# Making doctor-patient communication more effective from a patient's perspective

## A European mixed-method study in general medicine settings

Maria Angela Mazzi

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Naar een effectievere arts-patiënt communicatie vanuit het perspectief van de patiënt
Een Europese mixed methods studie in de huisartspraktijk
(met een samenvatting in het Nederlands)

## PROEFSCHRIFT

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door

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GULiVer brought me in a long journey and let me explore many different cultures.

I thank colleagues, patients and supervisors, who accompanied me on this trip, for having steered the ship together and guided my steps in territories I hadn't known yet.

And finally my safe harbor: my family and friends. Thank you for having patiently waited for me during my travels and welcomed me back each time with the same warmth and trust.

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# 1

# Introduction

Effective communication between patient and doctor during the consultation is the "royal pathway" for building a trustful doctor-patient relationship [1-4]. To be effective, the consultation should be conceived of as a bilateral "partnership" which pursues neither the exclusive goals of the doctor nor those of the patient, but balances and merges the targets of both [5-8].

The existing literature values and advocates the integration of patients' preferences in the evaluation of healthcare providers' professional skills [9-14]. However, these publications present some limitations concerning their generalizability [15] and clinical applicability [16].

This thesis therefore aimed to determine the criteria European patients and lay people adopt in assessing the quality of various aspects of doctors' communication approach, and to identify the doctor and patient behaviours which, in their view, contribute to making doctor-patient communication more effective.

## Background

### The patient perspective and patient-centred communication

The importance of the patient perspective as an essential element in effective doctor-patient communication, and its growing attraction as a research topic [17,18] and health policy topic [19], can be traced back to two important developments in the conceptions of health and illness, and consequently in clinical practice.

A first important step in medical care was Engel's elaboration of the biopsychosocial model [20] which systematically considers biological, psychological, and social factors and their complex interactions in understanding health, illness, and health care delivery. Accordingly, a biopsychosocial approach to patient care urged health providers to look for and manage the social, psychological and emotional elements of the patient's illness as well as the purely biological ones. A second important step was to operationalize this model by developing a patient-centred approach to communication with which to generate information on patients' experience of illness and related social and psychological problems, personal concerns, fears and unpleasant emotions. It was developed to complement and integrate the physician-centred interviewing process which is essential for, but limited to, the collection of biomedical

data [21-24]. Patient-centred communication, according to Epstein et al. [25], has four components:

1. Eliciting and understanding the patient's perspective: concerns, ideas, expectations, needs, feelings and functioning
2. Understanding the patient within his/her unique psychosocial context
3. Sharing understanding of the problem and its treatment in a way that is concordant with the patient's values
4. Sharing power and responsibility by involving patients in choices to the degree that they wish.

Each component may advance one or more functions of the medical encounter. In a recent conceptual paper, de Haes and Bensing [26] defined six such core functions, based on the integration of earlier models by Bird and Cohen-Cole [27], Lazare et al. [28] and Epstein and Street [28]. They distinguish between: fostering the relationship, gathering information, providing information, decision making, enabling disease and treatment related behaviour and responding to emotions.

This last component deserves special attention. The ability to detect, accurately identify and appropriately respond to emotions is crucial to patient-centred care because this ability boosts all the other core functions [29]. With this in mind, the Verona Coding Definitions of Emotional Sequences (Vr-CoDES) were developed to study when and how patients express emotions [30] and how health providers may respond [31]. The instrument takes into account previous findings, reviewed by Zimmermann et al. [32], that emotions are mainly expressed as hints or cues to underlying emotions rather than as explicit worries and concerns, and that there is a wide range of health provider responses, although empirical evidence for the appropriateness of responses to patients' cues and concerns is still lacking, especially in terms of the patient's view.

In synthesis, to reach appropriate clinical decisions, the patient's ideas, concerns, needs, expectations and priorities must be identified and respected [33,34], this process being facilitated by the development of good doctor-patient relationships— based on patient-centred skills (such as active listening, empathic comments or legitimization of the patient's emotional experiences) and aiming to foster a supportive relationship [35-37].

**Assessing the patient perspective on doctor-patient communication**

To know patients' wishes, needs and expectations regarding doctor-patient communication is of particular relevance in primary care because it is the cornerstone of human interaction in healthcare [38-42]. The first contact usually occurs with the General Practitioner (GP), the gatekeeper to specialist care. In this context, patients' satisfaction or dissatisfaction determines to a great extent their future collaboration and engagement in any subsequent treatment programs, including specialist care.

But who determines the quality of doctors' communicative approach? The literature so far has focused on defining and assessing communicative skills necessary to create an effective dialogue with the patient from a professional point of view [34,43-46]. Similarly, the content of training courses in patient-centred communication and evaluation programs implemented by medical schools in many countries are usually developed and evaluated by health professionals [47]. Patients have seldom been given the opportunity to evaluate the quality of health providers' communication skills [48] or to contribute to the development of training programs.

Doctor-patient communication is considered a domain 'par excellence' to include the public's perspective in quality assessments, because patients can have different goals and priorities from health care providers [49] and often report quality problems in the area of communication [50]. These communication problems contribute to many adverse patient outcomes, such as non-adherence [51], formal and informal complaints [52] and patient dissatisfaction [50]. For example, one of the problems in meeting the core components of patient-centred communication is knowing which elements, from a patient perspective, are most important. "It makes little sense to implement each component unless they are consonant with the patient perspective" [53]. The authors approached this problem by carrying out one of the first large surveys on patient preferences regarding patient-centred communication.

If exploring and being aware of patients' preferences and expectations becomes fundamental to carrying out a consultation that takes into account what patients actually want, and is therefore successful from a patient perspective, patients and potential patients have to be involved more systematically. In fact, there is now a growing consensus that the patient's perspective in defining the essential elements of good communication

should be taken into consideration far more than it has been so far [54-58] considering its value for truly patient-centred clinical practice.

A recent special issue of Patient Education and Counseling [59] brought together ongoing research and reflections about the quality of health care communication from the patient's own perspective. Information giving and fostering the relationship were the two out of six functions of the medical consultation most strongly emphasized as important by the different patient groups in the reported studies.

However, the emphasis given to the various functions was found to be dependent on the study's methodology. The review by Deledda et al. [60] of the communication preferences of primary care patients showed that the two different research approaches which characterized the collected papers, quantitative and qualitative, determined different preferences. Quantitative studies, based on structured and self-administered questionnaires, propose that patients express their expectations on a list of expert-defined communication skills and rate their priority. Here information giving became a prominent topic. Qualitative studies, based on focus group methods or in depth interviews, ask patients open questions regarding GP's communication performance and collect their observations either when watching videotaped consultations, or by referring to their ideal doctor or their past or present contacts with doctors. Here the focus was on the emotional aspects of doctors' communication. Preferences which emerged in quantitative studies thus were not directly comparable to the spontaneous, unguided preferences expressed by the patients in qualitative studies. The different findings have to be considered therefore as complementary, and call for the integration of qualitative and quantitative research approaches as represented by the mixed-method approach.

**Patient Variability**

An important issue arises as to whether patients in primary care have preferences which differ according to their personal, clinical, socioeconomic and context characteristics. Indeed, people can vary widely in their communicative needs and preferences [61], and what is 'good communication' for one person may be disliked or even a source of irritation for another [16,62,63]. A general adoption of all aspects of patient-centred communication therefore would be out of place. If doctors' communication evokes different reactions, that would mean that doctors

need to tailor their communication to patient preferences and expectations in those situations [64-66] and therefore use patient-centred skills in a flexible way [67-71].

The heterogeneity of patient needs and preferences in primary care is linked to numerous factors. These comprise individual characteristics such as socio-demographic and health conditions, personality and health literacy [72-78], as well as cultural characteristics defined by dominant value systems [79-82] and "external" environmental characteristics, such as national healthcare systems, public resources allocated to financing prevention and health education, service access and organization in terms of continuity of care, general practitioners' (GPs') role, their workload and waiting-times [83-86]. Most of these factors can be located in the ecological model of communication proposed by Street [87], who defines four different contexts which affect, and often dominate, the doctor-patient relationship by amplifying the inter-individual elements which intervene in the communication process: organizational, political/legal, cultural and mass media.

*Apropos of culture and country*

Given the importance of adapting the doctor-patient relationship to patient preferences, as in patient centred care or shared decision making processes, the current approach to developing guidelines and medical curricula on this issue tends to be generalized internationally [88,89]. The translation of teaching programs and clinical recommendations from one country to another implicitly assumes that cultural and national features have no role within the doctor-patient relationship. In other words, there should be no significant cross-national differences in the way doctors and patients relate to each other. Some studies on healthcare service organization challenge this assumption. A review of the payment system of General Practitioners (GPS) in different countries [90] found that the fee-for-service system, compared with salary payment, resulted in more patient visits, greater continuity of care, higher compliance with a recommended number of visits, but lower patient satisfaction regarding access to a physician. Successive Dutch studies confirmed that the type of remuneration (fee for service versus capitation within the same national healthcare system) has a moderating effect on the relationship between GPs' workload and consultation length, and therefore conditions GPs behaviour [91]. An international comparison study on doctor-patient

communication in six European countries [84] demonstrated that even within the western world patients seem to develop quite distinct patterns of expectations toward health care, which show up in the medical encounter. In a later study in ten Western and eastern European countries [80], differences in communication patterns could be linked to Hofstede's cultural dimensions [92]. For this reason, country is another factor to take into account when analysing the quality of care from a patient perspective

**Methodology**

*The mixed method approach*

The mixed-method approach combines qualitative and quantitative techniques to summarize information gathered using different tools and aims in order to explore a unique, but complex, topic [93]. This approach is transversal and can involve all the phases of the research plan: from research questions (qualitative - how/why, and quantitative - how much/how many) through data gathering (qualitative, such as focus group debates, and quantitative, such as questionnaires) and the type of data collected (textual or coded information, i.e. quantitative/categorical data) up to the analyses and interpretation of results (like ethnography, grounded theory, content analysis, and statistical techniques) [94,95]. In brief, as Pluye and Hong said, "mixing methods combines the power of stories and the power of numbers" (pag. 29, [96]).

The rationale for using multiple forms of research approach is based on recognizing that all methods have strengths and limitations, and that the biases inherent in any single method could be neutralized.

In brief, the qualitative research method is a holistic approach and goes 'in-depth': it answers 'why and how'. It is characterized by a flexible and iterative study plan; the researcher is involved in the research process; the sample is usually small and selected 'ad hoc' (the recruitment criteria are often designed to include a heterogeneous set); the data can have heterogeneous shapes (audio, visual or text material) and need to be interpreted and synthesized by a team of researchers, who select the common themes in order to synthesize and to produce a theoretical framework. This method, defined also as bottom-up (see table 1), presents the great advantage of enabling researchers to capture the richness and complexity of the observed phenomenon, but can produce selection biases in the recruitment of participants and also an interpretation bias by

introducing some subjective elements of the researcher, due to non-standardized data [97].

Table 1: Methodological approaches and corresponding data collecting procedures

|  | Quantitative approach | Qualitative approach | Mixed-methods approach |
|---|---|---|---|
| **Methodology** | 'top-down' | 'bottom-up' | Both top-down and bottom-up |
| **Instruments** | questionnaires (closed-ended questions) | focus-groups; interviews (open-ended questions); observation, document | Both open and closed-ended questions |
| **Data** | Performance, attitude, observational, census, | Interview, observation, document, audio-visual | Multiple forms of data drawing on all possibilities |
| **Analysis** | Statistical analysis | Text/image analysis | Statistical, text analysis |

In contrast, quantitative research focuses on counting the occurrences of a phenomenon or measuring the magnitude of an effect; its nature may be observational/descriptive (to explore some research hypotheses) or experimental/confirmative (to test pre-set hypotheses); study planning is pre-determined and stepwise and the researcher's position is detached and 'objective'. Moreover, the sample selection guarantees the representativeness of the target population so that the findings, obtained by analysing the sample dataset, can be applied to the whole population. This methodology, based on standardized procedures, is characterized by a more structured and replicable study design. The approach is 'top-down', applied to verify a theory (confirmatory aim) or to quantify the presence of an event in a target population or the intensity of the relationship among some features (descriptive/exploratory aim) [95] (see Table 1).

