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Good or not bad?

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analogue patients with non-specific low back pain

Goed of niet slecht? De invloed van positief en negatief taalgebruik op analoge patiënten met
aspecifieke lagerugpijn

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Abstract

While previous studies have already shown that doctor-patient communication can influence patient outcomes, there is still uncertainty as to what communicative behaviours have an influence on which specific variables. The present study sets out to test analogue patients' reactions to a consultation between a GP and a patient with non-specific low back pain. In a between-subjects experiment, 115 participants watched a video vignette with either positive or negative language use. Findings indicate no differences between groups for recovery expectations, kinesiophobia, medical adherence intentions and evaluation of the message. When comparing results from before and after watching the video, however, both groups expected the pain to last shorter and to be more in control of the pain after they had seen the video. Hence, it can be concluded that consultations between GPs and patients can have positive effects, while language use was shown to have no demonstrable effect on the studied patient outcomes. These findings are inconsistent with most of the existing literature in the field. Future studies should focus on individual differences of patients rather than treating all participants as one homogeneous group.

Keywords: low back pain, language use, framing, doctor-patient communication, kinesiophobia

Introduction

In doctor-patient communication, the way in which a general practitioner (GP) communicates can play a key role in patient outcomes and well-being. Symptoms with a non-specific cause in particular require good communication by the doctor, since the patient is insecure which factors cause the pain and often has no concrete medicine to take. An example of such symptoms is non-specific low back pain. Non-specific low back pain is defined as 'back pain in the area between the lower ribs and the *gluteal sulcus* [Latin terminology for the butt crease], that has no attributable or specific cause' (Bons et al., 2017, p. 2). It is estimated that ninety-five percent of all acute low back pain cases have a non-specific cause (Bons et al., 2017). In Western society, sixty to ninety percent of the population will suffer from non-specific low back pain at least once in their lives (Bons et al., 2017). Patients of non-specific low back pain often suffer from kinesiophobia (Bons et al., 2017): a state in which a patient has 'an excessive, irrational and debilitating fear of physical movement and activity resulting from a feeling of vulnerability

to painful injury or re-injury' (Kori, Miller, & Todd, 1990). However, physical movement should be stimulated as much as possible by doctors, because movement has a positive effect on recovery from non-specific low back pain. In the case of non-specific low back pain in particular, doctors can thus play a key role in patient recovery and other patient outcomes. Hence, for doctors it is of importance to know how to communicate in these particular situations.

Physician communication has been studied extensively in the past couple of decades. Several frameworks have been proposed describing effects of communication on health outcomes, such as the direct and indirect pathways from communication to health outcomes (Street, Makoul, Arora, & Epstein, 2009) and the Transformation Model of Communication and Health Outcomes (Kreps, O'Hair, & Clowers, 1994). According to Street et al. (2009), communication affects health either through a direct path or a mediated route (indirect path). They propose seven pathways that can contribute to improved health, such as enhancing the therapeutic alliance or enhancing patients' ability to manage emotions. The relative importance of each pathway depends on contextual factors, such as the health condition and where the patient is in the illness trajectory. Kreps et al. (1994) believe that antecedent conditions, such as expectations before treatment and nature of the health problem, can also have an influence on health outcomes. In their Transformation Model of Communication and Health Outcomes, Kreps et al. (1994) propose that these antecedent conditions can influence health outcomes via the process of communication (e.g. language used and nonverbal cues). These frameworks demonstrate that there is a link between doctor-patient communication and health outcomes of patients.

Other studies have tested particular outcomes that doctor-patient communication may affect. Meta-analytic studies suggest that positive doctor-patient communication may result in less pain (Mistiaen et al., 2015), while at the same time it can have a positive influence on medical adherence (Zolnierek & Dimatteo, 2009). Moreover, a good relationship between doctor and patient seems to have a small positive influence on healthcare outcomes (Kelley, Kraft-Todd, Schapira, Kossowsky, & Riess, 2014). Although there is empirical evidence that positive doctor-patient communication can have an influence on several patient outcomes, there is still uncertainty as to what communicative behaviours have an influence on which specific patient outcomes (Van Vliet, Van Dulmen, Mistiaen, & Bensing, 2016). Communicative behaviours such as eye-contact, language use and gestures might all have an influence on patient outcomes, but the extent of this influence is still unknown and needs more empirical evidence. The present study contributes to the field of GP-patient communication research by

focussing on specific language use elements. This study makes a distinction between positive and negative language use, so that it can be studied if either of these language elements leads to different patient outcomes.

Communication as a placebo

The results of aforementioned multiple meta-analytic studies suggest that GP-patient communication can influence patient outcomes. Consultations between GPs and patients can have placebo effects. These are positive effects on patient outcomes and well-being that are caused by external factors, rather than the treatment itself. Several studies have addressed placebo in doctor-patient communication (Bensing & Verheul, 2010; Van Vliet et al., 2016). According to Bensing and Verheul (2010), there are three mechanisms that can produce placebo effects: conditioning, manipulating expectations, and affect manipulation. The conditioning effect occurs when patients have previous medical experiences that influence the current medical treatment. Manipulating expectations is also a placebo mechanism: a treatment can have a positive effect on the patient purely because the patient expects it to do so. The third mechanism is affect manipulation, which occurs for example when patients' stress is reduced before the actual treatment. Van Vliet et al. (2016) add that providing patients with sufficient information about treatments can also function as a placebo. Besides placebo effects, so-called nocebo effects occur in clinical practice. Nocebo effects are 'adverse events produced by negative expectations and represent the negative side of placebo effects' (Colloca & Finniss, 2012, p. 567). Colloca and Finniss (2012) recommend that clinicians should avoid negative expectations by patients during several phases of treatment (i.e. consent process, procedural information and follow-up assessments).

These phases of treatment are present in most GP-patient consultations, because consultations between GP and patient are usually structured in a conscious way; a process called sequencing. Several studies have addressed sequencing and give suggestions on how to structure doctor-patient interactions (Frankel, 1984; Wouda & Van de Wiel, 2012). A consultation between GP and patient typically starts with an open-ended question, followed by the anamnesis (a process in which the physician asks the patient about personal information and medical history), physical examination, diagnosis, shared decision making on treatment, and closing. When patients get to hear their diagnosis, patients' recall is often poor, because breaking bad news evokes physiological arousal (Sep, Van Osch, Van Vliet, Smets, & Bensing, 2014). As a result, patients are unable to process the information by the doctor and forget part of the information that was told. Communication can help patients in these situations. On the

longer term, poor recall can have a negative influence on medical adherence, because patients do not know sufficiently about their disease and thus – accidentally – fail to adhere to their therapy. Adherence to therapy is also linked with kinesiophobia, although the results on this variable are somewhat conflicting. In a study on kinesiophobia with patients with chronic low back pain, a negative – though non-significant – relation was found between kinesiophobia and physical activity level (Altug et al., 2016). In a similar study on kinesiophobia in chronic neck pain, however, it was shown that kinesiophobia was not correlated to physical activity (Demirbüken et al., 2016).

Effects of communication on patient outcomes

Patient recall can be improved with affective communication by the GP: being emotionally supportive; adopting in a warm, empathic, and reassuring manner (Van Osch, Sep, Van Vliet, Van Dulmen and Bensing, 2014, p. 1383). Van Osch et al. (2014) found that affective communication by the doctor reduced anxiety and uncertainty, while recall of the patient improved. An affective communication style is also recommended by Sep et al. (2014), because it can decrease physiological arousal and improve information recall, which has a positive influence on medical adherence. Besides, affect manipulation can have an influence on recovery expectations. As mentioned before, Colloca and Finniss (2012) recommend that clinicians should avoid negative expectations by patients during treatment, because affect manipulation can influence patients' expectations of treatment and recovery. Verheul, Sanders and Bensing (2010) found a positive influence of an affective communication style on patients' affective state and treatment outcome expectations. Treatment outcome expectations can play a key role in the actual recovery; meta-analytic evidence suggests that patients with low expectations of recovery are less likely to recover than patients with high expectations of recovery (Ebrahim et al., 2015).

Contrary to other patient outcomes in doctor-patient communication, little research has been done on evaluation of the message. However, the variable could give insight whether patients find certain messages more informative, clear, and understandable than others. In an experiment, Schmid Mast, Kindlimann and Langewitz (2005) measured evaluations of patients to different communication styles, and, as they conclude, 'how you put it really makes a difference'. In their study, participants were analogue patients – patients or healthy participants that participate in an experiment (Van Vliet et al., 2012) – who watched a video vignette; a scripted video. Schmid Mast et al. (2005) found that a patient-centered communication style (providing emotional support for the patient) had a positive outcome on the evaluative level of

patients; i.e., patient satisfaction was significantly higher than after a disease- or emotion-centered communication style. Other studies have focussed on which communication approach of the GP is preferred by the patient. Martins and Carvalho (2013), also using video vignettes, found that 77.8 percent of patients preferred an 'empathic professional' doctor, followed by 12.5 percent who preferred a 'distanced expert' and 9.7 percent an 'emotionally burdened expert'. Hence, little is known on evaluation of the message, but patients seem to have a clear preference in communication style of the GP: doctors that provide emotional support and that are close to the patient. GPs can adapt their communication to this style to achieve greater patient satisfaction.

