The Development and Evaluation of Personalized Training in Shared Decision-making Skills for Rheumatologists

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ABSTRACT. ***Objective.*** Many factors influence a patient's preference in engaging in shared decision making (SDM). Several training programs have been developed for teaching SDM to physicians, but none of them focused on the patients' preferences. We developed an SDM training program for rheumatologists with a specific focus on patients' preferences and assessed its effects.

Methods. A training program was developed, pilot tested, and given to 30 rheumatologists. Immediately after the training and 10 weeks later, rheumatologists were asked to complete a questionnaire to evaluate the training. Patients were asked before and after the training to complete a questionnaire on patient satisfaction.

Results. Ten weeks after the training, 57% of the rheumatologists felt they were capable of estimating the need of patients to engage in SDM, 62% felt their communication skills had improved, and 33% reported they engaged more in SDM. Up to 268 patients were included. Overall, patient satisfaction was high, but there were no statistically significant differences in patient satisfaction before and after the training.

Conclusion. The training was received well by the participating rheumatologists. Even in a population of rheumatologists that communicates well, 62% reported improvement. The training program increased awareness about the principles of SDM in patients and physicians, and improved physicians' communicative skills, but did not lead to further improvement in patients' satisfaction, which was already high. (J Rheumatol First Release August 1 2019; doi:10.3899/jrheum.180780)

Key Indexing Terms:
OUTCOME ASSESSMENT PHYSICIAN PRACTICE PATTERNS RHEUMATIC DISEASES

Shared decision making (SDM) has been defined as "an approach where clinicians and patients share the best available evidence when faced with the task of making decisions, and where patients are supported to consider options, to achieve informed preferences"[1]. Positive effects of SDM have been assessed in the past by several researchers: SDM can facilitate effective treatment, has a positive effect on the clinical outcome (measured both objectively and subjectively), and can improve patient satisfaction[2,3,4,5]. Since 2010, the American College of Rheumatology (ACR) and the European League Against Rheumatism (EULAR) have acknowledged these positive effects and promote SDM in the ACR/EULAR guidelines[6].

The need for engaging in SDM is emerging equally among rheumatologists and patients, the latter valuing high-quality communication with their physicians. In 2015, a Dutch qualitative study determined which aspects are important according to patients under rheumatologic care. Patients associated quality of care with the following aspects: (1) SDM, (2) interest in the patient's personal life, (3) adjusting therapy based on the disease activity, (4) education about the expected disease course, and (5) insight into comorbidity and comedication. These aspects can be subdivided into the themes "communication" (1 and 2) and "the process of decision making" (3, 4, and 5)[7].

While both patients and physicians endorse the principles of SDM, few healthcare providers engage in SDM[3]. Physicians' experience of time pressure is likely an important reason, but a perceived lack of communication skills required

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for SDM is another[8,9]. Further, patients' preferences to engage in SDM seem to vary; some patients feel an inherent reluctance to engage in SDM, while others are intrinsically more sympathetic to SDM. These perceptions may vary over time and in different stages of the disease, which implies that rheumatologists should adjust their role in the SDM process according to the patient's most preferred role[10].

To facilitate and implement SDM, education and training programs can help[11]. Several training programs have been developed for physicians, the majority of them aiming at improving the patient-physician communication[12]. In 1999, Towle and Godolphin proposed a framework with competences for both patients and physicians regarding SDM. One of these competences for rheumatologists is the ability to elicit the preference of a patient for SDM. Other competences include communicative skills and provision of information[13]. Training programs nowadays are usually based on a core set of competences for physicians, but do not, to the best of our knowledge, focus on the preferences of patients to engage in SDM[13]. Given the lack of focus on patient preferences regarding SDM in available training programs, we (1) developed a personalized SDM program for rheumatologists and (2) assessed the effect of this training program on both rheumatologists' shared decision-making skills in daily practice and patient satisfaction with the delivered rheumatology care.