Until twenty years ago, as Marshall [98] observed, qualitative and quantitative methodologies were presented as antagonists and described in opposition, characterized by the differences in their aims and techniques. In the following years the two approaches gained equal scientific consideration but clinical communication research continued to stick to either qualitative or quantitative methodology. Only recently were mixed methods added [99]. The two approaches are conceived as complementary, considering their different functions [100]. Their mixing within a single study or in a series of connected studies generates a useful synergy appropriate for responding to complex research questions [101].

Neumann, in a recent special issue, emphasized the need for applying mixed methods to Health Communication Research also, and pleads for a

''methodological pluralism necessary to effectively capture the complexities of health care processes and to gather advanced insights into health communication phenomena" (p. 282)[102].

*The focus group*

Among qualitative techniques of data gathering, the focus group has an important role in medical research, since it generates relevant and rich information, albeit in a complex and unstructured way [103-107]. Focus groups are used for examining what people think, but particularly 'how they think and why they think that way' [103,108]; they are usually described as a group interview, but the findings exceed the simple sum of the single participants' contributions [109,110]. This plus value is generated by group work, i.e by the interactive dynamics among participants who, confronting each other freely as peers, can share a flow of concordant and/or dissonant opinions in order to identify and clarify their views on a specific issue.

In medical communication research, this instrument seems particularly suitable for identifying the cultural values, attitudes and priorities of the participants, clarifying their perspectives through the debate within the group, encouraging open conversation on embarrassing subjects and facilitating the expression of criticism, generating participants' own analysis of common experiences [111].

The focus group literature provides abundant and sound advice on process issues and operational practices, such as designing interview guides [112,113] and on structuring and moderating the groups [114,115]. Recently more room has been given to the methodological perspective of focus group design in order to maintain reliability and validity of findings [116-118].

## Aims of the thesis

The two main aims are to determine the criteria of European primary care patients and lay people when assessing the quality of various aspects of doctors' communicative approach, and to identify the doctor and patient behaviours which in their view contribute to making doctor-patient communication more effective.

Accordingly the specific research questions that were investigated in this thesis are twofold, with some specific sub-aims.

Figure 1. Data collection procedures and data products of GULiVer-I and II
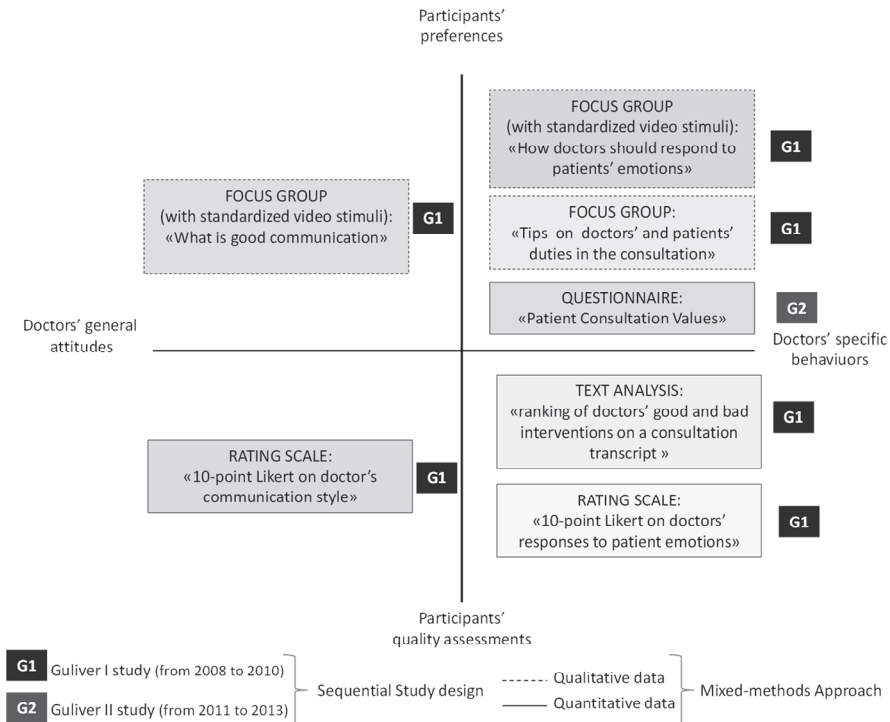


## Research questions

1. What matters in doctor- patient communication, according to the views of lay people?
   1.1 How do focus groups of lay people evaluate doctors' communicative approach when observing video-clips of medical consultations?
   1.2. Is there a gender effect when evaluating doctors' communicative performance?
   1.3 How do focus group participants judge the doctors' responses to patients' negative emotions, expressed as cues or concerns, in medical consultations?
2. What makes the doctor-patient consultation more successful from the patients' point of view?
   2.1 Can recommendations from lay people be generally applied in larger samples and primary care settings?
   2.2 What, in the patients' view, are the reciprocal responsibilities of doctors and patients in making the consultation successful?

*Chapter 1*

2.3 Are there differences between countries (Netherlands, Belgium, Italy and United Kingdom) in the preferences of primary care patients regarding different patient and doctor behaviours intended to make consultations more successful?

2.4 What are the preferred roles and responsibilities of doctors and patients, in the view of primary care patients from 31 European countries, and are they affected by personal and cultural characteristics?

These research questions were addressed in the context of a large European project named GULiVer.

Table 2: Synthesis of the GULiVer study design in phases I and II

|  | GULiVer-I | GULiVer-II |
| --- | --- | --- |
| **Methodological approach** | bottom-up: qualitative and quantitative | top-down: quantitative |
| **Participants** | people | patients |
| **Instruments of data gathering** | focus group with standardized videos of medical encounters (open questions) individual questionnaires transcripts of medical encounters | individual questionnaire PCVq: 33 closed questions (4-point Likert) |
| **Setting** | natural (enlisted from 'the street') | care (enrolled at health centre) |
| **Sampling** | snowball technique sample balanced by age, gender and country | random sampling, representative of GPs' countries |
| **Sample size** | middle size: n=259 | large size: n=7270 |
| **Country** | Italy, the Netherlands, Belgium, the UK | 31 European countries + outside EU partners (Australia, Canada, New Zealand) |
| **Recruitment time** | March 2008-September 2010 | October 2011- December 2013 |
| **Finance** | Spinoza Prize National Fund for Patient-Oriented Research of the Dutch Ministry of Health, Welfare and Sports (NL) | Spinoza Prize European Union |

## The sequential study design: The GULiVer Project

The study draws its name (GULiVer) from the four centres that developed the project: **G**hent University (Belgium), **U**trecht University (the

Netherlands), **Liv**erpool University (United Kingdom), and the University of **Ver**ona (Italy).

The overall study design includes two phases (named GULiVer-I and GULiVer-II; see Table 2), which were carried out in sequence, as shown in Figure 1, where the data collection procedures (qualitative or quantitative) and the corresponding data products are summarized. Their sequential nature keeps them inextricably connected.

*Phase 1: GULiVer-I*

A mixed-method study, prevalently based on focus-group contributions, was designed to gain new insights into citizens' perspectives regarding the quality of doctors' communication approach.

A sample of 259 citizens, recruited using a snowball technique, was divided into 35 groups (eight to nine for each of the four participating centres). The groups were homogeneous regarding country and gender and balanced for age. This target population of citizens was chosen since they were not directly involved in the consultations they were asked to comment and to evaluate; hence they were free to express their opinions. The details of the study protocol, the instruments and procedures are described elsewhere [119,120] (see appendix).

Table 3. GULiVer-I: tasks, instruments, and goals of the data collection stages

| Tasks | Instruments | Goals |
|---|---|---|
| **1 .individual quantitative** | GULiVer questionnaire (socio-demo, clinical info, attitudes) | Collecting participants' background characteristics |
| **2. individual quantitative** | After watching the set of 4 videos: - Global Patient Rating Scale (Likert 1-10) - plus/minus on the transcripts - Ranking of the doctors | General evaluation of the doctor communication |
| **3. group qualitative** | Focus group (on the results from Task 2) | General evaluation of doctor's communicative style |
| **4. individual quantitative** | After watching a set of 16 preselected fragments on patient emotional expressions and doctor's responses Rating scale (10 point Likert) on transcript fragments | Evaluation of doctor's ability to respond to patients' cues and concerns |
| **5. group qualitative** | Focus group (on the results from Task 4) | Evaluation of doctor's ability to respond to patients' cues and concerns |
| **6. group qualitative** | Group discussion | Collecting tips for doctors and patients to make the medical consultation more successful |

As shown in table 3, the lay people were invited to take part in a one-day meeting, divided into sessions of group discussions and individual tasks (questionnaires and rating scales). The participants were asked to watch four videos on the performance of doctors with different communicative abilities dealing with the same clinical scenario. Specific doctor behaviours could be observed, commented on and assessed both individually and through group discussion. Special attention was paid to applying standardized procedures by using the same methodology and presenting standardized videos as stimuli, in order to have qualitative and quantitative information linked to each other and to obtain comparable qualitative data from the focus groups at the four different centres. This phase of data collection was characterized by a 'bottom-up' approach.

*Phase 2: GULiVer-II*

This quantitative study is based on a large European survey (n=7270). Participants were primary care patients who were given a standardized questionnaire, the 'Patient Consultation Values questionnaire' (PCVq) to measure patients' views on 'how doctors, as well as patients, might make the medical consultation more effective from a patient perspective'. This questionnaire is based on GULiVer-I tips (see also Table 3, task 6). The transformation of tips into the items of the PCVq is illustrated in Table 4. This study was developed within the framework of the Quality and Costs of Primary Care in Europe ('QUALICOPC'), a large European study, which also took responsibility for the data collection. QUALICOPC is a multicentre study, funded by the European Union (EU) and running in 34 European countries; it is coordinated by the Netherland Institute for Health Services Research (NIVEL), which was also responsible for both GULiVer-studies. The details of the development of the study protocol and questionnaire, including translation procedures and tests of validity, reliability and readability, have been described in great detail by Schafer and colleagues [121,122]. The decision to take part in a large European survey made it possible to gain a broad and representative sample of general practice patients from all European countries. The large database allowed us to study the generalizability and validity of qualitative data, that is the tips for doctors and patients proposed by the focus group members. A 'top-down' approach was used to gather information on patients' views (see Table 4).

## Outline of the thesis

The studies, carried out and written as distinct papers, are reported in the following chapters (from 2 to 7). Below they are briefly introduced, highlighting the main research questions and the methodological approach. The chapters can be grouped into two sections, reflecting the two distinct phases of the GULiVer project.