Framing the message

GPs can put these communication styles in clinical practice with a process called framing. Framing is one of the most prevalent ways to adapt communication. Many studies have thus far focussed on the use of framing in doctor-patient communication. According to Entman (1993), to frame is 'to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described' (p. 52). Hence, a framed message is manipulated to emphasize particular aspects of a message.

Prospect theory by Kahneman and Tversky (1979) is one of the most-cited theories on framing. In short, prospect theory is about the use of gain and loss frames. In a gain frame, the positive aspect of a message is emphasized, while in the loss frame, the negative aspect of a message is emphasized. In the context of doctor-patient communication for example, a gain-framed message would be 'if you adhere to the therapy, you are more likely to survive', while a loss-framed message would be 'if you do not adhere to the therapy, you are more likely to die'. Rothman, Salovey, Antone, Keough and Drake Martin (1993, p. 430) propose that 'it is the match between a message frame and the required health behaviour' that depends whether a frame will lead to the desirable behaviour. Hence, as Zhao, Villagran, Kreps and McHorney (2012) note, it can be expected that a gain frame is more effective in motivating persistent medication taking than a loss frame. The reason for this is that both the gain frame and the recuperative behaviour (persistent medication taking) are health-affirming.

Levin, Schneider and Gaeth (1998) made a distinction between three types of framing, one of which is attribute framing. In attribute framing, the object/event attributes or characteristics are framed, which affects the item evaluation. An example of a positive attribute frame is 'there is ninety percent chance that you will live', instead of the opposed negative

attribute frame ‘there is ten percent chance that you will die’. In a study on general health communication, Bigman, Cappella, and Hornik (2010) found that respondents who were exposed to a positive attribute frame rated a vaccine as more effective than respondents who saw the negative frame. Framing results thus suggest that patients prefer a gain-framed or positive message. However, to date there is little evidence for specific positive and negative language use elements.

Negations and affirmations

Language use elements that have been studied in framing messages are negations and affirmations. According to Beukeboom, Finkenauer and Wigboldus (2010), a negation is a word that contains a negation marker (e.g. ‘not’ or ‘no’) to turn around the meaning of a proposition. In the context of doctor-patient communication, an example sentence with a negation would be ‘I know that it is not easy for you to exercise thirty minutes a day’. Affirmations, on the other hand, confirm the value and truth of a particular proposition. An example sentence with an affirmation would be ‘I know that it is difficult for you to exercise thirty minutes a day’. Negations are used frequently by doctors during diagnosis (Chapman, Bridewell, Hanbury, Cooper, & Buchanan, 2001; Dalianis & Velupillai, 2010). Chapman et al. (2001) conducted a corpus analysis incorporating more than 40,000 narrative clinical reports. They found that clinical observations in textual patient records are frequently negated, with a small number of negation phrases (such as ‘no’, ‘denies’, ‘not’, and ‘without’) being used the majority of the time. In a corpus study on Swedish clinical texts, Dalianis and Velupillai (2010) found a similar result. Negations and affirmations are thus shown to be frequently used in clinical practice and can henceforth be regarded as relevant for GP-patient communication research.

While some argue that negations and affirmations can be used in roughly the same way with the same meaning (Giora, 2006), others point out that negations can trigger stereotypic expectancies (Beukeboom et al., 2010). Beukeboom et al. (2010) carried out four different studies on negations, in which they found consistent evidence that ‘the use of negations is a source of bias that reflects and transmits a speaker’s prior assumptions and expectancies about other people’ (p. 988). In practice, this means that for example when a doctor tells a patient that the diagnosis is ‘not bad’, the patient might feel that the doctor expected the diagnosis to be bad in the first place, because of the (negated) word ‘bad’; findings that are supported by other studies (Schul, 2011).

In a study on negations and affirmations in the domain of doctor-patient communication, Burgers, Beukeboom and Sparks (2012) studied the influences of negations and affirmations

on patients' responses and medical adherence intentions. In an experiment in which both the frame and the use of negations and affirmations were manipulated, they found that suitable use of both frames depends on the context. When breaking positively framed bad news (e.g. by saying 'your situation is likely to improve' instead of 'your situation is likely to deteriorate'), Burgers et al. (2012) comment that doctors should not use negations. When breaking negatively framed news, though, doctors should employ negations. They suggest that future studies should focus on understudied linguistic variables in health context.

Although both framing and the use of negations have been studied extensively in the past, the use of specific language elements in GP-patient communication remained understudied. However, this study will focus on this aspect of GP-patient communication, with a distinction between positive and negative language use. In the present study, positive language use is defined as 'all words in an utterance with a positive meaning and connotation'. Hence, positive language use can consist of both negative content with a negation and positive content with an affirmation (i.e. 'not good' and 'good' are both counted as positive language use in this study). Negative language use, on the other hand, is defined as 'all words in an utterance with a negative meaning and connotation'. Negative language use can thus be both positive content with a negation and negative content with an affirmation (i.e. 'not bad' and 'bad' are both counted as negative language use in this study). This means that although 'not bad' might have a positive meaning in the context of the text, it is counted as negative language use because the word 'bad' has a negative connotation. An example sentence as 'the pain does not decrease' would be counted as positive, since the counterpart 'the pain deteriorates' has a clear negative meaning.

With the manipulation of different language use elements (positive/negative), this study can contribute to finding which specific language elements used by a GP have an effect on patient outcomes. As mentioned before, symptoms with a non-specific cause in particular require good communication by the GP. Hence, the focus in the present study will be on such a disease with a non-specific cause, namely non-specific low back pain.

Research questions

From this area of doctor-patient communication, the following research question appears: *What is the influence of positive versus negative language use in GP-patient communication on patient outcomes of analogue patients with non-specific low back pain?*

In addition, a number of sub-questions will be answered that focus on four dependent variables: recovery expectations, kinesophobia, medical adherence intentions, and the

evaluation of the message. The four sub-questions are: *What is the influence of positive versus negative language use in GP-patient communication on recovery expectations (SQ1), kinesiophobia (SQ2), medical adherence intentions (SQ3) and evaluation of the message (SQ4) of analogue patients with non-specific low back pain?*

Method

Materials

Two different versions of a video vignette were shown to the participants, which demonstrated a consultation between a GP and a patient with non-specific low back pain. The video vignette was a scripted encounter between a GP and a patient. One version was manipulated so that it contained positive language use by the GP, while the other was manipulated to negative language use by the GP. Hence, the independent variable was language use, which was manipulated either positively or negatively. Positive language use consisted of messages with negative content with a negation and positive content with an affirmation, while negative language use referred to messages with positive content with a negation and negative content with an affirmation. For example, in the positive video the GP said ‘I know that it is not easy for you to exercise’ (negation), while in the negative video the GP said ‘I know that it is difficult for you to exercise’ (affirmation). Similarly, another example is ‘Exercising aids the recovery process’ in the positive video (affirmation), while in the negative video ‘Exercising does not harm the recovery process’ was used (negation). The Dutch scripts of the positive and negative video can be found in Appendix A. Both versions of the video had a duration of approximately six and a half minutes, and the consultations consisted of three parts: anamnesis, diagnosis, and treatment recommendations. The anamnesis had identical content and language use for both versions. Language use was manipulated during diagnosis and treatment recommendations. Both diagnoses and recommendations were equal in terms of content; the only changes made were in the language use, as defined above. The same doctor and patient were used in both versions, so that language use was the only difference between the two videos.

Participants

In total, 115 Dutch participants took part in the experiment. There were slightly more male (52.2%) than female participants (47.8%). All participants were between 40 and 80 years old, with a mean age of 56.33 ($SD = 7.59$). Most participants had received higher education (33.9%) and secondary education (27.0%). One-fifth of the participants (20.9%) suffered from back pain during the time of the experiment, while approximately four-fifths of the participants (81.7%)

had suffered from back pain in the past. Since participants were watching a video, they were defined as analogue patients (Van Vliet et al., 2012). It was tested whether gender, educational level, having a job, suffering from back pain (all Chi square) and age (*t*-test) were equally distributed between the two groups. A Chi-square test showed that gender ($\chi^2 (1) = 0.22, p = .638$), educational level ($\chi^2 (3) = 0.27, p = .966$), people having a job ($\chi^2 (1) = 0.22, p = .636$), people currently suffering from back pain ($\chi^2 (1) = 0.26, p = .612$) and people suffering from back pain in the past ($\chi^2 (3) = 4.99, p = .172$) were indeed equally distributed between the two versions. Furthermore, an independent samples *t*-test showed that age was equally distributed between the two groups ($t (113) = 1.08, p = .283$).

Design

A between-subjects design was used. Each participant saw one of the two video vignettes. In total, 58 participants saw the video vignette with positive language use, while 57 participants saw the video with negative language use.

Instruments

Four dependent variables as well as several control variables were measured. The four dependent variables in this experiment were recovery expectations, kinesiophobia, medical adherence intentions, and evaluation of the message. Recovery expectations and kinesiophobia were pre-tested before watching the video. The full (Dutch) questionnaire can be found in Appendix B.