MATERIALS AND METHODS

Development of an SDM training for rheumatologists. Experts in SDM were interviewed separately to gain insight into topics to cover in the training and effective teaching methods. In addition, a literature search was conducted for evidence of effective elements in healthcare training programs. Key articles recommended by experts were retrieved. Literature was sought using the following terms: "shared decision making" AND "training" OR "workshop" AND "rheumatology" OR "arthritis". Articles were scanned on title and abstract (according to the aspects that were named crucial for training by the experts). When found relevant, the article was retrieved. Reference lists of key articles and articles identified in the search were checked for additional studies.

Based on the expert interviews and the literature search, a preliminary training program was developed. The core principle on which the training is based is that patients differ in their preference for SDM. This preliminary training program was pilot tested in 6 rheumatology residents from 3 hospitals. After the training an evaluation was performed, including an evaluation questionnaire and a brainstorming session with all the participating residents and the trainers. Finally, an evaluation was held with the training actor who assisted in the training. Based on all feedback, the training program was adjusted. The final SDM training was given to rheumatologists in 4 hospitals.

Evaluation: rheumatologists. To evaluate rheumatologists' experiences with the received training as well as the effect of this training, 2 evaluation questionnaires were completed: 1 immediately after the training and 1 after 10 weeks. The first questionnaire included 11 questions about gained insight in SDM, the training itself, and the importance of SDM. The second questionnaire contained 12 questions about the effects of the SDM training in daily practice, communication skills when applying SDM in practice, as well as the ability to recall discussed aspects of the training.

Evaluation: patients. Within a defined population of 4 hospitals, 2 groups of consecutive patients attending the rheumatology outpatient clinic received a questionnaire measuring their satisfaction regarding the received care. Patients from group 1 completed the questionnaire before the training of the rheumatologists, and patients from group 2 completed the questionnaire after their rheumatologists had received their SDM training. Inclusion criteria were treatment at the rheumatology outpatient clinic at 1 of the 4 hospitals, age 18 years or older, and sufficient understanding of the Dutch language. Patients were recruited after their visit to the rheumatologist and completed the questionnaire in the waiting area of each rheumatology practice. Each patient filled out the questionnaire anonymously. Prior to presenting the questionnaire to participating patients, approval from the Medical Ethical Committee at the Erasmus Medical Center was received (MEC-2016-100). Patients were informed about the purposes of this research and were aware of the possibility that we could publish data. They had the opportunity to decline the questionnaire in case they did not approve of the mentioned conditions.

The questionnaire consisted of 2 subscales of the Consumer Quality index Rheumatoid Arthritis (CQ-index RA), how the healthcare provider treats his/her patients (e.g., friendly and accurately), and the perceived expertise of the healthcare provider. The CQ-index is a validated questionnaire and both subscales taken together include 10 statements. Patients were asked to what extent they agreed with the statements on a 5-point Likert scale[14]. The Control Preferences Scale (CPS) is also embedded in the questionnaire, which consists of 1 question in which the patient has to indicate who made the decision in the last consultation (Table 1)[15]. Further, demographic and disease-specific features were questioned. Differences in demographic and disease-specific characteristics between group 1 and group 2 were tested using the Student t test for independent observations or the chi-square test when appropriate. Scores on the CPS and the CQ-I are expressed as percentages for group 1 and group 2 separately.

RESULTS

Development. When reviewing the literature, a total of 52 articles was found, of which 6 explicitly reported on SDM training. An effective training program should include the following components: an interactive aspect[12], the use of a multiple learning strategy[12], the use of reminders/reinforcers[12], repeated trainings[2,16], the discussion of barriers and facilitators for SDM[17], and the discussion of patients' difference in their preferred role in decision making[18].

Experts who were interviewed included 4 rheumatologists, 1 patient representative, 1 nurse practitioner, and 2 experts in training programs and SDM. Topics that were mentioned by most interviewees were (1) integrating patient preferences in the training by focusing on communication strategies for each patient with a tailored preference for SDM, (2) discussion of factors that may influence patients' SDM preference, (3) working with training actors, (4) using video examples of consultations as a training tool, and (5) providing a hands-on tool for SDM that rheumatologists can use in their daily practice.