The first section (chapter 2-5) focuses on the GULIVER-I phase and regards the lay people' views expressed in focus group discussions (qualitative approach) and on rating scales (quantitative approach). Chapter 2 describes the protocol of GULiVer-I in detail and checks the recruitment process of the target population, which is balanced by gender and age within the four centres. It highlights the accuracy of a shared implementation procedure for conducting group discussions and for obtaining assessments of the same set of video consultations. Chapter 3 shows the main results for the 35 focus groups where lay-people from the Netherlands, Italy, Belgium and the United Kingdom discussed what matters in doctor-patient communication (Task 3 of Table 3). A painstaking process transformed the qualitative information into quantitative data, based on a qualitative content analysis. Specifically, the audio-recorded discussions were transcribed and translated into English where needed, so that each researcher could access the full text. To code all comments made by focus group members, a coding system was developed and validated. The methodology is described in Moretti et al. [119]; the abstract is printed in the appendix, where the complete list of GULiVer publications is also shown. Specifically, chapter 3 investigates both

Table 4: Matches between GULiVer-I tips and GULiVer-II PCVq items

| GULiVer-I tips (Bensing et al., 2011) | PCVq Items (Mazzi et al., 2016) How important are the following to you: |
|---|---|
| *Before consultation* | |
| (DOCT): Give patients the opportunity for meeting the doctor without screening by a receptionist | 6.1 That I don't need to tell a receptionist or nurse about details of my health problem before seeing my doctor |
| (DOCT): Prepare for the consultation: know who is coming and what the medical background is | 6.2 That the doctor has prepared for the consultation by reading my medical notes |
| (DOCT): Gain knowledge about the patient's cultural background | |
| (PT): Prepare yourself well: keep a diary, write down what you want to ask, reflect on your expectation, know which medicine you take | 6.3 That I have prepared for the consultation by keeping a symptom diary or preparing questions |
| (PT): Take a companion, if you think that you might need support | 6.4 That I can bring a family member/friend to the consultation if I think this is useful |
| (PT): | 6.5 That I know which doctor I will see |
| (PT): Keep your appointment | 6.6 That I keep to my appointment |

*- Table continues -*

| GULiVer-I tips (Bensing et al., 2011) | PCVq Items (Mazzi et al., 2016)<br>How important are the following to you: |
|---|---|

<div align="center"><em>During consultation</em></div>

| | |
|---|---|
| (DOCT): Show patients that they are welcome | 7.1 That the doctor makes me feel welcome by making eye contact |
| (DOCT): Keep eye contact | |
| (DOCT): Listen and don't interrupt the patient | 7.2 That the doctor listens attentively |
| (DOCT): Take your time; don't show your hurry | 7.3 That the doctor does not give me the feeling of being under time pressure |
| (DOCT): Pay attention to psychosocial issues | 7.4 That the doctor is aware of my personal, social and cultural background |
| (DOCT): Avoid prejudices; keep an open mind | 7.5 That the doctor is not prejudiced because of my age, gender, religion or cultural background |
| (DOCT): Treat the patient as a human being and not as a bundle of symptoms | 7.6 That the doctor treats me as a person and not just as a medical problem |
| (DOCT): | 7.7 That the doctor is respectful during physical examination and by not interrupting me |
| (DOCT): Takes the patient seriously | 7.8 That the doctor takes me seriously |
| (DOCT): | 7.9 That the doctor understands me |
| (DOCT): | 7.10 That the doctor asks me if I have any questions |
| (DOCT): Avoid jargon, check if the patient understands | 7.11 That the doctor asks if I have understood everything |
| (DOCT): know your limits: know when you have to refer a patient | 7.12 That the doctor knows when to refer me to a medical specialist |
| (DOCT): Invest in a common agenda | 7.13 That the doctor asks how I prefer to be treated |
| (DOCT):Avoid disturbances by computer and telephone | 8.1 That the doctor avoids disturbances of the consultation by telephone calls etc. |
| (DOCT): Offer sources of (trusted) information (website, leaflets) | 8.2 That the doctor gives me additional information about my health problem e.g. Leaflets |
| (DOCT): Offer sources of (trusted) information (website, leaflets) | 8.3 That the doctor informs me about reliable sources of information e.g. Websites |
| (PT): Be assertive: tell the doctor what you expect | 8.4 That I tell the doctor what I want to discuss in this consultation |
| (PT): Prepare yourself well: keep a diary of your symptoms, write down what you want to ask, reflect on your expectations, know which medicines you take | 8.5 That I am prepared to ask questions and take notes |
| (PT): Take notes | |
| *(PT):* Be honest about your medical problems, don't exaggerate, don't be embarrassed | 8.6 That I am honest and not feel embarrassed to talk about my health problem |
| *(PT):* tell your doctor what you already did yourself to relieve the symptoms , including self-medication and complementary medicine | 8.7 That I am open about my use of other treatments, such as self-medication or alternative medicine |
| *(PT):* Tell the doctor about relevant psychosocial issues | 8.8 That psychosocial issues (for example personal worries) can be discussed if needed |

<div align="center"><em>After consultation</em></div>

| | |
|---|---|
| (DOCT): Always gve the patient the test-results, even if these are OK | 9.1 That the doctor gives me all test results, even if they show no abnormalities |
| (DOCT): Give the explicit opportunity for email contact | 9.2 That the doctor offers me to have telephone or email contact if I have further questions |
| (DOCT): Give the patient clear instructions about what to do under certain circumstances | 9.3 That the doctor gives me clear instructions on what to do when things go wrong |
| (PT): Adhere to the agreed treatment plan | 9.4 That I adhere to the agreed treatment plan |
| (PT): Inform your doctor on treatment results (could be done by email) | 9.5 That I inform the doctor how the treatment works out |
| (PT): Find another doctor if you are not satisfied, but , first, try to talk about your discontent | 9.6 That I can see another doctor if I think it is necessary |

the prevalent topics discussed by participants in the group conversations and the positive and negative comments on the quality of doctors' communicative behaviours. A set of quantitative techniques was used to assist the qualitative research, which is exemplified by a wide use of quotations relating to the categories of the GULiVer coding system.

The effect of doctors' and lay people's gender on how doctors' communication is assessed and discussed (see tasks 2 and 3 of Table 3) is reported in chapter 4. In line with the recent communication literature on doctor-patient gender concordance, the explorations here distinguish the effects due to doctor gender, participant gender and their combination, which was achieved by careful database design. Care was taken whenever possible to maintain the links between each comment, its author and the video stimulating the comment, allowing for a 'composite' analysis exploring the interaction between doctors' and participants' gender in connection with participants' global assessments of doctors' communicative approach (expressed using a 10-point Likert scale) and preferences for specific doctor behaviours (expressed by positive or negative comments).

In chapter 5 the quality of communication is focused on a specific core function of the medical encounter, as emphasized by De Haes and Bensing [26]: responding to emotions. The laypeople perspective is here explored on 16 concrete examples of doctor communication behaviours regarding patient expressions of negative emotions and doctors' responses, selected from the four displayed videos and classified by experts using the Verona Coding Definitions of Emotional Sequences (VR-CoDES). Each participant was asked to observe the set of 16 consultation fragments and then to rate the appropriateness of the doctor's reactions as defined by the fourth GULiVer-I task (see Table 3). These ratings were linked to each patient's rating of the overall quality of the communication, performed as one of the first tasks of the morning session, with the aim of learning to what extent the ratings of doctors' cue/ concern responses at micro level were determined by individual participants' global rating of the doctor's performance, in other words if there was a halo effect.

The second section, made up of chapters 6 and 7, focuses on the GULiVer-II phase. The tips for patients and doctors on how to improve doctor-patient communication derived from the 35 focus group discussions (see GULiVer-I task 6 in Table 3, and Table 4) were transformed into a quantitative measure of 31 items, the Patient Consultation Values questionnaire (PCVq). This 'patient-generated' questionnaire was administered in a large survey

of 6049 primary care patients from 31 European countries. Patients rated the importance of each of the 33 PCVq converted tips on four-point Likert scales. A first external validity study described in chapter 6 aimed to confirm the generalizability of the qualitative findings of the focus group tips to a larger sample by extracting a subsample of about 800 primary care patients, composed of Dutch, Italian, Belgian and UK patients.

The study described in chapter 7 presents the findings for all 6049 primary care patients representative of 31 European countries. In order to reduce the information regarding the 33 items of the PCV questionnaire, a set of factor analyses were performed for doctor and patient items separately. Seven factors were generated and defined the dependent variables: four factors concerned the roles and responsibilities of doctors in contributing to an effective consultation, the other three the roles and responsibilities of patients. Three research questions were investigated to show which were the most important doctor and patient roles, whether these preferences were shared by all patients or were different for specific patient subgroups classified by socio-demographic characteristics, and whether contextual factors, such as cultural and environmental characteristics at country level, were relevant for explaining cross-national differences in patient preferences.

The General Discussion chapter begins with a summary of the main findings of the thesis, linked to the respective research questions examined. The next section discusses what can be learned from this research, followed by a paragraph reflecting on methodological issues and their inherent strengths and limitations. The chapter concludes with a section on implications for clinical practice, and with proposals for future research.

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*Chapter 1*

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# 2

# The GULiVer-I protocol

## Abstract

**Background:** The project GULiVer explores how lay people in Belgium (**G**ent), the Netherlands (**U**trecht), the United Kingdom (**Li**verpool) and Italy (**Ver**ona) evaluate physicians' communicative skills. The aims are to present the study design and to assess the quality of collected data.

**Method:** In each centre one out of two sets of four videotaped consultations involving medical students with varying communication skills were shown to eight lay panels of six to nine participants each (n = 259). The selection of lay participants was stratified by gender and age in order to obtain a heterogeneous sample. Background characteristics included socio-demographics, participants' general physical (COOP-WONCA) and mental health (GHQ), communication preferences (QUOTE-com) and trust in doctors (TMP). Participants were asked to give quantitative and qualitative evaluations of the student doctors' performance in a mixed-methods design. Quality assessment of the collected data and protocol adherence of the four centres was carried out by Generalized Linear Model (GLM).

**Results:** The overall sample comprised 259 participants. Participants were equally distributed among the centres and balanced in terms of age, gender and OSCE scenario, confirming the quality of collected data.

**Conclusion:** The study design and the applied procedures will ensure a great richness of data allowing a wider European perspective on lay persons' views, assessed both individually and through focus group discussion.

**Keywords:** patient perspective; communication preferences; physician communication; mixed method approach; GULiVer

## Introduction

Delivering a patient-centred consultation is regarded a core competence for doctors[1-3] and medical schools in many countries have implemented communication skills training in the medical curriculum[4–7]. The content of these courses and examination programs is usually derived from psychological theories and determined by professionals (doctors, psychologists or nurses) [8,9], until now patients have been seldom involved in their development. Several studies show a low correlation between patients' and professionals' quality assessments [10–12], underlining the need for a more direct approach to tapping patients' views about the quality of doctor–patient communication. Various studies have been developed to reach this goal. First, actors who play the patient role in training courses or examination programs are sometimes asked to take part in the quality assessment [13]. However, these simulated patients are instructed by the same expert–professionals who are running the courses, and whether their opinions really reflect the patient perspective is doubtful [14]. A second way is by administering patient satisfaction questionnaires, right after the medical visit [15–17]. However, usually very high satisfaction rates are found [18,19], which could be a reflection of a positive response bias [20,21] due to patients need to trust their doctors, feeling of dependency, and fear of repercussions [22]. Finally, in some studies people from the general public are asked for their opinion of the quality of care, including the quality of doctor– patient communication  [23,24]. However, as there is no standardized stimulus, it is difficult to compare these evaluations on the quality of health care [25], and to determine to which concrete communication behaviour they refer to. We also do not know how transferable this knowledge is from the country where the study took place to other countries. With these considerations in mind, we planned a large, international study in which a number of videotaped medical consultations, taken from the final Objective Structured Clinical Examinations (OSCE), were shown to lay panels in different European countries: Belgium, the Netherlands, the UK and Italy. The study should answer the following questions: is there a concordance between lay people and communication experts in the way they judge doctors' communicative performance? Which communicative elements of the doctors' performance are valued, depreciated or considered irrelevant from the lay persons' perspective? To what extent are their preferences and dislikes determined by their psychosocial and clinical characteristics? Which are the similarities and

dissimilarities in communication preferences of lay persons with different nationalities? This article, the first in a series of papers about this project, describes the research protocol and proposes the application of a mixed methods approach to explore patients' perspective on doctors' communicative performance in a multicentre study.