Recovery expectations were defined as ‘the extent to which patients expect to recover from their specific disease’, which in this case was non-specific low back pain. Recovery expectations were measured using items of the Brief Illness Perception Questionnaire (IPQ; Broadbent, Petrie, Main, & Weinman, 2006). In this study, similar to the study of Verheul et al. (2010), three items of the Brief IPQ were used to determine recovery expectations. The three items were measured on a ten-point continuous linear scale. Item one was recoded. Reliability of the Brief IPQ was insufficient before watching the video (reverse-coded; $\alpha = .43$), while after the video it was acceptable (reverse-coded; $\alpha = .74$). To ensure consistency, the Brief IPQ items of both before and after the video were analysed separately.

Kinesiophobia was defined as ‘a condition in which a patient has an excessive, irrational and debilitating fear of physical movement and activity resulting from a feeling of vulnerability to painful injury or re-injury’ (Kori, Miller, & Todd, 1990). In this study, kinesiophobia was measured using an adapted version of the Tampa Scale of Kinesiophobia (Miller, Kori, & Todd,

1991). While the original Tampa Scale of Kinesiophobia consisted of seventeen items, the present study only used seven items on a four-point Likert scale. Items included statements such as 'If I were the patient, I would be afraid to hurt myself if I keep exercising' and 'If I were the patient, I should not exercise'. Items two, three and six were recoded. Reliability of the Tampa-scale was insufficient, both before (reverse-coded; $\alpha = .48$) and after watching the video (reverse-coded; $\alpha = .59$). Hence, for the Tampa-scale, the sum-scores were calculated rather than the means.

For medical adherence intentions, the definition of general patient adherence was used, which is 'the degree to which patients follow the recommendations of their health professionals' (Zolnieriek & Dimatteo, 2009, p. 826). In the present study, medical adherence intentions were measured with items proposed by Burgers et al. (2012) and the Adherence Estimator of McHorney (2009). On a seven-point Likert scale, participants rated four items: whether following the doctor's advice was wise, a good idea, if they thought it would have a positive effect on the low back pain and if participants would actually try to follow the recommendations. The reliability of medical adherence intentions was acceptable ($\alpha = .92$).

Evaluation of the message was defined as 'the extent to which participants had a positive opinion on the message'. Evaluation of the message was measured with the same items as Burgers et al. (2012). In their study, participants evaluated whether they found the message informative, clear, understandable, and if it took away hope on a seven-point Likert scale. Reliability of evaluation of the message was good (reverse-coded; $\alpha = .79$); item four was recoded.

Besides the dependent variables, a number of control variables were tested as well. Participants were asked whether or not they had experience with non-specific low back pain. They also indicated the time frame when they suffered from non-specific low back pain. In addition, anxiety when watching the video was measured with the Dutch short form of the State-Trait Anxiety Inventory (STAI), comprising six items on a four-point Likert scale (Van der Bij, De Weerd, Cikot, Steegers, & Braspenning, 2003). This control variable was used as a separate measure for Kinesiophobia. Reliability of the State-Trait Anxiety Inventory (reverse-coded; $\alpha = .83$) was good; items two, three and six were recoded. Finally, transportation, comprising five constructs (attention, going into the narrative world, identification, empathy and emotions), was measured with the Video Engagement Scale (VES; Visser et al., 2016). The VES consisted of fifteen items on a seven-point Likert scale. Reliability of the Video Engagement Scale was good ($\alpha = .93$).

At the beginning of the questionnaire, participants were asked to fill in five questions about their demographical background. These questions were about gender, age, marital status, education and their current status in terms of a job and/or voluntary work. After participants had completed the questionnaire, they were thanked for their participation in the experiment.

Procedure

Recruitment of the participants was done by the researcher. After an appointment had been made, the experiment was conducted on an individual basis. Participants were told that they were going to watch a consultation between a GP and a patient of non-specific low back pain in a video. Participants did not know about the manipulations in the experiment; they were told that the questionnaire was part of the student's bachelor thesis. It was emphasized that participants had to imagine as if they were the patient as much as possible. Participants used a laptop to watch the video and filled out the questionnaire on paper. Before the start of the questionnaire, participants were asked to fill out an informed consent, which can be found in Appendix C. The researcher was present during study conductance. Participants first had to read a short text, after which the first part of the questions were answered. Afterwards, participants watched the video, and then they filled out the second part of the questionnaire. Participants were only able to watch the video vignette once; there was no option to rewind or replay. Patients had the option to give their e-mail address, so that they could be contacted with the results of the experiment if they wanted to. The procedure was the same for all participants. There was no financial reward; participants were motivated to take part by pointing out that other patients could benefit from the results of this particular study.

Statistical testing

Since means between two different groups of participants (between-subjects design) were measured, for each of the dependent variables, an independent samples *t*-test was conducted. This way, it could be tested whether there was a significant difference between the means of the two groups on each of the four dependent variables. Kinesiophobia and recovery expectations were compared before and after watching the video with a paired samples *t*-test. In addition, each of the variables was tested on correlations to check whether any relations could be found.

Results

The research question of this study was ‘What is the influence of positive versus negative language use in GP-patient communication on patient outcomes of analogue patients with non-specific low back pain?’. This question was tested with several sub-questions, namely ‘What is the influence of positive versus negative language use in GP-patient communication on recovery expectations (SQ1), kinesiophobia (SQ2), medical adherence intentions (SQ3) and evaluation of the message (SQ4) of analogue patients with non-specific low back pain?’. All data were checked for normal distribution and outliers, none of which were found. The means and standard deviations of the independent samples *t*-tests can be found in Table 1. Means and standard deviations of the dependent samples *t*-tests can be found in Table 2.

Recovery expectations

Recovery expectations were compared before and after watching the video for each of the two groups. Three separate dependent samples *t*-tests were conducted. A paired samples *t*-test showed a significant difference between expected duration of the pain and watching the video, both for negative language use ($t(56) = 3.80, p < .001$) and positive language use ($t(57) = 2.90, p = .005$). Participants who had seen the video with negative language thought the pain would last shorter after ($M = 7.51, SD = 1.58$) watching the video than before ($M = 6.49, SD = 1.99$). Participants who had seen the video with positive language also thought the pain would last shorter after ($M = 7.41, SD = 2.33$) watching the video than before ($M = 6.29, SD = 2.37$). A paired samples *t*-test also showed a significant difference between patients thinking to be in control of the pain and watching the video, both for negative language use ($t(56) = 3.25, p = .002$) and positive language use ($t(57) = 2.54, p = .014$). Participants who had seen the video with negative language thought to be more in control of the pain after ($M = 5.88, SD = 2.20$) watching the video than before ($M = 4.75, SD = 2.06$). Participants who had seen the video with positive language also thought to be more in control of the pain after ($M = 6.19, SD = 2.35$) watching the video than before ($M = 5.21, SD = 2.08$). A paired samples *t*-test showed no significant difference between perceived effectiveness of the treatment and watching the video, both for negative language use ($t(55) = 1.98, p = .053$) and positive language use ($t(57) = 1.23, p = .225$).

Table 1. Means and standard deviations (between brackets) for each of the dependent and control variables, as evaluated by the two groups

	Scale	Positive language use <i>n</i> = 58 <i>M</i> (<i>SD</i>)	Negative language use <i>n</i> = 57 <i>M</i> (<i>SD</i>)
<i>Dependent variables</i>			
Duration of the pain ^a	1-10	7.41 (2.33)	7.51 (1.58)
Control of the pain	1-10	6.19 (2.35)	5.88 (2.20)
Effectiveness of treatment	1-10	6.72 (2.30)	6.88 (2.07)
Kinesiophobia (beforehand)	7-28	16.70 (3.84)*	15.45 (2.75)*
Kinesiophobia (afterwards)	7-28	15.16 (4.08)	15.25 (3.40)
Medical adherence intentions	1-7	5.73 (1.60)	5.97 (0.94)
Evaluation of the message	1-7	5.63 (1.22)	5.74 (0.92)
<i>Control variables</i>			
Anxiety	1-4	1.54 (0.68)	1.45 (0.47)
Engagement in the video	1-7	4.12 (1.20)	4.33 (1.26)

^a Duration of the pain was reverse-coded. Hence, a higher score on expected duration of the pain means that the pain was expected to last shorter.

* Asterisks indicate a significant difference ($p < .05$).

In addition, it was tested whether recovery expectations differed between the two language use manipulations after watching the video. Three separate independent samples *t*-tests were conducted. An independent samples *t*-test showed no significant effect of language

use on expected duration of the pain ($t(100.47) = 0.26, p = .799$). Since Levene's Test for Equality of Variances was significant, equal variances were not assumed. An independent samples t -test also showed no significant effect of language use on patients thinking to be in control of the pain ($t(113) = 0.74, p = .464$). Finally, an independent samples t -test showed no significant effect of language use on perceived effectiveness of the treatment ($t(113) = 0.38, p = .709$).