Based on these findings, we developed a framework with patient types according to their level of engagement in SDM (Table 2). The framework was constructed based on the experiences of the rheumatologists and supported by concepts influencing SDM found in the literature, such as health literacy and coping style. The framework was discussed with 2 of our experts. After this meeting, the final set of patient types for the framework was formed. The SDM training is built around this framework. Three main types of

Table 1. Patient characteristics in group 1 (prior to SDM training) and group 2 (after SDM training).

Patient Characteristics	Prior to SDM Training, n = 213	After SDM Training, n = 268
Female, %	58.7	64.3
Mean age in years (SD)	59.3 (14.9)	57.9 (16.0)
Education level, %		
Low (primary school)	46.3	36.1
Medium (community school)	32.2	34.6
High (university)	21.5	29.5
Nationality*, %		
Dutch	89.5	85.7
Other	10.5	14.3
Single diagnosis, %	77	76.8
RA, % of single diagnosis	37.7	36.9
PsA, % of single diagnosis	13.0	11.9
No diagnosis, % of single diagnosis	11.7	6.3
PMR, % of single diagnosis	10.4	8.3
Gout, % of single diagnosis	10.4	5.7
Arthrosis, % of single diagnosis	6.5	10.4
Other**, % of single diagnosis	10.4	20.3
Multiple diagnoses, %	23	23.2
Disease duration, %		
< 5 yrs	56.0	55.5
5–10 yrs	18.7	16.1
> 10 yrs	25.3	28.4
VAS disease activity, mean (SD)	69.1 (17.9)	67.4 (19.6)
VAS disability, mean (SD)	63.6 (21.8)	64.2 (21.8)
CPS: Who made the decisions this last consultation?, %		
I have made the decision on my own	0	0
I have made the decision on my own, taking the opinion of the rheumatologist into account	3	3
I have made the decision along with my rheumatologist	61	65
My doctor has made the decision, taking my opinion into account	25	19
My doctor made the decision	10	11

*Patients and their parents born in the Netherlands. **$p < 0.05$. SDM: shared decision making; RA: rheumatoid arthritis; PsA: psoriatic arthritis; PMR: polymyalgia rheumatica; VAS: visual analog scale; CPS: Control Preference Scale.

patients can be distinguished: (1) patients who actively want to have a say in their treatment, (2) patients who sometimes do and sometimes do not want to be actively involved, and (3) passive patients who are not interested in SDM. In Table 2, the patient types are explained. In the far-right column, statements from the CPS that correspond with the patient type are presented.

Content of training. The pilot training was given to 6 rheumatology residents by a psychologist and a rheumatologist (AP and PV). The fundamental idea of the training is that any patient can and should be involved in the SDM process. The main goal of the training was to teach the participants how to adjust their communication to patients so that patients are likely to make shared decisions with their rheumatologist. Supplementary content giving a detailed overview of the components and teaching methods of the training is available from the authors on request.

Evaluation of the training. After the practical part, a brainstorming session was organized. Participants asked for a more extensive homework assignment with an introduction into the patient types; this was added to the assignment. Further, a warming-up exercise was added to the practical portion, in which participants had the opportunity to become familiar with the training actor.

Evaluation by rheumatologists. A total of 30 rheumatologists participated in the training and immediately thereafter completed the first questionnaire (response rate 100%). After 10 weeks, 21 of these rheumatologists completed the second questionnaire (response rate of 70%). Participants' demographics are presented in Table 3.

Immediately after the training, 93% of rheumatologists were satisfied with the training, 57% reported to be capable of appreciating the preference of their patients to engage in SDM, and 62% believed that their communicative skills had improved. This latter percentage had improved to 74% after 10 weeks (second questionnaire). In addition, 33% of partici-

Table 2. Patient types and their characteristics along with the needed communication skills and corresponding statement on the Control Preferences Scale.