**Ethical approval**

The project was approved by the Medical Education Research Ethics Committee of the University of Liverpool. Informed consent of the participants was obtained in all three countries.

## Methods

**The study design**

The study draws its name (GULiVer) from the four centres involved in the study: **G**hent University (Belgium), **U**trecht University/NIVEL (the Netherlands), **Li**verpool University (UK) and the University of **Ver**ona (Italy). Figure 1 illustrates the design of the study. In each centre, a set of videotaped Objective Structured Clinical Examination (OSCE) consultations were shown to eight lay panels of six to nine participants. The consultations refer to two different scenarios, varying in the quality of student doctor's communication from an expert perspective. Each scenario had four student interviewers of different communicative abilities, to give maximal variation in doctor–patient communication. To reduce order effects in the presentation of the four videos, half of each of the groups who viewed either the Period Pain (PP) or Sexual Transmitted Disease (STD) scenario was presented with the video of the best performing student doctor first, while the other half of the group viewed the poorest performing student first.

**Material: selection of videotaped OSCE consultations**

The OSCE consultations were video recorded during the fourth year summative final undergraduate OSCEs at Liverpool Medical School, in a history taking station designed to test the quality of the medical students' interviewing skills. The patient role is played by an actress (simulated patient). The OSCE videos used for this study utilized two standardized

gynaecological problems associated with high levels of emotional distress, which the student doctors had to handle in a 10-min consultation:

- scenario vaginal discharge (STD): related to unsafe sex with an unknown partner and a possible diagnosis of STD
- scenario Period Pain (PP): serious PP resulting in absenteeism from work making the patient anxious about losing her job.

The students' communication skills were rated by the simulated patient (SP) on a 10-point Likert scale (Global Simulated Patient Rating Scale, GSPRS), while the examiner assessed the quality of communication using a checklist, based on a list of pre-established expert defined abilities (Liverpool Communication Skills Assessment Scale, LCSAS) [26].

From the pool of available videos (n = 166), four videos from each scenario were selected according to their GSPRS and LCSAS score to maximize the variability in the quality of communication (HH, HL, LH and LL videos according to whether they were assessed in the Higher or Lower quartile by the examiner and the SP respectively). The videos were either dubbed (Italy) or subtitled in Dutch (the Netherlands and Belgium) to conform to the accepted practice of displaying English language television programs across countries.

Figure 1. The study design
(Pt=patient, F=female, M=male, H=high score at GSPRS, L= low score at GSPRS)
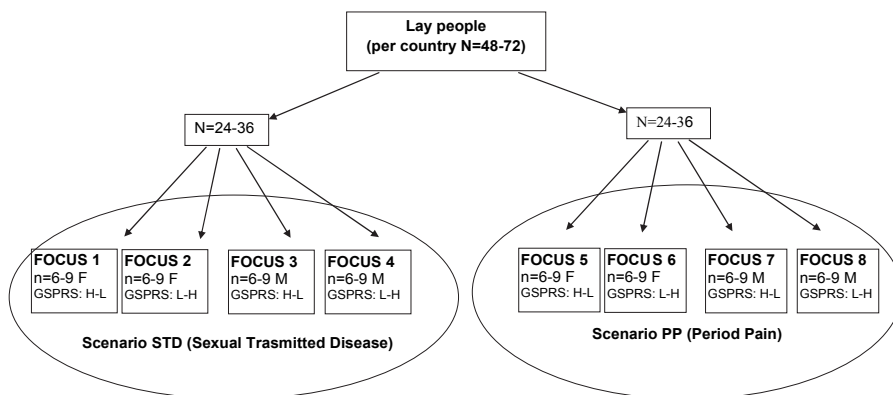


### Recruitment and selection of the participants

Participants were recruited from the general population. Recruitment took place in public areas, via calls in free local newspaper and by word of mouth. Inclusion criteria were age >18 years; at least one GP-visit over the

last 12 months; speaking the country's language; not being involved in a medical lawsuit or formal complaint during the last 2 years.

The selection of participants was stratified by gender (separate male and female panels) and age (18–30; 31–49; >50 years) in order to ensure a heterogeneous distribution of the sample and comparable results. The participants received a financial compensation (€150), which was handed over after the completion of all tasks.

**Measures and instruments**

In all four countries the same procedures were followed. The participants had to carry out, individually or in group, six tasks, including both quantitative and qualitative evaluations. Their completion took one full day. Preliminary stage: All participants were informed on the aims of the research; the structure of the meeting and the tasks; the relevant details regarding OSCE examinations, scenarios and examinees.

Task 1 (individual): Completion of questionnaires and rating scales covering three domains:

(1)  socio-demographic characteristics: age, gender, educational level, employment, marital status;

(2)  clinical characteristics: physical health (Functional Health Assessment Charts COOP-WONCA, item of general health, score range 1–5) [27]; mental health (General Health Questionnaire, GHQ-12, with score $\geq 3$ suggesting the presence of a significant emotional distress) [28]; presence of chronic diseases (yes–no); medical service utilization of primary care (once a year, less than once a month, monthly, weekly, more than once a week); and secondary care in the preceding year (never, once, more than once);

(3)  attitudes: personal communication preferences (Quote-com, regarding 23 physician behaviours, score range 0 (not important) to 100 (extremely important) [29-30], and personal trust in health care (Trust in Medical Profession, TMP; total score range 11–55, from low to high trust) [31].

The questionnaires, when not available in the national language, were translated, using the usual forward–backward procedure.

Task 2 (individual): The four different videotapes of the same scenario were projected on a screen. After observing each videotape participants were asked to:

(a) Assign a grade using the same 10-point Likert scale applied by the simulated patients (GSPRS) to assess the quality of each doctor's communicative performance in response to the question: 'How satisfied were you as a member of the general public with the way in which this doctor communicated with the patient?'.

(b) Indicate on the provided transcripts of the interview the salient remarks made by the student doctor by marking them with a plus (+) when judged positively or with a minus (-) when judged negatively. These judgments could be completed by written comments.

(c) Rank the four videos according to personal preference (GP ranking) answering the following questions: 'which doctor would you choose as your favorite GP?', 'which one as your less favorite?'; 'where would you put the other two?'.

Task 3 (group): The participants were invited to discuss and to share their preferences and views on the student doctors' performance with the group.

Task 4 (individual): Participants were shown some video fragments from the set of four interviews (16 fragments, four fragments from each interview). In each of these selected fragments the simulated patient gave a cue or expressed a concern. The panel members were asked to observe the way the student–doctors reacted to such expressions and individually rate on a 1–10 scale the appropriateness of these reactions.

Cues and concerns were identified by applying the 'Verona Coding Definitions of Emotional Sequences (VR-CoDES)' [32].

Task 5 (group): The participants were asked to discuss and comment, in the focus group, on their ratings from task 4 about the appropriateness of the students' reactions to a patient's cue or concern, and to explain why their reactions were rated as appropriate or not.

Task 6 (group): Before concluding the participants were invited to formulate tips for doctors and patients to make the medical consultation more successful, drawing on their personal experiences and the focus group discussions.

All the group discussions were video and audio taped.

The feasibility of the procedures was tested with three pilot panels, in order to verify whether participants could easily understood all the tasks, fill in all the questionnaires, got involved and felt free to contribute to the focus groups discussion and, finally, could maintain an adequate level of attention and participation throughout the duration of the focus group. All participants gave a positive evaluation and expressed their satisfaction for

the project; and everyone maintained a high level of interest toward the topics discussed during the focus groups. Therefore no substantial modifications were necessary and the pilot data were included in the data analysis.

**Statistical analyses**

The protocol adherence was checked applying a Generalized Linear Model (GLM) with Poisson family distribution and logarithm link function. A post hoc analysis of model residuals [33] on the whole sample tested the complete independence of the stratification variables (country, scenario, gender and age). The frequency distributions of the socio-demographic and clinical characteristics both among the four countries and the two scenarios were compared using Pearson chi-square test in the analysis of two-way contingency tables and Student's t-test or one-way ANOVA for continuous variables. Whenever a significant difference occurred, an adjusted residual analysis or post hoc Bonferroni multiple-comparison test, respectively, for categorical and continuous variables, was performed in order to evidence which subgroups showed a wider observed gap than expected.
Data were analysed using Stata version 9.2.

Table 1 Participants' frequency distribution according to country, age, gender and
scenario (period pain-PP, sexual transmitted disease-STD)

| Gender | Netherlands | | Italy | | UK | | Belgium | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Male** | pp | std | pp | std | pp | std | pp | std | pp | std | Total |
| **18-30** | 4 | 6 | 4 | 6 | 7 | 2 | 6 | 4 | 21 | 18 | 39 |
| **31-50** | 5 | 4 | 7 | 7 | 6 | 10 | 3 | 3 | 21 | 24 | 45 |
| **>50** | 4 | 6 | 5 | 4 | 5 | 4 | 3 | 2 | 17 | 16 | 33 |
| **Total** | 13 | 16 | 16 | 17 | 18 | 16 | 12 | 9 | 59 | 58 | 117 |
| **Female** | pp | std | pp | std | pp | std | pp | std | pp | std | Total |
| **18-30** | 10 | 4 | 7 | 7 | 7 | 3 | 3 | 6 | 27 | 20 | 47 |
| **31-50** | 5 | 5 | 7 | 5 | 8 | 8 | 4 | 5 | 24 | 23 | 47 |
| **>50** | 7 | 3 | 8 | 5 | 7 | 8 | 5 | 4 | 27 | 20 | 47 |
| **Total** | 22 | 12 | 22 | 17 | 22 | 19 | 12 | 15 | 78 | 63 | 141 |
| **Total*** | **35** | **28** | **38** | **34** | **40** | **35** | **24** | **24** | **137** | **121** | **258** |

* one socio-demographic questionnaire is missing in the Netherland subsample

## Results

### The adherence to the research protocol

The overall sample comprised 259 participants, equally distributed across the centres and the stratification variables (table 1), as established by the study design and confirmed by the GLM (deviance =21.2 (df=40); p=0.99).

### Sample background characteristics

The overall sample presents a satisfactory mixture of socio-demographic and clinical characteristics (table 2).There was a wide variation in use of health services, in accordance with what could be expected from the general population.

### Participants characteristics and scenario and country comparisons

The frequency distributions of the background characteristics of the participants showed no differences between the two scenarios except for the presence/absence of chronic disease ($Chi^2$=21.7 p=0.02) and the level of trust (TMP score; t=3.21 p<0.01).

Significant differences among the countries (table 2) were observed for level of education ($chi^2$ =23.4, df=6), occupational status ($chi^2$=58.24, df=12), presence of chronic disease ($chi^2$=31.3, df=3), general health status (COOP-E; $chi^2$=21.9, df=6), and service utilization (Hospital admission, $chi^2$=9.43, df=3; specialist visits, $chi^2$=11.7, df=3 ; GP visit, $chi^2$=16.0, df=6). Most of these observed differences seem due to the English and Belgian subsample. The post-hoc analyses showed that higher frequencies than expected (adjusted residuals cut-off 3.0) resulted in the English subsample specifically for the subgroups "employed" (6.2), "excellent COOP-E" (4.3), "absence of specialist visits" (3.3), and in the Belgian group for "chronic disease" (4.9). In the opposite direction, lower values than expected were observed among the subgroups "low education" (-3.9), "student" (-3.4), "6-10 GP visits in a year" (-3.5) for the English sample and absence of hospital admission (-2.3) in the Belgian sample. An additional difference was observed in the Netherland sample, where student subgroup was more represented than expected (3.2), while the employed subgroup was underrepresented (-5.1).