Table 2. Means and standard deviations (between brackets) for recovery expectations and kinesiophobia, as evaluated before and after watching the video

	Scale	Positive language use $n = 58$		Negative language use $n = 57$	
		before $M (SD)$	after $M (SD)$	before $M (SD)$	after $M (SD)$
Duration of the pain ^a	1-10	6.29 (2.37)*	7.41 (2.33)*	6.49 (1.99)*	7.51 (1.58)*
Control of the pain	1-10	5.21 (2.08)*	6.19 (2.35)*	4.75 (2.06)*	5.88 (2.20)*
Effectiveness of treatment	1-10	6.26 (2.13)	6.72 (2.30)	6.23 (1.87)	6.84 (2.07)
Kinesiophobia	7-28	16.70 (3.84)*	14.93 (3.73)*	15.45 (2.75)	15.25 (3.40)

^a Duration of the pain was reverse-coded. Hence, a higher score on expected duration of the pain means that the pain was expected to last shorter.

* Asterisks indicate a significant difference ($p < .05$).

Kinesiophobia

Kinesiophobia was compared before and after watching the video for each of the two groups. A paired samples t -test showed no significant difference in kinesiophobia after watching the video for negative language use ($t(54) = 0.50, p = .620$). For positive language use, however, a paired samples t -test did show a significant difference in kinesiophobia after watching the video ($t(55) = 2.75, p = .008$). Participants who had seen the video with positive language use scored lower on kinesiophobia after ($M = 14.93, SD = 3.73$) watching the video than before ($M = 16.70, SD = 3.84$). However, it should be noted that already before watching the video the

participant group who would watch the positive video scored significantly higher on kinesiophobia than the group that would watch the negative video ($t(111) = 2.09, p = .039$); mean score on kinesiophobia for the positive group ($M = 16.70, SD = 3.84$) was higher than the negative group ($M = 15.39, SD = 2.74$). Thus, because of the high baseline the positive group was more likely to have a significant difference in the first place.

In addition, it was tested whether kinesiophobia differed between the two language use manipulations after watching the video. When comparing the two videos, an independent samples t -test showed no significant effect of language use on kinesiophobia ($t(110) = 0.14, p = .892$).

Medical adherence intentions

An independent samples t -test showed no significant effect of language use on medical adherence intentions ($t(92.47) = 0.97, p = .336$). Since Levene's Test for Equality of Variances was significant, equal variances were not assumed.

Evaluation of the message

An independent samples t -test showed no significant effect of language use on evaluation of the message ($t(105.60) = 0.54, p = .588$). Since Levene's Test for Equality of Variances was significant, equal variances were not assumed.

Additional analyses

Two control variables were measured, i.e. anxiety and engagement in the video. An independent samples t -test showed no significant effect of language use on anxiety levels ($t(101.41) = 0.82, p = .412$). Since Levene's Test for Equality of Variances was significant, equal variances were not assumed. An independent samples t -test also showed no significant effect of language use on engagement in the video ($t(113) = 0.93, p = .352$).

In addition, the data were tested for correlations. These tests were carried out to check if there were any other factors that could have influenced the results. All demographical data of the participants were tested with each of the variables. The results can be found in Table 3 and 4 in Appendix D.

Several significant correlations were found for the participant characteristics. A significant positive correlation was found between age of the participant and evaluation of the message ($r(115) = .22, p = .016$). Older subjects were shown to have a more positive attitude to the message than younger participants. Another significant positive correlation was found

between age of the participant and medical adherence intentions ($r(115) = .19, p = .040$). Older subjects were shown to have higher medical adherence intentions than younger participants. A significant positive correlation was also found between age of the participant and engagement in the video ($r(115) = .27, p = .004$). Older subjects were shown to be more engaged in the video than younger participants. In addition, a significant positive correlation was found between participants who had suffered from low back pain in the past and engagement in the video ($r_s(115) = .21, p = .027$). Participants with more experience with low back pain in the past were shown to be more engaged in the video than participants with less experience with back pain in the past. The remaining significant differences can be found in Tables 3 and 4.

Besides, correlation tests revealed several relations between the variables. Anxiety was shown to be a predictor for kinesiophobia; a significant positive correlation was found between anxiety and kinesiophobia before ($r(113) = .20, p = .032$) and after ($r(112) = .33, p < .001$) watching the video. Participants with higher anxiety levels were shown to score higher on kinesiophobia than participants with lower anxiety levels. A significant negative correlation was found between kinesiophobia and medical adherence intentions ($r(112) = -.34, p < .001$) and evaluation of the message ($r(112) = -.19, p = .048$). Participants who scored higher on kinesiophobia after watching the video were shown to have a lower score on medical adherence intentions and evaluation of the message than people who scored lower on kinesiophobia. The remaining significant differences can be found in Tables 3 and 4.

Conclusion and discussion

The research question of this experiment was ‘What is the influence of positive versus negative language use in GP-patient communication on patient outcomes of analogue patients with non-specific low back pain?’. All in all, language use was shown to have no demonstrable effect on the patient outcomes recovery expectations, kinesiophobia, medical adherence intentions and evaluation of the message. While the participants that watched the positive video did have a significant decrease in kinesiophobia, this difference can mainly be attributed to the high baseline score that the group had in the first place. This point was confirmed by a comparison between the two groups, which was not significant.

However, differences did occur before and after watching the video, indicating that the differences were on account of the consultation rather than the language use. In this study, watching the video led to higher expectations of recovery, namely a shorter duration of the pain and thinking to be more in control of the pain. Hence, it can be concluded that consultations between general practitioners and patients do have an effect on patient outcomes.

Comparison with the literature

The findings of this study are inconsistent with most of the existing literature in the field. Former research has already demonstrated that consultations can have positive effects on patient outcomes, a finding that was partly confirmed by this study. In the present experiment, it was found that a GP-patient consultation can have a positive effect on recovery expectations. This finding is supported by other studies (Sep et al., 2014; Verheul et al., 2010) focusing on this particular variable. While those studies also found beneficial effects of consultations on other variables, such as information recall and patient's affective state, this study did not find any other benefits.

For example, this study found no differences in medical adherence intentions for each of the two conditions (i.e. positive and negative), while others did (Burgers et al., 2012; Zhao et al., 2012; Zolnieriek & Dimatteo, 2009). However, it should be noted that many studies in the field, e.g. Burgers et al. (2012), use the context of breaking bad news, while this study did not. As noted before, breaking bad news can evoke physiological arousal (Sep et al., 2014). In this study, the consultation ended with a diagnosis, namely non-specific low back pain rather than a hernia, which could even be regarded as good news for the patient. Hence, there was no physiological arousal and the condition of the patient is different to that of other studies, which might account for the conflicting results. For evaluation of the message, no result was found as well. Others did find differences with the exact same items (Burgers et al., 2012), but again, this was in the context of breaking bad news. Notable for evaluation of the message were the high scores that both groups had on this variable. In the study of Burgers et al. (2012), the highest score on this variable was 4.30, while in this study, the positive group evaluated the message with 5.63 and the negative group with 5.74. Apparently, both groups were positive about the message, regardless of the language that was used.

Most notably, language use has no effect on recovery expectations, kinesiphobia, medical adherence intentions and evaluation of the message. There could be underlying causes for this finding, one of which is the Consideration of Future Consequences (CFC) that was studied by multiple scholars (Orbell, Perugini, & Rakow, 2004; Zhao et al., 2012). CFC is divided in low CFC (focused on the short term rather than the long term) and high CFC (focused on the long term rather than the short term). In their study, Orbell et al. (2004) found that low CFC individuals, confronted with information about short-term negative outcomes, ignored information about long-term benefits. This finding is especially relevant in the context of the present study, in which kinesiphobia was measured. While exercising might be painful on the

short term, it can lead to better recovery on the long term. Incorporating CFC in this study could have yielded different results, moreover because other studies (Zhao et al., 2012) confirm the results of Orbell et al. (2004). Negation phrases are used to turn around the meaning of a proposition and thereby make a statement more indirect. For example, ‘not bad’ is a more indirect way of saying ‘good’. In that case, indirect negation phrases would appeal more to people with high CFC, while direct affirmation phrases would appeal more to low CFC. Thus, individual differences in CFC could lead to a different preference for either negations or affirmations.

Strengths and limitations

Although both framing and the use of negations have been studied extensively in the past, the use of specific language elements in GP-patient communication remained understudied. This study has contributed to the literature by studying the (limited) effects of language use on patient outcomes, being one of the first to do so. A strong point of this study was the design used. Recovery expectations and kinesiophobia were not only measured after but also before watching the video, revealing additional effects. Another strong point was the video vignette that was used. The videos were judged as reliable by a coordinator of a GP training programme, indicating a realistic and representative encounter between a GP and patient. The procedure of the experiment was strict. Because the researcher was present while participants were watching the videos rather than sending them the video online, the researcher could ensure that participants were not distracted. Moreover, a relevant participant group (aged forty to eighty) was studied rather than a group of students, as is the case in many other studies.