Patient Type	Characteristics	Rheumatologist's Needed Communication Skills	Control Preferences Scale
Autonomous	Stubborn and independent	The patient is the expert. Doctor has to adjust and can try to convince the patient regarding the doctor's preferences. Patient does not tolerate authority.	I've made the decision on my own.
			I've made the decision on my own, taking the opinion of the rheumatologist into account.
Active	Confident	Shared decision making. Doctor pairs up with the patient and shows his/her own opinion but takes the knowledge and experience of the patient into account. Patient will be able to make a decision shared with the doctor.	I've made the decision along with my rheumatologist.
Ambivalent	Skeptic	Doctor should ask about the expectations and fears regarding the treatment and should try to eliminate these fears. Try to persuade the patient in making a shared decision. Inform the patient about the longterm effects of the disease.	My doctor has made the decision, taking my opinion into account.
	Emotional	Doctor should actively ask whether the patient fears certain aspects of treatment or disease and provide information regarding these aspects. Give a clear treatment plan and ease the patient. These patients need a paternalistic doctor who informs them and clarifies things. Decision is often made by the doctor with consent of patient.	My doctor has made the decision, taking my opinion into account.
Passive	Indifferent; passively cooperative	Doctor is seen as the expert. You have to actively give patients the feeling to be in control. Help the patient to make a decision and explain the benefits and disadvantages of a certain decision. Explain your preference. Doctor will make the decision with consent of the patient. Explain the consequences of nonadherence to treatment. Doctor has to be paternalistic, but has to actively involve the patient.	My doctor has made the decision, taking my opinion into account.
	Passively avoiding	Doctor is in charge. Patient has to be involved in treatment decisions. Give a clear explanation of the treatment options. Stimulate the patient to think along.	My doctor made the decision.
	Dependent	Doctor is in charge. Patient has to be involved in treatment decisions. Give a clear explanation of the treatment options. Stimulate the patient to think along and actively involve the patient. Doctor will make the decision, with consent of the patient.	My doctor made the decision.

Table 3. Characteristics of healthcare providers who received the training.

Characteristics	T = 1	T = 2
Female, %	73.7	66.7
Age, yrs, mean (SD)	43.6 (9.4)	46.5 (8.3)
Occupation, %		
Rheumatologist	70.0	85.7
Resident	10.0	0.0
Rheumatology nurse	20.0	9.6
Experience, yrs, mean (SD)	10.0 (8.9)	13.6 (8.8)

T = 1: group that completed evaluation questionnaire right after training; T = 2: group that completed evaluation questionnaire 10 weeks after training.

pants reported to engage in SDM more frequently and 79% of them were able to recall the most critical elements of the SDM training.

Evaluation by patients. Prior to training, 213 patients filled out the questionnaire while 268 patients filled out the questionnaire after the training. Of the patients, 59% were female with a mean age of 59 years in group 1 while this percentage was 64% in group 2. The most common diagnosis in both groups was RA. As reported in Table 1, no statistically significant differences were observed.

In Figure 2, the patients' responses on the CQ-index are displayed. Overall, patients in both groups scored high on the CQ-index; more than 95% of the patients scored the statements with "mostly" or "always" on both scales. No statistically significant differences were observed between group 1 and group 2.

On the CPS, most patients engaged in SDM (61% and 65%, respectively; Table 1). Further, the 2 groups of patients had similar responses on the CPS questionnaire. No differences were observed between male and female patients regarding the CPS ($p > 0.05$). No differences in preference in SDM were observed between patients from different ethnic backgrounds or education level.

DISCUSSION

To our knowledge, we were the first to develop a personalized training program on SDM for rheumatologists. The core component of the training was a scheme with patient types differing in their preference in SDM. Participants were