Table 2: Socio-demographic characteristics of participants by scenario and centre (ER=Emergency Room; H=Hospital; GP=General Physician)

| Sample characteristics | Total N=258 | PP n=137 | STD n=121 | p-value | NL n=63 | IT n=72 | UK n=75 | BE n=48 | p-value |
|---|---|---|---|---|---|---|---|---|---|
| **Socio demographic** | | | | | | | | | |
| **Education %** | | | | 0.83 | | | | | **<0.01** |
| None/primary school | 12.8 | 13.9 | 11.6 | | 17.5 | 22.2 | 0.0 | 12.5 | |
| Secondary school | 39.9 | 38.7 | 41.3 | | 44.4 | 41.7 | 40.0 | 31.3 | |
| Higher school | 47.3 | 47.4 | 47.1 | | 38.1 | 36.1 | 60.0 | 56.3 | |
| **Marital status %** | | | | 0.58 | | | | | |
| Married/ Living together | 44.7 | 47.8 | 41.3 | | 42.9 | 33.3 | 57.3 | 44.7 | |
| Widowed/Divorced | 11.7 | 11.0 | 12.4 | | 11.1 | 12.5 | 12.0 | 10.6 | 0.14 |
| Single | 43.6 | 41.2 | 46.3 | | 46.0 | 54.2 | 30.7 | 44.7 | |
| **Occupation %** | | | | 0.59 | | | | | |
| Employed | 56.8 | 53.7 | 60.3 | | 29.0 | 55.6 | 86.7 | 47.9 | |
| Unemployed | 4.7 | 3.6 | 5.8 | | 8.1 | 5.6 | 0.0 | 6.3 | |
| Student | 19.8 | 22.1 | 17.4 | | 33.9 | 18.1 | 6.7 | 25.0 | **<0.01** |
| Incapacitated | 4.7 | 4.4 | 4.9 | | 11.3 | 0 | 2.7 | 6.3 | |
| Other (housewife/retired) | 14.0 | 16.2 | 11.6 | | 17.7 | 20.8 | 4.0 | 14.5 | |
| **Clinical** | | | | | | | | | |
| **Chronic disease (%)** | 27.5 | 19.1 | 36.9 | **<0.01** | 33.3 | 15.3 | 16.0 | 56.3 | **<0.01** |
| **Coop-e (%)** | | | | | | | | | |
| Excellent/very good | 55.2 | 56.2 | 54.1 | | 45.3 | 41.7 | 76.0 | 56.3 | |
| Good | 29.7 | 31.4 | 27.9 | 0.43 | 35.9 | 40.3 | 13.3 | 31.2 | **<0.01** |
| Fair/ poor | 15.1 | 12.4 | 18.0 | | 18.7 | 18.1 | 10.7 | 12.5 | |
| **GHQ % (Score >3)** | 24.3 | 26.3 | 22.1 | 0.44 | 28.1 | 20.8 | 17.3 | 35.4 | 0.10 |
| **ER visits (%)** (Never) | 77.2 | 76.6 | 77.9 | 0.81 | 73.4 | 79.2 | 81.3 | 72.9 | 0.59 |
| **H admission (%)** (Never) | 87.3 | 87.6 | 86.9 | 0.87 | 82.8 | 91.7 | 93.3 | 77.1 | **0.03** |
| **Specialist visits (%)** (Never) | 41.3 | 45.3 | 37.0 | 0.17 | 31.3 | 37.5 | 57.3 | 35.4 | **<0.01** |
| **GP visits** | | | | 0.96 | | | | | **0.01** |
| < 5 times in a year | 76.8 | 77.4 | 76.2 | | 65.6 | 73.6 | 90.7 | 75.0 | |
| 6-11 times in a year | 14.7 | 14.6 | 14.8 | | 23.4 | 19.4 | 2.7 | 14.6 | |
| Monthly or more | 8.5 | 8.0 | 9.0 | | 10.9 | 6.9 | 6.6 | 10.4 | |
| **Attitude** | | | | | | | | | |
| **QUOTE** care: mean | 83.0 | 83.7 | 82.3 | 0.50 | 85.8 | 81.2 | 82.0 | 83.8 | 0.40 |
| (sd) | (16.7) | (16.6) | (16.8) | | (16.4) | (16.3) | (17.2) | (16.7) | |
| **QUOTE** cure: mean | 83.0 | 84.4 | 81.3 | 0.09 | 84.7 | 84.3 | 82.6 | 78.9 | 0.16 |
| (sd) | (14.1) | (15.0) | (13.1) | | (14.3) | (13.8) | (14.0) | (14.5) | |
| **TMP** Score: mean | 31.3 | 29.9 (5.4) | 31.9 | **<0.01** | 30.1 | 31.5 | 30.8 | 31.1 | 0.46 |
| (sd) | (5.7) | | (4.4) | | (4.2) | (5.0) | (5.5) | (5.0) | |

Significant differences are reported in bold

## Discussion

This study demonstrates the feasibility of involving lay people in research projects on the quality of care, using systematic procedures and a wide range of methods and measures.

Participants became immediately involved in the project, evidencing great interest in the evaluation of doctor's communicative ability. The low number of missing data together with the documented adherence to the

study protocol confirms the good quality of the collected data. No substantial differences were found between participants background characteristics among the two scenarios. Accordingly, subsequent analyses will not need to take into account the scenario as a confounding variable.

Some relevant differences in the background characteristics of the UK and Belgium subsample were observed. Differences are probably due to the recruitment technique that could have led respectively to an over (UK) and under (Be) representation of people with higher socio-economic and health status. The same event could have occurred in the Dutch sample, where the employed subgroup seems underrepresented. Future data analysis will take into account the differences observed, adopting a multilevel approach, including country as an additional level of analysis.

The study design and the applied procedures offer several advantages for a better understanding of lay persons' view on healthcare communication issues. Lay people from four countries took part allowing a wider European perspective. This led to a large final sample of 35 focus groups, consisting of 259 individual participants. The recruitment criteria assured the desired variety of the samples in terms of psychosocial and clinical characteristics: the whole age range was presented, as well as people of different socio-economic status, educational level and health status. Both individual and group opinions were collected using quantitative as well as qualitative methods. This approach will allow investigators to study participants' opinions from multiple points of view to obtain a more comprehensive view of lay people perspective on doctor–patient communication issues. Moreover, the quality assessments from different participants in different countries are comparable, using the same methodology and presenting as stimuli standardized videos. Participants had the opportunity to judge the performance of student doctors with different communicative abilities, dealing with the same clinical scenario. Specific doctor behaviours could be observed, commented and assessed individually and through group discussion to provide a detailed and comparable picture of the views of the general public. The study design accounted for the confounding variables age, gender and scenario and gave rise, together with the recruitment criteria, to a sufficient heterogeneity within each panel, and an elevated homogeneity (and consequently comparability) between them. Lastly, as lay people were not directly involved in the consultations, our participants were favourably placed to freely judge and to comment on the student doctors' communicative performance, while still representing a patient perspective. This position prevented the potential bias of social desirability

and facilitated a realistic picture including both, positive and critical observations.

There are several limitations. The 'doctors' in the videos were selected from a sample of fourth year undergraduate students. However, they were taking their final summative exam before graduation and thus were expected to deal with the patient as instructed. The exam setting itself could be criticized since videos from this setting do not necessarily resemble the natural variance observed in senior doctors' behavioural repertoire. However, the aim of this study was not to provide findings on the quality of care in the four countries, but to compare lay people's opinions on what they consider to be good quality of communication and to collect their rationales behind these assessments. For this aim, we needed to show the lay people the same set of videos. OSCE stations supply standardized and easily comparable doctor patient interactions and we believe that this advantage counterbalanced the limitations due to the simulated context. On the other hand, being stimuli for the focus group discussions, the videos were also starting point for a wider discussion of participants' own experience with their GPs.

Finally, both scenarios refer to gynaecological situations which could have hindered male panels in expressing their opinion. This limitation was overcome by having separate panels for males and females to minimize any potential embarrassment and advising the male participants on how to identify with the patient.

This research project aims to better understand what citizens expect and desire from their doctors. It will allow researchers to obtain new insights on the communication elements on which to build a truly patient-centred healthcare. Insights from this study will be particularly helpful for medical education, because they will provide information about which types of physician communication are equally valued by all lay people and which elements are liked or disliked by persons with different socio-demographic or psychosocial characteristics, to enable a differentiated approach in medical consultations.

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To whom it may concern

This is to certificate that the paper" GULiVER- travelling into the heart of good doctor-patient communication from a patient perspective: study protocol of an international multicentre study written by Moretti F, Fletcher I, Mazzi MA, DeVeugele M, Rimondini M, Geurts C, Zimmermann C, Bensing J and published in the European Journal of Public Health (2011) is the fruit of the collaborative work of the authors mentioned.

Although the team members had their own, specific contribution to this paper, the contribution of Maria Angela Mazzi needs to be highlighted, because - as the team's methodologist and statistician - she had a major influence on all larger and smaller decisions about the study design and methodology. Her contribution to the study protocol was fundamental.

Dr. Francesca Moretti

# 3

# How do focus groups of lay people evaluate doctors' communication approach when observing video-clips of medical consultations?

**Abstract**

**Background:** The literature shows that the quality of communication is usually determined from a professional perspective. Patients or lay people are seldom involved in the development of quality indicators or communication.

**Objective:** To give voice to the lay people perspective on what constitutes 'good communication' by evoking their reactions to variations in physician communication.

**Design:** Lay people from four different countries watched the same videotaped standardized medical encounters and discussed their preferences in gender-specific focus groups who were balanced in age groups.

**Setting and participants:** Two hundred and fifty-nine lay people (64 NL, 72 IT, 75 UK and 48 BE) distributed over 35 focus groups of 6–8 persons each.

**Main variables studied**: Comments on doctors' behaviours were classified by the GULiVer framework in terms of contents and preferences.

**Results**: Participants prevalently discussed 'task-oriented expressions' (39%: competency, self-confident, providing solutions), 'affective oriented/emotional expressions' (25%: empathy, listening, reassuring) and 'process-oriented expressions' (23%: flexibility, summarizing, verifying). 'Showing an affective attitude' was most appreciated (positive percentage within category: 93%, particularly facilitations and inviting attitude), followed by 'providing solution' (85%). Among disfavoured behaviour, repetitions (88%), 'writing and reading' (54%) and asking permission (42%) were found.

**Conclusions**: Although an affective attitude is appreciated by nearly everybody, people may vary widely in their communication needs and preferences: what is 'good communication' for one person may be disliked or even a source of irritation for another. A physician should be flexible and capable of adapting the consultation to the different needs of different patients. This challenges the idea of general communication guidelines.

**Keywords:** focus groups, patient perspective, physician communication, qualitative and quantitative analyses, videotaped consultations

*Chapter 3*

## Introduction

Good communication is a core competence for physicians in all provision of health care [1-3]. But who is to determine what constitutes good communication? Much of the literature has focused on defining the communication skills that are necessary to develop a satisfying and effective dialogue with patients from a professional perspective [4-6], thereby largely neglecting the views of the potential beneficiaries of health care: the patients. It is true that clinicians, researchers and medical educators have made efforts to bestow the patients a central position in their own health care [7-8], but, to date, patients still have seldom been given the opportunity to evaluate physicians' communication skills [9-11]. The only patient-based sources for quality assessment are global patient satisfaction surveys, which are hardly used to improve clinical practice and often are methodologically limited [12-13]. The problem with this one-sided approach is that professional and patient views on what constitutes 'good communication' do not always match and may reveal different priorities and preferences [14-19]. Moreover, physicians have been found to be poor judges of patients' actual preferences [20-21]. There is now a growing consensus that involving patients in defining the essential elements of good communication might help to improve everyday clinical practice [9], and that the patient's perspective should be taken into greater consideration in the assessment of the quality of care [12, 22-24].

