**Ambivalent** T1 N=17 (27%) T2 N=18 (28%)

Low necessity ← → **High necessity**

Indifferent T1 n = 10 (16%) T2 n = 9 (15%)	**Accepting** T1 n = 34 (55%) T2 n = 34 (55%)

Low concerns

Figure 3. *Attitudinal analyses of beliefs about immunosuppressive or biological therapy over time.*

To explore the changes in the NCD over time, only patients who completed both questionnaires at T1 and T2 ($N = 62$) were included. On average, there was no difference between experienced concerns at the start ($M = 13.56$, $SD = 3.75$) and after six months ($M = 13.58$, $SD = 3.43$), $t(57) = -.04$, $p = .966$. There was also no difference between patients' personal need for medication at start of their treatment ($M = 18.41$, $SD = 3.21$) and after six months ($M = 18.27$, $SD = 3.49$), $t(57) = 0.28$, $p = .781$. According to the NCD, patients thought that the benefits of taking the medication outweighed the costs at T1 ($M = 4.84$, $SD = 4.11$) and T2 ($M = 4.68$, $SD = 4.67$), $t(57) = 0.24$, $p = .807$. These differences were not significant.

Table 2.
Differences in attitudinal groups for drop-out and participating patients

	Attitudinal groups			
Did the patient stop with the treatment?	**Sceptical**	**Ambivalent**	**Indifferent**	**Accepting**
Yes	1 (4.5%)	8 (36.4%)	2 (9.1%)	11 (50.0%)
No	1 (1.6%)	17 (27.4%)	10 (16.1%)	34 (54.8%)

Patients' satisfaction

To analyse satisfaction over time, only patients who completed both questionnaires at T1 and T2 (n = 62) were included. At the beginning of the treatment, patients were satisfied with nurses' general information about their disease and treatment (M = 3.63, SD = 0.42, range 1-5) and about nurses' affective communication (M = 3.74 SD= 0.37 range 1-5) and with nurses' support with their medication use (M= 3.47 SD= 0.42 range 1-5). (M = 7.8, SD = 1.0, range = 5 – 10 at T1) and after six months (M = 7.7, SD= 1.0, range = 5 - 9 at T2). An Anova with repeated measures showed that patients significantly rated the components of the satisfaction scale differently, Wilks' Lamba = .638, $F(2,68)$ = 19.278, $p < .001$, η^2 = .632.

After six months, patients were generally most satisfied about nurses' general information about their disease and treatment (M= 3.70 SD= 0.43 range 1-5) and affective communication (M= 3.71 SD= 0.42 range 1-5) and support with their medication use (M= 3.44 SD= 0.56 range 1-5). The difference between patients' satisfaction at start of the treatment and after six months was not significant. An Anova with repeated measures showed that patients significantly rated the components of the satisfaction scale differently, Wilks' Lamba = .040, $F(1,61)$ = 621.006, $p < .001$, η^2 = .960.

Table 3.
Medication beliefs

Scale	Range of score	Mean Score	SD	Minimum score	Maximum score	N
Necessity (t1)	5 to 25	18.47	3.26	10	25	84
Necessity (t2)	5 to 25	18.24	3.64	5	25	62
Concerns (t1)	5 to 25	13.75	3.64	6	25	84
Concerns (t2)	5 to 25	13.66	3.43	7	20	62
Differential (t1)	- 20 to 20	4.70	4.20	-4	19	84
Differential (t2)	- 20 to 20	4.58	4.80	-11	15	62