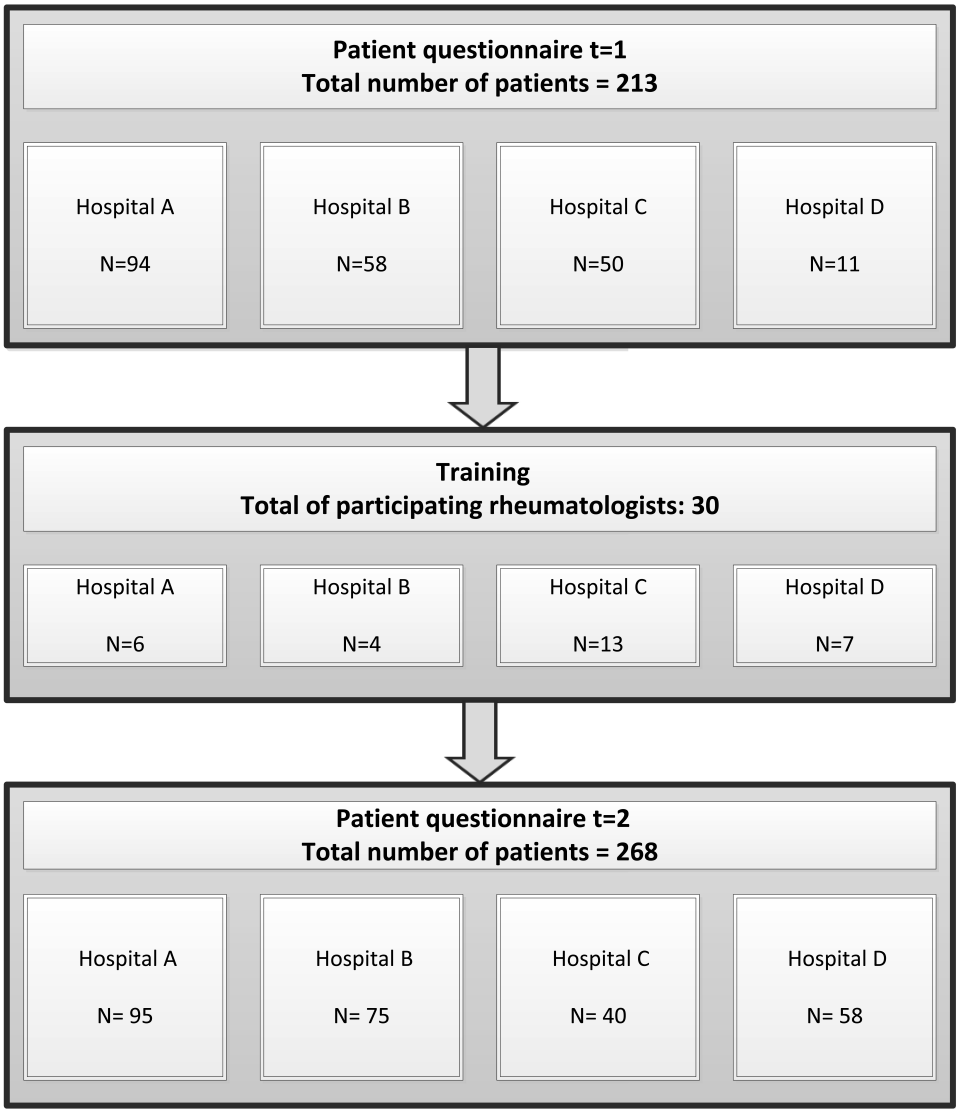

Figure 1. Schematic overview of the study.

educated about this scheme, the steps to take in the SDM process, and they practiced communication strategies with the different patient types. Overall, the participants were satisfied with the received training. After the training, rheumatologists found their communication skills improved. A third have engaged more in SDM. Overall, patients were very satisfied with their received care. A large proportion of patients said that they were engaging more in SDM.

The training was developed using expert interviews and SDM training programs described in the literature. The authors acknowledge that many more training programs might have been developed locally that are not specified in the literature. Therefore, we do not have a complete overview of effective elements in SDM training programs. It might also have been that if we interviewed different experts, other elements might have been pointed out as important to share in the training. An important part of the developmental process of the training was to involve the rheumatologist's view on SDM. This makes the training especially adapted to the specific problems that rheumatologists encounter when making shared decisions. Because the participants were satisfied with the training, we believe that the developmental process of the training is sufficient.