Putting the spotlights on patients or potential patients as assessors of the quality of care immediately raises another issue that is largely overlooked in the literature: patient variability. In our modern, guideline-driven health care systems, there is a tendency to define the quality of care in standardized terms, setting golden standards for optimal care, from which doctors may deviate if necessary according to a 'comply or explain' principle. This gives room for tailored care, but is no stimulus for it. Yet, knowing that in health care, diversity among patients is the norm and not the exception [19,25], it seems reasonable to ask whether a one-size-fits-all approach to patient care is the best one [17], as *'The'* patient simply does not exist. People may vary widely in their communication needs and preferences, and what is 'good communication' for one person may be disliked or even a source of irritation for another.

The aim of this paper is to describe the quality assessments on clinical communication of people from 4 different countries (Belgium, the Netherlands, UK Italy). The study participants watched the same set of

videotaped medical consultations and discussed in focus group the arguments for their positive and negative quality. To synthesize the large amount of gathered information, a quantitative approach to qualitative data was used [26,27]. Indeed, the quantitative methodology offers tools that grounding the analysis on the coded transcripts may well summarize the focus group conversations. This technique may properly assist the qualitative research to investigate the following two research questions:

1. What are the prevalent topics discussed by the participants?
2. What are the most frequent positive and negative statements on the quality of physicians' communicative behaviour?

## Methods

### Study sample

This study is part of an international multicenter study which draws its name (GULiVer) from the four centres involved: Ghent University (Belgium), Utrecht University/NIVEL (the Netherlands), Liverpool University (United Kingdom) and the University of Verona (Italy). In all four countries, the same procedures were followed according to a detailed protocol [28]. Briefly, a total of 259 lay people participated in the study (64 in Netherland, 72 in Italy, 75 in UK and 48 in Belgium), evenly distributed over 35 focus groups, comprising 6-8 persons per group, with at least two persons in the classes 18-30, 31-49 and $\geq$50 years of age to guarantee a heterogeneous age distribution. Each centre organized nine focus group meetings (except Belgium with 8). As gender is likely to influence the type of concerns disclosed by participants, focus groups were gender specific.

### Focus group materials

The groups watched the same set of videotaped OSCE simulated doctor–patient consultations (objective structured clinical examinations [29]) provided by the Liverpool Medical. The videotapes had been recorded in a station designed to test the quality of students' interviewing skills during 4th year summative finals and had been selected to provide a maximum variation in the examiner rated quality of communication. The videos regarded gynaecological problems associated with high levels of emotional distress, presented by simulated patients. The doctor's task was to collect patient symptoms and to recognize and manage potential distress.

The videos were either dubbed (Italy) or subtitled (the Netherlands and Belgium) to conform to the accepted practice of displaying English language television in different countries. The transcripts of the consultations were also provided in the language of the participants.

After watching each video, participants individually rated the quality of doctor's communication on a 10-point scale. Subsequently, the group discussion started, which lasted 1 h. The participants were asked to discuss the communication of the observed student doctors and provide reasons for their negative or positive evaluations. The facilitators gave the following instruction to the participants:

1. We are interested in understanding what is your opinion about the quality of doctor's communication in the shown videotaped medical consultations.
2. Please feel free to express any idea or thought!
3. Don't be afraid to express your opinion: today you are the 'experts'!
4. We welcome positive as well as negative comments!
5. Feel free to respond to any observation of another participant, but don't interrupt the other person.

The video registrations of the focus group discussions were fully transcribed and recorded in an excel file, both in the country's and in the English language, so that the sets of all focus groups were accessible by researchers from all countries. An inductive content analysis was then performed; a detailed description was given by Moretti et al. [30]. The focus group findings of the present study are based on this content analysis.

**Units of analysis and measures**

Researchers of each centre coded each participant's verbal turns of the focus group transcriptions. Turns were split in more than one statement (from now called units of analysis) when regarding different aspects of doctors' performances. The focus groups contributions were classified according to five main dimensions; a detailed description of methodological procedures and intercoder reliability were shown in Moretti et al. [30]. The analyses performed in the present paper were based on results from the following three dimensions:

1. Content of statement: different types of information were identified. They were classified in six communication areas, divided into 12 main categories and 41 subcategories, here synthesized in Figure 1.

Figure 1: Thematic areas of GULiVer framework related to doctor verbal behaviour performance

Nonverbal communication clusters all behaviours a GP expresses in nonverbal form. They are: facial expressions, eye contact, reading and writing, laughing and touch.

Process-oriented expressions concern all comments regarding the manner in which a doctor manages the conversation. Specifically, such expressions can refer to 4 primary aspects: a) the structure of the conversation (opening/closing, linking different parts of the conversation, flexibility, time); b) the ability to summarize retrieved information; c) the degree to which a GP involves his patients (sharing plans/ideas, asking permission, verifying); and d) the structure of the doctor's speech (use of repetition, fillers, interruptions, comprehensibility or jargon).

Task-oriented expressions refer to all expressions that concern the instrumental tasks of an interview. They include the GP's interpersonal behaviour that is focused on instrumental aspects (such as being clear, competent, business-like, self-confident, getting a complete picture of the patient's problem,) and other communicative skills, such as collecting information, giving information, and providing solutions.

Affective-oriented expressions include behaviours that are focused on affective/emotional components of an interview. They include statements that are related, for example, to empathy or an inviting attitude of the GP, reassurance, facilitation, listening and not be judgmental.

Socio-demographic characteristics of the GP is concerned with all the statements about gender, age and ethnicity of the doctor.

Other expressions clusters all the statements that can be stated in none of the previous categories, referring for example to the concepts of "continuity of care", "objective examination" or "getting distracted".

2. Positive or negative statement regarding the general communication style or attitude: a distinction was made between statements expressing a positive (liking/agreement) or negative (disliking/disagreement) value on doctors' communicative performance. A neutral value is assigned when the value is neither positive nor negative.
3. Explanation: presence of statements for which positive or negative preferences are also explained and motivated.

By counting the frequencies of the coded units of analysis, it is possible to obtain a list of the most commented topics. Moreover, by separating the comments in positive, neutral and negative statements, an indication is obtained which kind of communication is appreciated or disliked.

**Statistical analyses**

A preliminary exploration, using a multinomial logit model, was applied to check the homogeneous frequency distribution of the six communication areas by different focus groups.

To evidence differences in the distribution of participants' preferences within the 12 GULiVer categories of doctor behaviours, a chi-squared test was performed and followed by a residual analyses [31].
The analyses were performed using Stata 11.2 [32].

## Results

Each participant made at least one statement (mean = 27; SD = 18.4, range: 1–110), the level of participation ranging from passive (<10 statements by 10% of participants) to very 'active' (>50 statements by 9% of participants). In total participants, expressed 7067 statements of which 1598 were unrelated to the doctors' communicative behaviours and therefore not considered for analysis. The mean number of pertinent statements was 156 per focus group (range: 77–350).

### Overall picture

All coefficients of the multinomial logit model proved to be not significant (P > 0.10) and confirmed that the statements were equally distributed among the six areas and independent of gender and country, that is, all 35 focus groups dedicated similar space to each area. This 'shared list' of communication topics allowed to perform the analyses on the whole sample of 35 focus groups. Among the six areas, 'task-oriented expressions' were most extensively discussed (39%, range per focus group: 19–53%), followed by 'affective oriented/emotional expressions' (25%, range: 11–39%), 'process-oriented expressions' (23%, range: 12–36%) and 'non-verbal communication' (8%: range: 0–21%). Doctor characteristics such as ethnicity, gender, outfit, were rarely discussed (2%: range: 0–7%) as well as issues regarding examinations and continuity of care ('other' 3%: range: 0–12%).

### What are the most frequently discussed arguments?

Table 1 shows the frequencies of discussed arguments within the six communication areas, and some examples of the most frequent ones are displayed in Figure 2. About half of all statements centre around the attitude of the doctors. in terms of both Affective/emotional behaviour and task-oriented/professional behaviour (25 and 22%, respectively). Most comments within 'process-oriented expressions' regard how the doctor structures the conversation (12%), while collecting and giving information,

within 'task oriented expressions', collect 14% of the statements (9 and 5%, respectively). Finally statements on 'non-verbal behaviours' are also quite frequent (8%).

Table 1: Frequency distribution of focus-group comments regarding different doctor behaviours by participants' judgments

| Area | Communication Category | total comments | | negative | neutral | positive |
|---|---|---|---|---|---|---|
| | | n | Column% | row% | row% | row% |
| Non-verbal communication: | Nonverbal behaviours | 414 | 7.6 | **26.3** | 14.7 | 58.9 |
| | Structuring | 653 | 11.9 | 11.3 | **18.8** | 69.9 |
| Process-oriented expressions (n= 1238; 22.6%) | Summarizing | 164 | 3.0 | 14.6 | 7.3 | 78.1 |
| | Patient involvement | 215 | 3.9 | **24.2** | 14.4 | 61.4 |
| | Speaking peculiarities | 206 | 3.8 | **68.5** | 5.3 | 26.2 |
| | Attitude of the doctor | 1227 | 22.4 | 3.8 | 12.6 | **83.6** |
| Task-oriented/problem focused expressions (n= 2115; 38.7%) | Collecting information | 480 | 8.9 | **21.5** | 15.0 | 63.5 |
| | Giving information | 264 | 4.8 | 7.2 | 15.9 | 76.9 |
| | Providing solution | 144 | 2.6 | 4.2 | 11.1 | **84.7** |
| Affective /emotional expressions: | Attitude of the doctor | 1390 | 25.4 | 2.7 | 4.2 | **93.1** |
| General characteristics: | Socio-demographic | 130 | 2.4 | 14.6 | **56.9** | 28.5 |
| Others | | 182 | 3.3 | 5.5 | **81.9** | 12.6 |
| Total | | 5469 | 100.0 | 11.7 | 14.7 | 73.6 |

Percentages in bold higher or lower than expected

Figure 2: Examples of quotations of most frequent topics

| **Affective/emotional expressions of the doctor** |
|---|
| • 'Being reassuring (n=320; 6%): *"She is my favourite. When you are the gatekeeper, then you should first of all reassure the patient that she can say anything"* (female, age= 51, NL) |
| • Showing interest (n=265; 5%): "*with a 'human' doctor a person from a psychological point of view will cope better with the problems in front of him." (*female, age= 64, IT) |
| • Having a pleasant attitude (n=207; 4%): *"the girl had a very loving glance, a very gentle glance"* (male, age= 53, IT). |
| **Task oriented/problem focused expressions of the doctor** |
| • 'Being competent' (n=435; 8%): "Competent, he has taken the time to inform you that is a reassurance. It's a edge sort of thing, the competence of the knowledge and the way he is sharing the fact with you" (male, age= 25, UK) |
| • 'Self-confidence' (n=233; 4%): "but because he is nervous he doesn't do the right things. By his speed. But you can learn that" (female, age= 58, NL) |
| • 'Getting a complete picture' (n=211; 4%): "I just thought he was dynamic and caught everything you know that was needed to be asked and he finished off really well" (female, age= 51, UK). |

*- examples continue -*

| | |
|---|---|
| | **Structuring the interview** |

- 'Flexibility' (n=261; 5%): "Yes, it was almost or he had learned his lesson by heart and he had to ask all these questions and uh, did not explore any further than that, yes." (female, age=40, BE)
- 'Time issues' (n=150; 3%): "he gave me the impression to be in a hurry" (female, age=56, IT)
- 'Opening and closing the interview' (n=144; 3%): "I think only one of the students asked how the patient was like just as an informal introduction, hi how are you today, but not many of them did that" (female, age=20, UK).