The present study has several limitations. One of those is the use of analogue patients rather than real patients. However, meta-analytic evidence suggests that the use of analogue patients is a valid measure and that analogue patients can ‘provide knowledge on the patient perspective on communication’ (Van Vliet et al., 2012, p. 1541). Moreover, all participants were in the target group of back pain (age forty to eighty) and approximately four-fifths of the participants had suffered from back pain in the past. Another limitation is the fact that the manipulation in the video vignettes occurred after more than four minutes. At this point, concentration of the participants might have been lower than at the beginning of the video, diminishing the effect of language use manipulations. While a shorter video could have led to different results, it would have decreased the realism of the consultation. Hence, the current design was chosen.

One reviewer commented on the operationalization of the manipulation that was used. Statements as ‘I know that it is not easy for you to exercise, but exercising will improve recovery’ (positive) and ‘I know that it is difficult for you to exercise, but exercising will not worsen the recovery’ (negative) were used as opposites in this study. However, it could be argued that they accentuate different aspects, namely manipulating expectations in the positive condition and empathy in the negative condition. If that were the case, the lack of consistency in the manipulation could have influenced the results. It should be noted however that, despite possibly manipulating different aspects, no differences were found on those aspects.

Future studies could focus on a more deeper understanding as to which specific communicative behaviours have an influence on which patient outcomes. As others have done already (Orbell et al., 2004; Zhao et al., 2012), it would be recommended to focus on individual differences, such as CFC, rather than treat all participants as one homogeneous group. While analogue patients seem to provide information from the patient’s perspective, studying a group of real patients would be preferable. Clear distinctions in frames should be made, such as the difference between a gain and a loss frame. In such a design, manipulated differences will be greater than in the present study and thus possibly yield to different results. More research is needed to assess how GPs should and should not communicate during doctor-patient interactions.

Implications

This study has yielded several theoretical and practical implications. As Van Vliet et al. (2016) stated, there is still uncertainty as to what communicative behaviours have an influence on which specific patient outcomes. Findings of this study indicate that at least language elements have no demonstrable effect. The results contribute to the theoretical frameworks that have been proposed thus far, such as the direct and indirect pathways from communication to health outcomes (Street et al., 2009). Street et al. (2009) distinguished pain control and remission as health outcomes; both items were indeed shown to improve in this study. This experiment also contributes to the Transformation Model of Communication and Health Outcomes (Kreps et al., 1994). While Kreps et al. (1994) argued that ‘language used’ was one of the communicative factors that affected health outcomes, findings of this experiment conflict with that theory. Language used seems to have no effect on patient outcomes.

In terms of practical implications, the main finding of this study is that consultations do have an effect. Apparently, sequencing and the way in which consultations are structured in current clinical practice are effective. In addition, for GPs, this study has shown that specific

language use elements do not have beneficial nor detrimental effects on patient outcomes. Given results from previous studies, it would be recommended for GPs and doctors to focus on communication style (i.e. affective) rather than the specific elements.

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Appendix A – Transcripts of the videos

Script positief taalgebruik (*positive language use*)

(H = huisarts, P = patiënt)

Tekst

ANAMNESE

H: Goedemorgen, ik ben dokter de Jong

P: Goedemorgen, Mirte van Bremen

H: Gaat u zitten. Wat kan ik voor u doen, mevrouw van Bremen?

P: Nou, ik ben gisterenochtend wakker geworden met verschrikkelijke last van mijn rug. Ik heb er echt zo'n last van dat ik dacht: ik bel meteen voor een afspraak. Dus nu zit ik hier.

H: Hmm hmm. Heeft u enig idee wat het zou kunnen zijn; die rugpijn?

P: Ik moet steeds aan een hernia denken. Ik hoop natuurlijk dat dat het niet is...

H: Hmm hmm, en kunt u de pijn voor mij omschrijven? Is het een doffe pijn, of een scherpe pijn? Of heeft u last van steken?

P: Nou, ik zou niet zeggen: scherp. Maar ook niet dof... Lastig.

H: Geen specifiek last van steken ergens?

P: Nee, geen steken nee.

H: Kunt u aangeven waar de pijn precies zit?

P: Ja, hier. Echt helemaal in mijn onderrug.

H: Dus over de hele breedte van de rug?

P: Ja.

H: En heeft u daarbij ook last van urineverlies?

P: Nee, gelukkig niet.

H: En straalt de pijn uit naar uw been?

P: Ehhh, nee.

H: Heeft u een koud of doof gevoel in uw rug of ergens anders?

P: Nee, dat zou ik ook niet zeggen nee.

H: Heeft u nog gewoon gevoel in uw benen?

P: Ja hoor, ja.

H: En heeft u nog moeten hoesten of niezen? Heeft dat invloed op de pijn?

P: Hoesten hoef ik gelukkig niet, maar ik heb wel geniesd, dat is niet fijn.

H: Maar de pijn wordt niet erger door het niezen?

P: De rugpijn bedoelt u?

H: Ja, de rugpijn.

P: Nee, dat niet.

H: Heeft u koorts gehad de afgelopen dagen?

P: Nee dat denk ik niet.

P: Nee, nooit zo heftig.

Handeling

Geven hand

Gaan zitten (Patiënt gaat moeilijk zitten; rugpijn)

“Hier” hand op onderrug

H: En dit is gistermorgen begonnen...

P: Ja

H: Is er iets specifiek gebeurd waardoor de pijn zou kunnen worden veroorzaakt?

P: Nee, daar heb ik wel even nagedacht. Maar ik ben gewoon de dag ervoor wezen werken. Ik ben niet gevallen of zo, maar 's morgens werd ik wakker en was het zo.

H: Aha, en wat voor werk doet u?

P: Ik ben administratief medewerker bij een verzekeringsmaatschappij.

H: Hmm hmm. De pijn is dus gisterenmorgen begonnen... Wat heeft u in de loop van de dag gedaan?

P: Eehm. Ik ben opgestaan met zulke pijn. Toen dacht ik al: zo kan ik niet naar het werk. Ik ga altijd met de auto naar mijn werk, dus ik heb meteen gebeld. Vervelend voor mijn collega's, maar ik moest mijn werk afzeggen. Ik kreeg niet eens mijn sokken aan, zo veel pijn doet het...

H: U kreeg uw sokken niet aan zegt u. Heeft u nog pijn in andere houdingen?

P: Nou, niet specifieke houdingen, maar meer als ik iets wil gaan doen.

H: Dus als ik het goed begrijp is het niet echt mogelijk om de alledaagse dingen te doen op dit moment.

P: Nee. Ik heb rustig aan gedaan; ik heb haast niks gedaan eigenlijk. Toen ik ging slapen heb ik wat paracetamol genomen en toen ging het slapen wel een beetje, dus ik heb gelukkig wel een paar uurtjes slaap genomen.

H: Hmm hmm. Dus u heeft zelf al een paracetamol genomen tegen de pijn. Hoeveel paracetamol heeft u toen genomen?

P: Twee tabletten van 500mg geloof ik.

H: En heeft u nog andere dingen geprobeerd om te pijn te verminderen?

P: Ik heb een warme douche genomen, want ik dacht dat ik iets verrekt had of zo. Maar dat hielp ook niet.

H: Aha, dus eigenlijk is paracetamol het enige dat helpt?

P: Ja, toen heb ik ieder geval een paar uurtjes kunnen slapen.

H: Oke. Dus als ik het goed begrijp heeft u sinds gisterenmorgen onderrugpijn, paracetamol is eigenlijk het enige dat op dit moment helpt. Warm douchen heeft geen zin, maar de pijnstilling heeft wel effect gehad.

P: Ja.

DIAGNOSE

H: Op basis van wat u mij verteld heeft, denk ik aan iets anders dan een hernia, de specifieke klachten die daarbij horen zoals uitstraling van de pijn naar de benen en de steken ontbreken bij u. Waar de klachten wel bij passen is specifieke lage rugpijn.

P: Specifieke lage rugpijn? Wat houdt dat dan in?

H: Specifieke lage rugpijn is een onschuldige aandoening. Het samenspel van spieren, banden en botten functioneert minder goed. Wat precies de oorzaak is, is onbekend. Wat we wel weten is dat bewegen het herstel kan bevorderen. De heftigste pijn duurt meestal maar enkele dagen en neemt daarna af.

P: Ok.

ADVIES

H: U vertelde mij dat u rust heeft genomen, maar ik wil u aanraden om juist meer te gaan bewegen.

Typt gegevens in en kijkt daarna naar patiënt

P: Oke... Ook al krijg ik daar meer pijn van?

H: Ja ik weet dat het niet makkelijk is. Maar het is juist goed voor u om te bewegen. Beweging bevordert het herstel, en rust kan er juist voor zorgen dat u stijf wordt, waardoor de rugklachten erger kunnen worden. Daarom raad ik u aan om zoveel mogelijk de activiteiten zowel thuis als op het werk weer op te pakken.

P: Hmm, dat wordt wel moeilijk denk ik.

H: Als dat moeilijk wordt, kunt u altijd even rust nemen. Dit kunt u voor een paar uurtjes doen, en dan weer uw normale activiteiten herpakken. Probeer in ieder geval zoveel mogelijk te bewegen. U kunt ook paracetamol gebruiken, zoals u al deed, dat is aan te bevelen voor een korte periode. Neem vier maal daags twee tabletten van 500 mg. Daarmee bouwt u een voldoende hoge spiegel op en voorkomt u dat steeds weer die pijn ontstaat. Na vier dagen moet u dit gaan afbouwen en telkens één tablet minder nemen.