While these positive effects were appreciated by the examined population, this did not lead to practicing SDM more frequently; only 33% of the rheumatologists reported to engage in SDM more frequently. One explanation is that rheumatologists were already engaging in SDM before they took part in the training. This is supported by the large number of patients that reported their decisions were made together with the rheumatologist (61%), even before the training (Table 2). Another explanation is that rheumatolo-

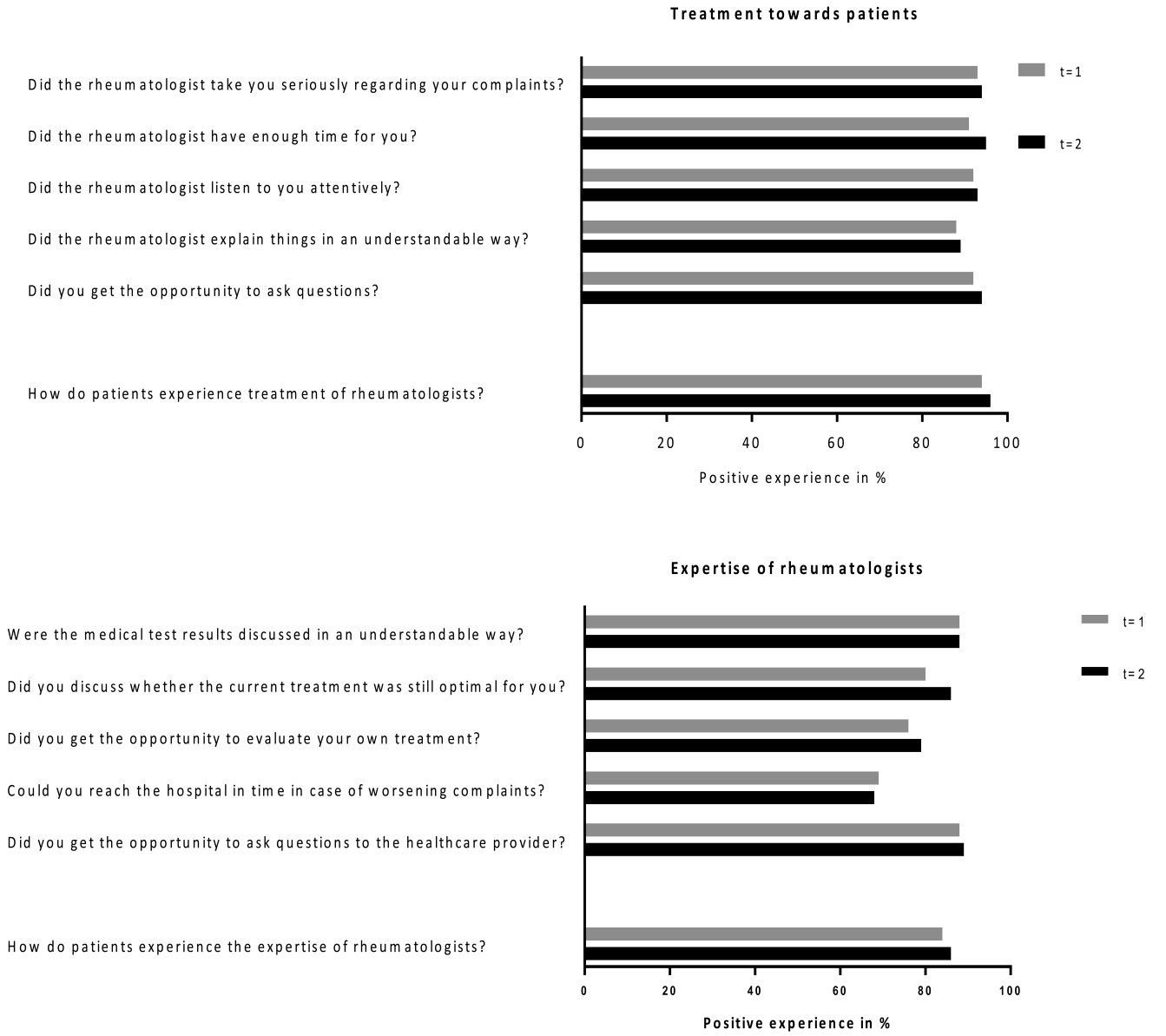

Figure 2. Patients' responses on the CQ-index.

gists experience lack of time, which is reported as an important barrier for SDM[17]. However, studies have shown that engaging in SDM does not lead to longer consultation times[11]. In fact, in the long term, healthcare providers can reportedly save time[17]. In addition, SDM may lead to motivated patients and improved adherence[3,19]. It is important to include these positive effects of SDM in the training material. By emphasizing this point during the SDM training, the implementation of SDM could increase.