Satisfaction and medication beliefs

To investigate the relationship between satisfaction and patients' beliefs (NCD) towards their medication at T1, all patients who completed the questionnaire at T1 (N = 84) were included. Patients' satisfaction with the general information about their disease and treatment had a significant, positive relation with beliefs towards medication (β = .31, p = .012). This indicates that the more satisfied patients were with their nurses' information about their disease and treatment, the more positive beliefs they held towards their medication. Patients' satisfaction regarding the perceived level of tailoredness was significantly related to a more positive belief towards medication (β =.25, p = .024). This indicates that patients who were more satisfied about the level of tailoring in the consultation had more positive beliefs towards their medication. To measure the relation between satisfaction and patients' beliefs after six months, we repeated the analyses with the 62 patients who completed the questionnaire at T2. Results showed that patients'

satisfaction with the general information about their disease and treatment at T2 was significantly related to more positive beliefs towards medication after six months (β = .35 p = .015). However, the relation between the perceived level of tailoredness and positive beliefs towards medication disappeared.

Discussion

This study provides insights into IBD patients' beliefs about immunosuppressive or biological therapy and explored the relation between patient satisfaction with provider's communication and beliefs about medication. Our results can be summarized into three key findings. First, almost half of the patients perceived problems with taking the medication. Second, beliefs remained stable after six months. Third, patients' satisfaction with nurses' communication is significantly related to their beliefs about the medication.

At the start of their treatment, most patients accepted the medication, but almost half of the patients reported problems with believing that the medication was necessary and/or had concerns about the medication. Similar results in IBD patients taking maintenance medication have been reported (Ediger et al., 2007; Horne et al., 2009). Horne and colleagues (2009) compared the reported medication intake behavior across the four attitudinal groups. Results indicated that the 'accepting' group had the highest levels of successful medication intake behavior, which was significantly higher than all the other groups. Patients in all other attitudinal groups were significantly more likely to be nonadherent. To improve medication intake behavior through targeted interventions, it is important to identify patients who have negative beliefs about their medication. It may however be rather difficult for nurses to identify these beliefs, particularly if the nurses are not trained in the detection of such beliefs. A recent study developed an online preparatory assessment (OPA) which gains more insight into patients' beliefs and assists nurses in determining the most effective strategy to meet patients' specific beliefs. Based on the results of the OPA, nurses are informed about the perceived beliefs and specific communication strategies that should be used in order to address these negative beliefs (Linn, Weert, Smit, Perry, & Van Dijk, 2013).

According to the common-sense model of health and illness (Leventhal, Brissette, & Leventhal, 2003) and the NCF (Clifford et al., 2008), patients starting their treatment receive information about the medication and develop new beliefs based on new information and experiences. For example, a decrease in symptoms of one's illness can lead to less adaptive responses, such as lower perceived necessity (Leventhal et al., 2003). According to these models it seems plausible that medication beliefs may change over time. Our results show no statistical differences in the BMQ-Specific after six months. This is in contrast with other studies in which changes over time were measured. One study found more positive beliefs about antidepressants after six months (Aikens & Klinkman,

2012). Another study found more negative beliefs about medications for cardiovascular disease after twelve months (Allen LaPointe et al., 2010). However, these results were found in in other diseases. IBD patients starting with immunosuppressive or biological therapy can expect to experience improvement in their health after two to four months, depending on the type of medication (Mertens, Hertel, Reuther, & Ricker, 1981) which may explain why we did not observe any changes in beliefs. Another explanation may be that, according to the Elaboration Likelihood Model (ELM), patients engage in central-route processing if involvement is high, which means that one is willing to elaborate on the message. Attitudes formed via the central route are more stable (Petty & Cacioppo, 1986a). As IBD patients especially prefer to be actively involved in the decision-making process concerning their treatment (Baars et al., 2010), it seems plausible that IBD patients are more likely to engage in the central route, which makes beliefs more difficult to change. Moreover, the beliefs in the previous mentioned studies and in our study population were not targeted. This might be due to the failure of health care providers to apply appropriate techniques to change those beliefs. Communication skills training for health care providers should prioritize exploring, identifying and addressing patients' beliefs.