P: Ok. Ik ga het proberen. En als de pijn nu niet minder wordt?

H: Laten we afspreken dat als de pijn niet minder wordt, en langer dan een week aanhoudt, dat u dan weer een afspraak met mij maakt. Maar de verwachting is, dat de pijn minder wordt.

P: Oké, dat is goed.

H: Heeft u verder nog vragen voor mij?

P: Nee ik geloof het niet.

H: Prima, dan was dat het voor nu.

P: Ja, bedankt.

H: Tot ziens, dag.

P: Dag.

Einde van zin: staat op en
geeft hand
Staat moeizaam op en geeft
hand

Loopt weg

Script negatief taalgebruik (*negative language use*)

(H = huisarts, P = patiënt)

Tekst

ANAMNESE

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P: Goedemorgen, Mirte van Bremen

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H: Hmm hmm. Heeft u enig idee wat het zou kunnen zijn; die rugpijn?

P: Ik moet steeds aan een hernia denken. Ik hoop natuurlijk dat dat het niet is...

H: Hmm hmm, en kunt u de pijn voor mij omschrijven? Is het een doffe pijn, of een scherpe pijn? Of heeft u last van steken?

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P: Nee, geen steken nee.

H: Kunt u aangeven waar de pijn precies zit?

P: Ja, hier. Echt helemaal in mijn onderrug.

H: Dus over de hele breedte van de rug?

P: Ja.

H: En heeft u daarbij ook last van urineverlies?

P: Nee, gelukkig niet.

H: En straalt de pijn uit naar uw been?

P: Ehhh, nee.

H: Heeft u een koud of doof gevoel in uw rug of ergens anders?

P: Nee, dat zou ik ook niet zeggen nee.

H: Heeft u nog gewoon gevoel in uw benen?

P: Ja hoor, ja.

H: En heeft u nog moeten hoesten of niezen? Heeft dat invloed op de pijn?

P: Hoesten hoef ik gelukkig niet, maar ik heb wel geniesd, dat is niet fijn.

H: Maar de pijn wordt niet erger door het niezen?

P: De rugpijn bedoelt u?

H: Ja, de rugpijn.

P: Nee, dat niet.

H: Heeft u koorts gehad de afgelopen dagen?

P: Nee dat denk ik niet.

P: Nee, nooit zo heftig.

H: En dit is gistermorgen begonnen...

Handeling

Geven hand

Gaan zitten (Patiënt gaat moeilijk zitten; rugpijn)

“Hier” hand op onderrug

P: Ja

H: Is er iets specifiek gebeurd waardoor de pijn zou kunnen worden veroorzaakt?

P: Nee, daar heb ik wel even nagedacht. Maar ik ben gewoon de dag ervoor wezen werken. Ik ben niet gevallen of zo, maar 's morgens werd ik wakker en was het zo.

H: Aha, en wat voor werk doet u?

P: Ik ben administratief medewerker bij een verzekeringsmaatschappij.

H: Hmm hmm. De pijn is dus gisterenmorgen begonnen... Wat heeft u in de loop van de dag gedaan?

P: Eehm. Ik ben opgestaan met zulke pijn. Toen dacht ik al: zo kan ik niet naar het werk. Ik ga altijd met de auto naar mijn werk, dus ik heb meteen gebeld. Vervelend voor mijn collega's, maar ik moest mijn werk afzeggen. Ik kreeg niet eens mijn sokken aan, zo veel pijn doet het...

H: U kreeg uw sokken niet aan zegt u. Heeft u nog pijn in andere houdingen?

P: Nou, niet specifieke houdingen, maar meer als ik iets wil gaan doen.

H: Dus als ik het goed begrijp is het niet echt mogelijk om de alledaagse dingen te doen op dit moment.

P: Nee. Ik heb rustig aan gedaan; ik heb haast niks gedaan eigenlijk. Toen ik ging slapen heb ik wat paracetamol genomen en toen ging het slapen wel een beetje, dus ik heb gelukkig wel een paar uurtjes slaap genomen.

H: Hmm hmm. Dus u heeft zelf al een paracetamol genomen tegen de pijn. Hoeveel paracetamol heeft u toen genomen?

P: Twee tabletten van 500mg geloof ik.

H: En heeft u nog andere dingen geprobeerd om te pijn te verminderen?

P: Ik heb een warme douche genomen, want ik dacht dat ik iets verrekt had of zo. Maar dat hielp ook niet.

H: Aha, dus eigenlijk is paracetamol het enige dat helpt?

P: Ja, toen heb ik ieder geval een paar uurtjes kunnen slapen.

H: Oke. Dus als ik het goed begrijp heeft u sinds gisterenmorgen onderrugpijn, paracetamol is eigenlijk het enige dat op dit moment helpt. Warm douchen heeft geen zin, maar de pijnstilling heeft wel effect gehad.

P: Ja.

Typt gegevens in en kijkt daarna naar patiënt

DIAGNOSE

H: Op basis van wat u mij zojuist heeft verteld, denk ik niet aan een hernia. De specifieke klachten zoals verminderd gevoel en uitstraling van de pijn naar de benen treden bij u niet op. De klachten die u heeft zoals de pijn in de lage rug, zonder bijkomende klachten passen meer bij aspecifieke lage rugpijn.

P: Aspecifieke lage rugpijn, wat houdt dat in?

H: Aspecifieke lage rugpijn is een niet-ernstige aandoening. Het is het tijdelijk slecht functioneren van spieren, banden en botten in de rug, waardoor de pijn wordt veroorzaakt. Wat precies de oorzaak is, is niet aan te geven. Wel weten we dat rust ongunstig kan zijn voor het herstel. De heftigste pijn duurt meestal niet langer dan enkele dagen; daarna neemt het af.

P: Oké.

ADVIES

H: U vertelde mij dat u rust heeft genomen, maar ik raadt u juist aan om weer te gaan bewegen.

P: Bewegen... Maar ik krijg daar juist extra veel pijn van...

H: Ja, ook al is dat moeilijk. Het is niet slecht om te bewegen. Rusten kan juist ongunstig zijn voor het herstel, en daardoor kunt u stijf worden en juist meer rugklachten krijgen. Dus ik raadt u aan om juist uw activiteiten weer op te pakken, zowel thuis als op het werk.

P: Oké. Ik denk wel dat dat moeilijk wordt.

H: Als dat echt moeilijk wordt, kunt u altijd niet bewegen voor een paar uur, maar probeer daarna uw activiteiten weer op te pakken. Probeer gewoon zoveel mogelijk te bewegen. Daarnaast kunt u, zoals u nu al doet, paracetamol gebruiken. Dat is niet schadelijk voor een korte periode. U kunt vier maal daags twee tabletten van 500 mg gebruiken. Daarmee bouwt u voldoende hoge spiegel op zodat de pijn niet steeds terugkeert. Na vier dagen moet u dit weer afbouwen en kunt u elke keer één tablet minder nemen.

P: Ok. Ik ga het proberen. En als het nu niet minder wordt?

H: Laten we afspreken dat als het niet minder wordt, en de pijn langer dan een week aanhoudt, dat u dan weer een afspraak maakt en dat we dan even verder kijken. Maar de verwachting is, dat de pijn niet zal aanhouden.

P: Oké, dat is duidelijk.

H: Heeft u verder nog vragen voor mij?

P: Nee ik geloof het niet.

H: Prima, dan laten we het hierbij.

P: Ja, bedankt.

H: Tot ziens.

P: Dag.

Einde van zin: staat op en
geeft hand
Staat moeizaam op en geeft
hand

Loopt weg

Appendix B – Dutch version of the questionnaire

Radboud Universiteit



Beste deelnemer,

Fijn dat u wilt deelnemen aan dit onderzoek! Wij zijn studenten Communicatie- en Informatiewetenschappen aan de Radboud Universiteit Nijmegen. Dit onderzoek voeren we uit in het kader van onze bachelorscriptie en zal gaan over arts-patiëntcommunicatie.

Allereerst beantwoordt u een paar algemene vragen. Vervolgens krijgt u een korte situatieschets te lezen. Voor het beantwoorden van de vragen die daarop volgen is het belangrijk dat u zich gedurende het hele onderzoek inleeft in de patiënt uit de geschetste situatie. Daarna zult u dezelfde patiënt te zien krijgen in een videofragment. Probeer u zich zo veel mogelijk in haar te verplaatsen (wat zij denkt en voelt) en beantwoordt op basis daarvan de vragen die aan u worden voorgelegd. Wij vragen u daarom om de video aandachtig te bekijken.

Deelname aan het onderzoek zal ongeveer 15 tot 20 minuten duren. Bij het beantwoorden van de vragen zijn geen goede of foute antwoorden mogelijk; het gaat om uw mening. De gegevens die we in dit onderzoek verzamelen, zullen door wetenschappers gebruikt worden voor artikelen en presentaties. Natuurlijk maken we deze gegevens volledig anoniem. Tevens zullen uw gegevens nooit aan derden worden verstrekt. U doet vrijwillig mee aan dit onderzoek en kunt op elk moment tijdens het invullen van de vragenlijst uw deelname stopzetten.