In addition to lack of time, rheumatologists' communication patterns also seem to be a barrier for the implementation of SDM. Physicians often find it difficult to change established communication patterns and are therefore reluctant to engage in SDM (and thus deviate from their communication patterns)[16]. A strength of our training is that we specifically addressed how to adapt communication styles to specific patient preferences, making the rheumatologists aware of the effects of their communication pattern on the patient. It is promising that the evaluation 10 weeks after receiving the training showed that rheumatologists found their communication skills improved after the training, but this effect may disappear over time. Improving communication skills is not achieved by 1 training, but requires more practice and awareness. To establish longterm effects, regular communication training is needed.

Whether it is time constraints or communication patterns,

the actual goal is to optimally adapt the SDM to the patient's preference and to deliver more high-quality care. To do so, it is important for both patients and physicians to understand the principles of SDM fully. According to a study by Shay and Lafata, patients in the practical setting believe they have engaged in SDM if they have reached the same outcome (e.g., agreed on the same therapeutic treatment) as their physician[20]. On the other hand, understanding the patients' preferences toward engaging in SDM is also crucial. Physicians often fail to assess the need of patients to engage in SDM, even if the rheumatologist has a longstanding relationship with the patient. A common misconception is that certain demographic factors, such as age, education, or sex, predict the preference to be engaged in SDM. Acting upon this misconception (for example, by assuming that some patients have no interest in engaging in SDM) can lead to lower satisfaction among patients because they feel stigmatized[18]. In our study, no differences in the patient's sex and educational background were observed. Our framework deals with the previously mentioned common misconceptions and allows rheumatologists to identify different patient types and enables appropriate reactions[18].

This study has some limitations. First, despite the positive effects of SDM training for patients, we did not offer these to our patient population because of lack of finances and time constraints. These training sessions would aid in enhancing SDM in practice. However, because our training focuses on the different types of patients and incorporates practicing SDM with patients, rheumatologists will be able to engage even the most passive patients in SDM.

There was little variation in patient satisfaction and in the preference to engage in SDM, as measured by the CPS. There might be several reasons for this. First, our population consisted mainly of Dutch patients, leaving the possibility that different results would have been obtained in a more mixed population. Mead and Roland examined the differences in medical care evaluation in ethnic minorities and concluded that these patients rated the received care more negatively than their white peers[21]. Further, in a large population-based survey regarding patients' preferences for SDM, African American patients preferred a more paternalistic approach (e.g., where the actual decision is often made by the physician)[22]. Our results, however, were slightly different: focusing on answers given by non-Dutch patients in our population, no differences were observed in satisfaction before and after the training between non-Dutch and Dutch patients, meaning that in our population, ethnicity had no influence on patient preferences for SDM.

Another reason for the limited variation in patient satisfaction is that it was measured by the CQ-index RA. This tool is especially useful for patients with RA. Because our population consists not only of patients with RA, it can be questioned whether it is justifiable to use this tool for our population. This was studied, and it was determined that the questions are reliable enough to measure the patients' perspective regarding the quality of care across all rheumatic diseases[23].

The effect of the SDM training was assessed indirectly by measuring patient satisfaction. The gold standard for assessing the effects of an SDM training program is observing consultations to objectively judge whether rheumatologist and patient indeed engage more in SDM. We decided not to do this because of time and logistical constraints, and because there might be differences in the actual communication process that is observed during the consultation and the patient's perception of this consultation, which in turn influences patient satisfaction. Indeed, there is evidence that SDM leads to more satisfied patients[24].

Further research should focus on the direct effect of SDM training on daily practice, for example, by means of a randomized controlled trial. By using video observations, the various aspects of SDM can be quantified. Our study points out that rheumatologists in the Netherlands report to engage in SDM and that most of our examined patients state to have engaged in SDM during their last visit. Patients are overall very satisfied with the received care from the rheumatologist. This might mean that patients and physicians are not fully aware of all aspects of SDM. Training will be helpful in making both groups more aware about the principles of SDM and may help physicians to intentionally apply its principles.

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