Our results indicate that patients' satisfaction with nurses' communication is significantly related to medication beliefs. In addition, our results indicate that patients' satisfaction regarding the extent to which the consultation was tailored to their needs was significantly associated with medication beliefs. Especially high quality information may prevent inaccurate information and thus negative beliefs. Previous studies in this field have consistently demonstrated a positive relationship between satisfaction and successful medication intake behavior (Bartlett et al., 1984; Hulka et al., 1976; Korsch et al., 1968; Ley, 1988; Zolnierek & DiMatteo, 2009). It is often assumed that this is also the case for patients' beliefs about medication.

Patients often report unmet information needs when starting with their medication (Irvine, 2004). Educating patients should be based on individual preferences, by directly asking patients about their needs. Previous studies showed that tailored information, which relates to the specific information needs of the patient, improves patient satisfaction (Kessels, 2003; Ley, 1979), recall of medical information (Kessels, 2003; Van der Meulen et al., 2008) and therefore may result in more successful medication intake behavior (Linn et al., 2012; Ownby, Hertzog, & Czaja, 2012). To improve medication intake behavior, our results indicate that it is important that providers use a tailored patient-centred approach; especially since it enables patients to discuss their beliefs, explaining benefits and risks of the medication (Nunes et al., 2009). As a consequence, patients may have more positive beliefs towards their medication. When patients were asked how satisfied they were with their nurses' information provided the past six months, the relation with medication beliefs remained. With these results in mind we can assume that communication may especially be important in the initiation of the treatment for

example, when the patient takes the first dose of a prescribed medication. Indeed, a review of reviews concluded that educational interventions such as interpersonal education appear to have a favourable impact on medication intake behavior. However, most of the effects decrease over time (Van Dulmen et al., 2007).

There was a moderate to strong positive relation between satisfaction and the perceived level of tailoredness. This may indicate that patients who are more satisfied about the information given during the consultation may perceive fulfilled information needs. This is in line with the work of Linder-Pelz (1982) who considers satisfaction as a multidimensional concept in which patient satisfaction is a positive attitude or a positive evaluation of health care services. In this view, patients' evaluate distinctive aspects of their care, for example the quality of the information and the degree to which the providers' information meets the patients' needs (Sixma, Kerssens, Campen, & Peters, 2002).

Limitations
Our study is limited because we measured the BMQ-Specific at a six months interval in IBD patients receiving immunosuppressive biological therapy. Since patients may form or change their beliefs based on an increase or decrease in symptoms of the illness, IBD patients starting with their medication have not sufficiently noticed the effectiveness of the medication after six months. Measuring the BMQ-Specific after six months may be too short for patients to notice significant changes in their health. This, in turn, may result in underestimating the results. Further research should include an interval of one year or even longer to measure changes in beliefs.

Conclusions
This study underlines that effective communication matching patients' needs and preferences leads to more positive beliefs about medication. Thus, the provision of tailored information makes patients more positive towards their prescribed medication. Thus adequate, high quality information which is tailored to the patients' needs is important when addressing beliefs about medication. Successful interventions should therefore focus on tailored adequate information to modify these beliefs.

Practical implications

With almost fifty percent of the patients experiencing problems with either their personal need for medication and/or concerns about their intake, this suggests the need for supporting patients with their beliefs and concerns. Responding adequately to patients' concerns is essential, because it reduces anxiety (Butow et al., 2002) and may promote satisfaction (Uitterhoeve et al., 2008), increases disclosure of emotions, concerns and worries (Roter & Larson, 2002), and gives providers a better understanding of patients' concerns which makes it easier to respond more adequately to these cues (Uitterhoeve et al., 2008). A previous study showed that adequate communication strategies, tailored to the patients' concerns are related to less concerns (as indicated by the BMQ-Specific; Linn et al., 2012). Especially since medication beliefs are associated with medication intake behavior, adequate, high quality information which is tailored to the patients' needs seems to be important in addressing patients beliefs and may also result in higher satisfaction with health care.