Voor vragen kunt u contact opnemen met onze begeleidster drs. Inge Stortenbeker (i.stortenbeker@let.ru.nl).

Alvast hartelijk bedankt voor uw medewerking!

Hieronder volgen eerst een paar algemene vragen over uw persoonlijke situatie. Schrijf alstublieft uw antwoord op het lijntje, kruis aan wat op u van toepassing is of omcirkel het getal dat op u van toepassing is. Let op: U kunt maar één antwoord per vraag invullen of omcirkelen. Verder is het de bedoeling dat u geen vragen overslaat, tenzij dit wordt aangegeven.

1. Wat is uw geslacht?

☐ Vrouw

☐ Man

2. Wat is uw leeftijd?

_____ jaar

3. Wat is uw opleidingsniveau?

Als u momenteel met een studie bezig bent, kruis deze dan aan.

☐ Geen onderwijs

☐ Basisschool

☐ Middelbaar onderwijs

☐ Lager beroepsonderwijs

☐ Hoger Beroepsonderwijs (HBO)

☐ Universitair (WO)

☐ Anders namelijk; _____

4. Wat is uw burgerlijke staat?

☐ Alleenstaand

☐ In een relatie

☐ Samenwonend of getrouwd

☐ Gescheiden

☐ Weduwnaar/Weduwe

5. Werkt u momenteel (betaald of vrijwillig)?

☐ Ja, ik werk als; _____

☐ Nee

Als u deze vraag met nee beantwoordt, ga dan door naar vraag 7.

6. Hoeveel uur per week werkt u gemiddeld?

_____ uur per week

7. In hoeverre vindt u uw werk (betaald of vrijwillig) fysiek zwaar?

Helemaal niet zwaar 1 2 3 4 5 6 7 Heel erg zwaar

8. Hoe vaak bent u lichamelijk actief?

Denk bijvoorbeeld aan sporten, fietsen, wandelen

☐ Nooit

☐ 1 keer per week

☐ 2-3 keer per week

☐ Vaker dan 3 keer per week

9. Heeft u op dit moment last van rugpijn?

☐ Ja

☐ Nee

10. Heeft u in het verleden last gehad van rugpijn?

☐ Nee, nooit

☐ Ja, soms

☐ Ja, regelmatig

☐ Ja, vaak

Als u vraag 9 en 10 met 'nee' heeft beantwoord, ga dan verder naar de tekst onder aan deze pagina.

11. Hoe lang houdt de rugpijn aan, of hoe lang heeft deze aangehouden?

☐ Korter dan 6 weken

☐ Tussen de 6 en 12 weken

☐ Langer dan 12 weken

12. Heeft u de huisarts bezocht voor uw klachten?

☐ Ja

☐ Nee

Als u deze vraag met 'nee' beantwoordt, sla dan vraag 13 over.

13. De huisarts hielp mij bij mijn klachten.

Helemaal mee oneens

1

2

3

4

5

6

7

Helemaal mee eens

Voordat u verder gaat met het onderzoek, is het belangrijk dat u zich inleeft in de volgende situatie. Leest u deze alstublieft aandachtig door:

“Sinds gisterochtend heeft u last van heel erge rugpijn, onderin uw rug. U weet niet wat het precies is, u denkt dat het misschien wel een hernia kan zijn. U heeft de pijn nog nooit eerder gevoeld en u weet niet wat de oorzaak van de klachten is. Uw dagelijkse activiteiten worden sterk belemmerd, omdat u erge pijn ervaart wanneer u beweegt. U heeft zich hierdoor ziek gemeld op werk. Met een warme douche, door te rusten en door het nemen van paracetamols heeft u geprobeerd de pijn te verminderen. Helaas namen deze maatregelen de pijn niet weg. Daarom heeft u besloten een afspraak te maken bij de huisarts.”

Voor het beantwoorden van de vragen die hierna volgen, is het belangrijk dat u zich goed kunt inleven in de situatie omschreven op de vorige pagina. Lees daarom, indien nodig, de situatie nogmaals door. Beantwoord daarna de onderstaande vragen vanuit die situatie.

14. Hoe lang denkt u dat de rugpijn aan zal houden?

Voor korte tijd 1 2 3 4 5 6 7 8 9 10 Voor altijd

15. Hoeveel controle denkt u te hebben over de klachten?

Helemaal geen controle 1 2 3 4 5 6 7 8 9 10 Volledige controle

16. In hoeverre denkt u dat de behandeling zal helpen tegen de rugpijn?

Helemaal niet 1 2 3 4 5 6 7 8 9 10 Helemaal wel

Als ik de patiënt was, dan zou ik...

17. bang zijn ietsel op te lopen als ik bleef bewegen.

Helemaal niet 1 2 3 4 Helemaal wel

18. waarschijnlijk minder pijn ervaren als ik lichamelijk actief zou zijn.

Helemaal niet 1 2 3 4 Helemaal wel

19. erover nadenken om meer te bewegen.

Helemaal niet 1 2 3 4 Helemaal wel

20. bang zijn om na het doen van lichaams oefeningen pijn te hebben.

Helemaal niet 1 2 3 4 Helemaal wel

21. verwachten dat mijn pijn erger wordt als ik me over de rugklachten heen zou zetten.

Helemaal niet 1 2 3 4 Helemaal wel

22. niet geloven dat het gevaarlijk is als ik ergens veel pijn door krijg.

Helemaal niet 1 2 3 4 Helemaal wel

23. geen lichaams oefeningen moeten doen.

Helemaal niet 1 2 3 4 Helemaal wel

Voordat u de video gaat bekijken, vragen wij u aan te geven hoe goed u zich kon inleven in de beschrijving van de situatie van de patiënt.

24. Tijdens het lezen van de tekst was ik volkomen geconcentreerd op de tekst.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

25. Ik kon me goed verplaatsen in de situatie van de patiënt.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

26. Ik voelde mee met de patiënt.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

Dit was het eerste deel van de vragenlijst.

U krijgt nu een video te zien van een consult bij de huisarts. Het consult gaat over een patiënt die last heeft van rugpijn. Probeert u zich in te beelden dat u in de stoel van de patiënt zit. Kijk en luister goed naar het consult en probeert u zich zo goed mogelijk in te leven in de situatie van de patiënt. Na het kijken van de video volgt het tweede deel van de vragenlijst.

U kunt dit deel nu inleveren waarna u het tweede deel van de vragenlijst ontvangt.



U heeft zojuist een video gezien van een gesprek tussen een huisarts en patiënt. Probeert u zich ook bij het invullen van deze vragen zo goed mogelijk in te leven in de patiënt.

27. Hoe lang denkt u dat de rugpijn aan zal houden?

Voor korte tijd 1 2 3 4 5 6 7 8 9 10 Voor altijd

28. Hoeveel controle denkt u te hebben over de klachten?

Helemaal geen controle 1 2 3 4 5 6 7 8 9 10 Volledige controle

29. In hoeverre denkt u dat de behandeling zal helpen tegen de rugpijn?

Helemaal niet 1 2 3 4 5 6 7 8 9 10 Helemaal wel

Als ik de patiënt was, dan zou ik...

30. bang zijn ietsel op te lopen als ik bleef bewegen.

Helemaal niet 1 2 3 4 Helemaal wel

31. waarschijnlijk minder pijn ervaren als ik lichamelijk actief zou zijn.

Helemaal niet 1 2 3 4 Helemaal wel

32. erover nadenken om meer te bewegen.

Helemaal niet 1 2 3 4 Helemaal wel

33. bang zijn om na het doen van lichaams oefeningen pijn te hebben.

Helemaal niet 1 2 3 4 Helemaal wel

34. verwachten dat mijn pijn erger wordt als ik me over de rugklachten heen zet.

Helemaal niet 1 2 3 4 Helemaal wel

35. niet geloven dat het gevaarlijk is als ik ergens veel pijn door krijg.

Helemaal niet 1 2 3 4 Helemaal wel

36. geen lichaams oefeningen moeten doen.

Helemaal niet 1 2 3 4 Helemaal wel

De volgende vragen gaan over het gevoel dat u had tijdens het kijken van de video.

Terwijl ik de video keek...

37. voelde ik me kalm.

Helemaal niet 1 2 3 4 Heel erg

38. voelde ik me gespannen.

Helemaal niet 1 2 3 4 Heel erg

39. was ik van streek.

Helemaal niet 1 2 3 4 Heel erg

40. was ik ontspannen.

Helemaal niet 1 2 3 4 Heel erg

41. voelde ik me tevreden.

Helemaal niet 1 2 3 4 Heel erg

42. was ik bezorgd.

Helemaal niet 1 2 3 4 Heel erg

De volgende vragen gaan over het advies van de arts.

43. Ik vind het advies van de arts een goed idee.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

44. Ik vind dat het advies van de arts wijs is.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

45. Ik denk dat het advies van de arts een positief effect zal hebben op de rugpijn.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

46. Ik zou proberen het advies op te volgen.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

De volgende vragen gaan over de arts zelf.