**Collecting and Giving information**

- medical area (n=185; 3.4% and n=167; 3.1% respectively for collecting and giving ones): "And it was the only one who asked about a Pab test, that was good, I think. Like: did you have Pab tests before?" (male, age=32, NL)
- psychosocial area (n=171; 3% and n=28; 1%) "Also very important is that he clarifies, because I see him because I want to be cured rather than to be listened to; the more information I receive and the more he gives me certainty, the more I feel reassured and at ease in the place I am" (male, age=31, IT)

## Positive and negative statements

The majority of participants' statements was positive (74%), with a range from 13% for 'other statements' (mainly 'neutral') to 93% for 'showing an affective attitude' (see Table 1). The residual analysis, exploring the significant differences tested by chi-square test (see the three rightmost columns of Table 1, showing the percentage of judgements within each communication category; the observed frequencies in bold are apart from the expected ones), showed that the negative comments were focused primary on the structure of the doctor speech (69% of speaking peculiarities statements were negative), followed by non-verbal behaviour (in which 26% of the observed statements were negative, compared to 12% of the expected ones), for instance lack of eye contact, doctor expressions aimed to involve the patient into conversation (24%) or to collect information (22%). The participants appreciated doctors' attitudes, both in terms of emotional-oriented and task-oriented expressions (93 and 84%, respectively), followed by 'providing solution' (85%). In particular, as shown in Table 2, the most appreciated behaviours (positive judgments >90%) regarding the affective/emotional attitudes were 'facilitating', 'inviting attitude', 'giving reassurance', 'showing interest to patient', 'listening', 'pleasant attitude' and 'being empathic'. Concerning the 'task-oriented attitudes', the preferences were so listed: clarity of interview, showing self-confidence, providing a complete picture and competency. Figure 3 shows some examples of how the participants phrased their positive judgments regarding doctor attitudes.

Table 2: Frequency of specific behaviours (subcategories) regarding affective/emotional and task-oriented attitudes of the doctor by participants' judgments

| Communication Category | Communication Subcategory | negative row% | neutral row% | positive row% | Total count |
|---|---|---|---|---|---|
| affective/emotional attitudes of the doctor | facilitating | 0.9 | 0.0 | 99.1 | 109 |
| | inviting attitude | 0.7 | 2.0 | 97.3 | 149 |
| | reassurance/trust | 2.5 | 2.5 | 95.0 | 320 |
| | showing interest in patient | 1.9 | 3.4 | 94.7 | 265 |
| | listening | 0.0 | 6.6 | 93.4 | 91 |
| | pleasant attitude | 3.4 | 4.3 | 92.3 | 207 |
| | empathic | 0.0 | 10.0 | 90.0 | 110 |
| | neutral/no personal remark | 10.8 | 9.3 | 79.9 | 139 |
| task oriented/problem focused attitudes of the doctor | clarity of the interview | 1.3 | 6.4 | 92.3 | 78 |
| | self confident | 1.7 | 8.2 | 90.1 | 233 |
| | complete picture | 2.8 | 7.6 | 89.6 | 211 |
| | competency | 2.8 | 8.0 | 89.2 | 435 |
| | businesslike/straight to the point | 9.0 | 10.9 | 80.1 | 156 |
| | other/general | 8.8 | 54.4 | 36.8 | 114 |

Table 3 examines the comments focused on non-verbal communication and process-oriented expressions. It can be seen that within subcategories 'eye contact', 'flexibility' and 'comprehensibility', nearly all comments are positive (94, 83 and 79%, respectively).

Table 3: Frequency of specific behaviours (subcategories) regarding process oriented expressions and non verbal communication

| Communication category | Communication subcategory | negative row% | neutral row% | positive row% | Total count |
|---|---|---|---|---|---|
| Nonverbal behaviours | Eye contact | 3.4 | 2.5 | 94.1 | 119 |
| | Others | 25.9 | 15.3 | 58.8 | 131 |
| | Facial expression | 14.7 | 26.5 | 58.8 | 34 |
| | Laughing | 45.8 | 20.8 | 33.4 | 24 |
| | Reading and writing | 53.9 | 23.5 | 22.6 | 102 |
| Structuring | Flexibility | 6.1 | 10.7 | 83.1 | 261 |
| | Changing of topics and signposting | 10.2 | 16.3 | 73.5 | 98 |
| | Opening or closing of the interview | 8.3 | 24.3 | 67.4 | 144 |
| | Time issues | 24.0 | 29.3 | 46.7 | 150 |
| Patient Involvement | Verifying | 12.7 | 18.2 | 69.1 | 55 |
| | Sharing plans / ideas | 19.0 | 16.8 | 64.2 | 95 |
| | Asking permission | 41.5 | 7.7 | 50.8 | 65 |
| Speaking peculiarities | Comprehensibility | 16.7 | 4.2 | 79.1 | 48 |
| | Fillers | 78.8 | 4.6 | 16.7 | 66 |
| | Repetition | 88.1 | 6.5 | 5.4 | 92 |

Figure 3: Examples of quotations of positive statements (frequency > 75%) per communication area

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**Non verbal communication**

**Eye contact**: *"Body language and so on, looking at the patient and so on. Body language was very good, I think, with the fourth one. Someone who looks at you like this, who is turned towards you like this"* (female,age=20,BE)

**Process oriented expressions**

**Flexibility** "*He wasn't putting her under pressure to talk like automatically he asked questions first.*" (female,age=34,UK);

**Comprehensibility**: *"I have found a good doctor who speaks my language… Not those academic words'* (male,age=62,BE)

**Summarizing**: *"For me it's very positive, I would feel fine with it because of the fact that the doctor was attentive to what I said and that it would allow me to check if he got it right, to control, that's a positive"* (female,age=36,IT)

**Task oriented/problem focused expressions of the doctor**

**Clarity of the interview**: "*the doctor asked "did you gave birth". The patient said no and the doctor said: in that case we could have used as reference pain the delivery pain*" (female,age=24,IT)

**Self-confident**: "*"Yes, he came across confident to me and he didn't hesitate, he seemed to have his next question ready you know.*" (female, age=52,UK).

**Complete picture**: "*Yes, she still got, she asked everything. And from a personal point of view, I know it's good when they say you have to get all the background information, but like if you are going with something you do want to concentrate quite a lot on what*" (female,age=56,UK).

**Competency**: *"She questions, if there was a theme, then she really asked more about it. She really explored it and then she went on or she looked for a solution. For example, about the operation "have you had surgery". Then she goes on like "how long ago"* (female,age=61,NL).

**Businesslike/straight to the point**: "*she asked right and precise questions without loosing too much time"* (female,age=48,IT)

**Providing solutions**: *"And she was the only one who was looking for solutions with enthusiasm, the other ones only analysed the problem (...)"(male,age=35,NL)*

**Giving information:** *"Also very important is that he clarifies, because I see him because I want to be cured rather than to be listened to; the more information I receive and the more he gives me certainty, the more I feel reassured and at ease in the place I am" (male,age=31,IT)*

**affective/emotional expressions of the doctor**

**Facilitating**: *"I liked very much when he asked her if there was another question she would like to ask, to open her up"* (female,age=24,IT);

**Inviting attitude**: *"he has created the right atmosphere so that the lady could say something more, while the other doctors were very technical"* (female,age=62,IT);

**Reassurance/trust**: "*But yes, that makes you trust him, isn't it. For me that would be important. Because I have chosen the person who seemed the most sympathetic one*" (male,age=37,BE);

**Showing interest/commitment**: *"I think it's important for a doctor to be able to read someone you know, as soon as they walk in that room they should pick up, … you have got to learn to read a person"* (male,age=26,UK);

**Listening**: "*I found him very helpful and ready to listen. He let the patient talk quite a bit, she told how she felt, what were her symptoms before he intervened with questions…*" (female,age=26,IT);

**Pleasant attitude**: "*I found he had human warmth"* (male,age=71,NL);

**Empathy**: *"So but I liked him I put him as my favourite because I found him very empathetic"* (female,age=25,UK);

**Neutral/no personal remark:** *"She did not judge and she did'nt approve either. And that made a professional and objective impression**"(male,age=36,NL)

On the other hand, the subcategories that were prevalently coded as negative highlighted that participants did not like interruptions of the normal fluent speech, such as 'repetitions' (88%: *'Some of them were repeating questions, that they had already, the patient had already told them. I thought that was quite negative; it means that you haven't listened in the first place'* (male, age = 59, UK) and 'fillers' (79%: *'I did not like all these "ok, ok," which made me nervous'*. (female, age = 68, IT), *'To say, "right, right" showed some insecurity'* (male, age = 35, IT). For some participants, this behaviour influenced the level of trust negatively [*'It doesn't inspire confidence in the patient, does it?'* (female, age = 44, UK)]. Among non-verbal behaviours also 'reading and writing' received many negative comments (54%), because doctors who took notes did not look at their patients and appeared uninterested in trying to understand their suffering: '*A doctor who is writing all the time, that would irritate me enormously*' (male, age = 42, BE).

It is interesting to note that some behaviours received conflicting opinions, in particular laughing (46 vs. 33%, respectively, negative and positive values), asking permission (42 vs. 51%), time issues (24 vs. 47%) and sharing plans/ideas (19 vs. 64%). Figure 4 shows some of these different and opposing views.

## Discussion

This study has provided some interesting results, both with regard to the content and to the applied methodology. Thanks to the detailed study protocol and the intensive collaboration of researchers in each of the four participating countries, the chosen methodology proved to be feasible to conduct an international multicenter study, with the unique result that qualitative as well as quantitative data could be reported about what (lay) people in different countries think about the quality of communication, based on their assessment of the same set of videotaped consultations. The aim of this study was to give voice to the patient perspective on what constitutes 'good communication' by letting lay people watch videotaped medical consultations and let them discuss their likes and dislikes, as well as the reasons for these positive and negative judgments.

Focus groups were used, because this is the preferred technique for eliciting subtle or sensitive opinions from people on topics which are not discussed on a daily basis [33]. By choosing this approach, we comply with recommendations to involve patients in quality assessments on clinical

Figure 4: Examples of quotations of controversial topics

| | POSITIVE QUOTES | NEGATIVE QUOTES |
|---|---|---|
| **Laughing** | *"She comforted me straightaway with her smile; that was very pleasant, I think."* (female, age=44, NL); *"I thought tughing was not meant to be like that but a way of being friendly."* (female, age=44, NL) | *"I had a feeling she would laugh at me."* (female, age=22, NL); *"It is not really a laughable subject, so I think that I would have thought, 'Why are you laughing?' "* (female, age=22, NL). |
| **Ask for permission** | *"I mean ok, the guy sort of said you know I am going to ask you some very important but personal questions and if you want me to stop at any time, just say, that's is acceptable"* (female, age=43, UK). | *"He also asks the same question a hundred times: 'May I ask you...' before he poses the question. And that, too, is very irritating, because he has the mandate to ask a question"* (male, age=35, NL); *"But it was also something that made me think, 'Stop saying 'Sorry' all the time!"* (male, age=23, NL). |
| **Time issue** | *That he takes time for me, anyway. But I have to say that I am not going to see the doctor very often. I am a bit fed up with it.* (male, age=62, B). *"I think also because of, the time limit doctors have, when you see the full waiting rooms and so on that he should be busy with the problem itself, and with the things happening around it"* (female, age=20, B). | *I also felt as if she run out things to say: she was filling time* (female, age=53, UK). |
| **Sharing plans /ideas** | *'Who has a certain order in his way of working which appeals to me and in the end he might have a solution which I could follow or not, that is for me to decide'* (male, age=56, NL) *I'm not referring only to the humane aspect, but also to the fact that the doctor would fully understand what are my feelings about my illness, and not only which physical consequences it has for me, but rather if it would represent a real problem'* (female, age=24, I) | *That's what he said what do you want me to do. I said I don't know, I said. I am in pain with my wrist.* (male, age=57, UK). *The doctor was above with "What do you expect from me". It is the doctor who says what is to do.* (female, age=29, I). |

communication [34]. Our participants confirmed to be highly interested in doctor-patient communication: they were easily recruited, became immediately involved in the project, and the discussions in the focus groups were very lively. The similarities in the content of the focus group discussions over countries and gender were striking. The majority of the

comments made in the focus groups were about the doctor's task-oriented communication, in particular about biomedical exchanges. This is in line with what could be expected as the literature shows that between 57 and 75% of the doctor's expressions in general practice can be characterized as 'task-oriented' and only a small part of it devoted to psychosocial exchanges [35–38]. More interesting is the proportion of negative, positive and mixed evaluations of specific doctor behaviours, because these highlight the critical communication aspects to which clinicians should pay attention.