47. De arts heeft veel aandacht voor de behoeften van de patiënt en stelt deze voorop.

Helemaal niet 1 2 3 4 5 Helemaal wel

48. Ik twijfel of arts echt om de patiënt geeft.

Helemaal niet 1 2 3 4 5 Helemaal wel

49. Ik vertrouw de arts dermate dat ik het advies op zou volgen.

Helemaal niet 1 2 3 4 5 Helemaal wel

50. Ik vertrouw erop dat de arts de medische behoeften op de eerste plaats zet bij behandeling van de patiënt.

Helemaal niet 1 2 3 4 5 Helemaal wel

51. Ik vertrouw erop dat de arts het zou vertellen als er een fout in de behandeling gemaakt wordt.

Helemaal niet 1 2 3 4 5 Helemaal wel

De volgende vragen gaan het over het gesprek tussen de arts en patiënt.

Het consult dat ik zojuist gezien heb, was...

52. informatief.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

53. duidelijk.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

54. begrijpelijk.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

55. ontmoedigend.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

56. realistisch.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

Tot slot volgt er een aantal vragen over de mate waarin u zich kon inleven in de video.

57. Tijdens de video was ik volkomen geconcentreerd op de video.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
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58. Tijdens de video leek het alsof ik aanwezig was bij de gebeurtenissen die plaats vonden in de video.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
---------------------	---	---	---	---	---	---	---	-------------------

59. Toen ik de video aan het bekijken was, waren mijn gedachten volkomen bij de video.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
---------------------	---	---	---	---	---	---	---	-------------------

60. Nadat de video afgelopen was, had ik het gevoel dat ik terugkwam in de realiteit.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
---------------------	---	---	---	---	---	---	---	-------------------

61. Toen ik al een tijdje naar de video gekeken had, leek het alsof ik één werd met de patiënt in de video.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
---------------------	---	---	---	---	---	---	---	-------------------

62. Ik kon me goed verplaatsen in de patiënt in de video.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
---------------------	---	---	---	---	---	---	---	-------------------

63. De video heeft me geraakt.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
---------------------	---	---	---	---	---	---	---	-------------------

64. Tijdens het kijken naar de video, was ik in de wereld van de video.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
---------------------	---	---	---	---	---	---	---	-------------------

65. Tijdens het kijken van de video, voelde ik dezelfde emotie als de patiënt.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
---------------------	---	---	---	---	---	---	---	-------------------

66. Ik vond de video indrukwekkend.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
---------------------	---	---	---	---	---	---	---	-------------------

67. Ik voelde mee met de patiënt in de video.

Helemaal mee oneens	1	2	3	4	5	6	7	Helemaal mee eens
---------------------	---	---	---	---	---	---	---	-------------------

68. Tijdens het kijken van de video, was ik me niet bewust van de ruimte om me heen.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

69. Tijdens het kijken van de video had ik het gevoel dat ik hetzelfde meemaakte als wat de patiënt meemaakte.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

70. In mijn gedachten leek het alsof ik de patiënt in de video was.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

71. Door het kijken van de video, ervoer ik diverse emoties.

Helemaal mee oneens 1 2 3 4 5 6 7 Helemaal mee eens

Dit is het einde van het onderzoek. Hartelijk bedankt voor uw deelname!

Appendix C – Informed consent for the participants



TOESTEMMINGSVERKLARING

Naam onderzoek: Arts-patiënt communicatie bij lage rugpijn

Verantwoordelijke onderzoeker: drs. I.A. Stortenbeker

Verklaring deelnemer

Ik heb uitleg gekregen over het doel van het onderzoek. Ik heb vragen mogen stellen over het onderzoek. Ik neem vrijwillig aan het onderzoek deel. Ik begrijp dat ik op elk moment tijdens het onderzoek mag stoppen als ik dat wil. Ik begrijp hoe de gegevens van het onderzoek bewaard zullen worden en waarvoor ze gebruikt zullen worden. Ik stem in met deelname aan het onderzoek.

Naam:

Geboortedatum:

Handtekening:

Datum:

Verklaring uitvoerend onderzoeker

Ik verklaar dat ik de hierboven genoemde persoon juist heb geïnformeerd over het onderzoek en dat ik mij houd aan de richtlijnen voor onderzoekers zoals verwoord in het protocol van de Ethische Toetsingscommissie Geesteswetenschappen

Naam:

Handtekening: Datum:.....

Appendix D – Correlation tables

Table 3. Pearson correlations (*r*) between demographics and all of the dependent and control variables (*N* = 115)

Variable	Age	Educational level	Working hours	Having a tough job	Physical activity	Having suffered from back pain in the past	Duration of the pain	Helpfulness of the GP	T0 Duration of pain	T0 Control of pain	T0 Effectiveness of treatment
Age											
Educational level	,070										
Working hours	-,045	,085									
Having a tough job	-,088	-,373**	,321**								
Physical activity	,091	,039	-,257*	-,108							
Having suffered from back pain in the past	,099	-,142	,119	,201*	-,051						
Duration of the pain	-,036	-,044	-,011	,170	-,022	,416**					
Helpfulness of the GP	,377**	,156	-,050	,148	-,150	-,060	-,083				
T0 Duration of pain	-,115	,066	,067	-,160	-,005	-,035	-,212*	-,129			
T0 Control of pain	,043	-,117	,061	,180	-,089	-,027	-,085	,238	,301**		
T0 Effectiveness of treatment	,044	,006	,292**	-,123	,196*	-,171	-,141	,162	,134	,171	
T1 Duration of pain	,038	,106	-,050	-,128	,161	,039	,029	,025	,273**	-,092	,176
T1 Control of pain	,144	-,051	-,120	-,023	,079	-,098	,102	,344*	-,024	,187*	,164
T1 Effectiveness of treatment	,028	-,054	-,094	-,118	,012	,002	,078	,021	,096	,026	,226*
Engagement in the video	,266**	-,034	-,017	,125	,122	,200*	-,070	,121	-,151	-,191*	,107
Anxiety	-,135	-,101	,052	,113	-,013	-,064	-,085	-,010	-,108	,012	-,214*
T0 Kinesiophobia	-,068	,085	-,093	,003	-,054	-,106	-,069	,018	-,317**	-,281**	,003
T1 Kinesiophobia	-,004	-,054	-,116	,152	,103	,010	-,023	,213	-,086	,033	-,180
Medical adherence intentions	,192*	-,049	-,086	-,036	,206*	-,024	,074	-,043	,042	-,098	,229*
Evaluation of the message	,224*	-,067	-,107	,009	,130	,093	,192	,118	-,137	-,098	,140

Table 3. Continued.

Variable	T1 Duration of pain	T1 Control of pain	T1 Effectiveness of treatment	Engagement in the video	Anxiety	T0 Kinesiophobia	T1 Kinesiophobia	Medical adherence intentions	Evaluation of the message
Age									
Educational level									
Working hours									
Having a tough job									
Physical activity									
Having suffered from back pain in the past									
Duration of the pain									
Helpfulness of the GP									
T0 Duration of pain									
T0 Control of pain									
T0 Effectiveness of treatment									
T1 Duration of pain									
T1 Control of pain	,439**								
T1 Effectiveness of treatment	,442**	,587**							
Engagement in the video	,029	-,018	-,064						
Anxiety	-,294**	-,233*	-,222*	-,087					
T0 Kinesiophobia	,012	-,105	-,136	-,055	,202*				
T1 Kinesiophobia	-,318**	-,224*	-,353**	-,044	,333**	,316**			
Medical adherence intentions	,455**	,317**	,444**	,113	-,545**	-,159	-,341**		
Evaluation of the message	,325**	,375**	,356**	,319**	-,461**	-,022	-,187*	,629**	

** Significant at $p < .01$.* Significant at $p < .05$.

Table 4. Spearman correlations (r_s) between demographics and all of the dependent and control variables ($N = 115$)

Variable	Gender	Marital status	Having a job	Currently suffering from back pain	Visiting a GP
Gender					
Marital status	-,048				
Having a job	-,067	,137			
Currently suffering from back pain	,065	-,200*	,045		
Visiting a GP	-,115	-,131	-,004	,323**	
T0 Duration of pain	,062	-,007	-,026	,174	,123
T0 Control of pain	-,021	,131	,069	,018	,028
T0 Effectiveness of treatment	-,110	,019	-,010	,081	,048
T1 Duration of pain	,072	-,069	,058	,165	,021
T1 Control of pain	-,063	,037	,085	,087	-,111
T1 Effectiveness of treatment	-,069	,043	,066	,026	-,068
Engagement in the video	,033	-,032	,300**	,009	-,235*
Anxiety	-,109	-,204*	-,157	,079	-,133
Kinesiophobia before watching	-,089	-,170	-,086	,041	,095
Kinesiophobia after watching	-,026	-,101	,077	,046	,036
Medical adherence intentions	-,019	,158	,111	-,162	,003
Evaluation of the message	,046	,028	,140	-,085	-,134

** Significant at $p < .01$.

* Significant at $p < .05$.