A relatively high number of positive comments referred to 'affective/emotional expressions', and this confirms what is already consolidated in the literature: patients value and appreciate doctors' expressing empathy, support, interest and active listening [39–41]. In the eyes of our sample, an emphatic doctor seems to be characterized by an open, inviting and compassionate attitude, and the participants are quite consistent in the positive value they give to this type of communication. Our study adds three important observations to this general picture.

First, affective communication should always remain at a professional level. Indeed, personal remarks or self disclosure are not always valued positively, nor is the use of humour. For example, some participants reported doctor's jokes observed in the video consultations, as indicators of intimacy and partnership, while others perceived the same behaviour as highly insensitive and offensive. This confirms that therapeutic effects of humour in medicine are guaranteed only by an appropriate and patient-centred use of such interventions that takes into account emotional [42], cultural [43] and contextual variables [44].

Second, some 'process-oriented expressions' which were intended to create a pleasant and open atmosphere were sometimes experienced as problematic and controversial. For example, asking permission or apologizing for doing something sometimes seems to convey doctor's insecurity or indifference to what have been said by the patient. Also, back channel responses, such as 'ok, mh mh.', if used too often or with no connection with previous patients' statements, seem to be seen as annoying or as a lack of attention. The importance of physicians' genuine listening attitude during the consultation is confirmed by participants' comments pertaining to 'non-verbal expressions'. Writing and reading during the consultation and Keeping eye contact received, respectively, highly negative and highly positive comments, underlying how the congruence between verbal and non-verbal behaviour affects how a

message is received. To nod and saying 'ok' while writing or reading a note is disliked and considered a sign of distraction or indifference. Such passive listening expressions should be congruent with non-verbal behaviours and also counterbalanced by active listening interventions which better structure the interview, show attention and increase the identification and accuracy of clinically relevant information [45].

A third interesting and somewhat unexpected result regards patients' involvement in the decision- making process. Few participants seem to consider the task of making decisions as doctor's sole responsibility; most people want to be involved in medical decision making. However, a considerable percentage of negative comments in our study referred to doctor interventions aimed to share plans and ideas with patients. Some participants saw the doctor as responsible for making decisions ('that is why I came to see the doctor'), others felt at a loss and abandoned when the doctor left the final decision to the patient. Similar results have been reported elsewhere [46,47]. Our study confirms again that tailoring to patients' needs is essential for performing a satisfactory consultation [6] and 'informed flexibility', as expressed by the degree to which an individual physician can adapt the consultation to the changing needs of one patient or to different needs of different patients [7] is a key aspect of a truly patient-centred consultation.

**Strength and weaknesses**

The study design has some clear strengths: balanced study sample, standardized stimuli for the quality assessment and discussion, mixed techniques for synthesize the focus groups' data. In more detail, the sampling strategy was to create comparable groups by gender and country, while stratified by age within each focus group to represent different patient profiles. The discussion guide was previously agreed by facilitators and was based on standardized stimuli (a set of four videotaped medical interviews, showing the same type of medical problem but for different doctors).

Another strength is the application of a quantitative approach to qualitative data, the 'quantitizing' of qualitative data [48]. This approach combines the best of two worlds: the content analysis allowed a systematic classification of the expressed concepts by defragmenting the text of transcripts, the quantitative analysis to identify the most frequently discussed issues, revealing their level of importance attributed by the participants.

Some limitations of the study have to be noted. The videos used to collect panel perspectives might be considered as being not representative of real general practice consultations: clinicians were 4th-year students, performing a consultation with a simulated patient within an OSCE setting. Moreover, the disorders presented by the simulated patients were two very specific gynaecological problems. Actually a juxtaposition of methodological and practical evaluations leads to the selection of this set of interviews. Although we were aware of a potential reduced generalizability of the results, we considered the advantages of the selected videotaped medical consultations to outweigh the disadvantages, because our selection guaranteed a higher control of the variability related to the phenomenon observed. Simulated consultations based on the same scenario allowed the participants to compare different approaches applied by clinicians in the same standardized setting. The available external evaluations of OSCE examiners and simulated patients made it possible to select and show to the panels a wide range of communication performances, ranging from excellent to very poor. The specific gynaecological problems of the consultations let us opt for separate focus groups for males and females to put participants at ease and let them free to express their opinions and concerns. Finally, not to be personally involved as a patient does not seem to be a problem as evidences from the literature indicate that feedback given in simulated interactions maintain an acceptable validity and reliability [49].

**Conclusion**

Affective communication is highly valued by nearly everybody, as long as it stays at a professional level and is perceived as genuine. Non-verbal communication plays a significant role in people's quality assessment, in particular the consistency between verbal and nonverbal communication. Doctors' shown competency and self-confidence is also highly appreciated and the opposite demeanour criticized. Negative assessments are also given to superfluous repetitions and routinous back-channelling ('ok', 'hmm', 'yes') if not accompanied by adequate non-verbal communication. Hardly any other types of communication evokes either positive either negative quality assessments, and these mixed reactions make clear that there is no such thing as 'one size fits all'. Tailored approaches are always needed in the medical consultation room. This challenges the idea of general communication guidelines.

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# 4

# Is there a gender effect when evaluating doctors' communicative performance?

**Abstract**

This paper assesses whether gender plays a role when male and female participants discuss the quality of doctor-patient communication in gynaecological consultations. An European multi-centre study was conducted comprising 259 participants in 35 gender- and country-specific focus groups. In all focus groups, a set of four videotaped Objective Structured Clinical Examination (OSCE) consultations was used as a prompt for discussion. The doctors' ability in communicating was assessed by participants' ratings and by a quantified content analysis of their comments, using a mixed method approach. Gender analysis was performed applying a set of generalized linear regression models.

The findings indicated that gender differences were smaller than expected. The individual ratings of the overall quality of communication were similar for male and female participants and there were hardly any differences in the content of the discussions. The only two exceptions were that female doctors were criticized more than male doctors when they made impersonal comments and that female participants were more outspoken than men, positively and negatively. The prevalence of gender similarities suggests that doctors' empathy, support, understanding and pleasantness are highly appreciated by both male and female participants and appear to transcend gender differences.

**Keywords:** doctor-patient communication; gender; mixed methods; quality ratings; focus group.

## Introduction

In the literature on doctor-patient communication, gender plays a modest but consistent role. Empirical studies have paid attention to gender role performance, role expectations, preferences, and experiences of patients and doctors [1–6]. The study of patient's gender, doctor's gender and their interaction has been approached using different methodologies, according both to the outcome measure and the target gender, that is the patient, doctor or both [7]. Interaction analysis systems or expert observer ratings are used when focusing both on the gender of the doctor and/or that of the patient, and also on their actual interaction during consultations [8]. A recurrent finding regarding doctors' communication style is, for example, that female doctors, compared to male doctors adopt more "patient centered" behaviours [9–11]. This suggests a female gender role performance corresponding to what patients would expect from a female doctor. Female patients talk more about their emotions than male patients [12]. Surprisingly, the gender of the doctor does not appear to have an influence upon such patient affective expressions, as was shown for gynaecological patients [13].

Qualitative and quantitative measures based on in-depth interviews with patients and their self-rated scales are used when exploring a range of issues in the field. These include: the patient's expectations of the doctor's gender role; the patient's general preference with regard to the gender of the doctor; patients' personal experiences with male or female doctors; and patients' evaluation of doctors' communication skills when observing videotaped consultations [7]. For example, analogue patients who observed videotaped Objective Structured Clinical Examinations (OSCE) perceived patient-centred male medical students to be more competent than female ones[8].

Recent research has focused on the effects of doctor-patient dyads sharing the same gender as opposed to gender discordant doctor-patients dyads during medical consultations [14,15]. For example, gender concordant dyads result in greater patient-oriented interactions and in greater patient trust and enablement [10,16,17]. In fact, it has been hypothesized that patients' satisfaction with their consultation might improve when a doctor adopts an approach towards communicating which fits the patients' gender role expectations. Gender thus may have a moderating effect on the relationship between the doctor's approach towards communication and the patient's satisfaction [18,19].

Experts in medical education have thus proposed specific teaching programmes to improve attitudes and skills regarding gender issues in medical practice [20–22]. On the other hand, a Swedish research group pointed out that among leading experts, men, as opposed to women, tend to maintain that gender-related issues in medical practice are overemphasised or "important… but of low status" [23].

While the experts seem to disagree, and there is an ongoing debate in the literature about the nature, size and relevance of gender issues in medical communication, it is reasonable to let patients themselves determine whether or not 'doctor gender' is an important issue in the medical consultation room. The findings of such a study might be of relevance for health care and promotion planning [24] as well as teaching purposes [25].

The present study endorses this suggestion, using data from the large dataset of an international multicentre study, GULiVer, which addressed patients' views on good doctor-patient communication. It assessed views both individually through rating scales and through focus group discussions [26].

The GULiVer study design used separate male and female panels and male and female doctors. This allowed researchers to explore whether or not the communication of male doctors as opposed to female doctors is valued differently by men as opposed to women. We expect that gender differences – if they exist at all – should emerge in this type of design.

Three research questions were investigated:

1. Are there gender differences in the *quality ratings* of doctors' communication by female and male participants?
2. Are there any differences in *the kind of topics* that are discussed in male and female focus groups with regard to doctors' ability to communicate?
3. Are there differences between male and female participants in *what is liked or not liked* in the way the doctors communicate?

## Method

A set of 35 focus groups were conducted in an international study which draws its name GULiVer from the four centres involved: Ghent University (Belgium), Utrecht University (the Netherlands), Liverpool University (United Kingdom) and the University of Verona (Italy). Each centre organized nine focus group meetings (except Belgium which had eight focus group meetings). The same procedures were followed in each focus group according to a detailed protocol [27].

In order to produce the same prompt for all focus groups, we aimed to select videotaped medical consultations fulfilling three criteria: 1) standardization of medical consultation; 2) variety in the quality of doctor communication; 3) sensitive gender related medical problem [28]. Following these criteria, two sets of four videotaped Objective Structured Clinical Examination (OSCE) consultations, provided by the Liverpool Medical School and designed to test the quality of students' interviewing skills during their final (fourth year) examinations, were selected to be used as a prompt for the focus group discussions. Students, referred to as "doctor", had to gather facts about a simulated patient's condition. The consultations (detailed in Table 1) referred to two different scenarios, both about gynaecological problems associated with high levels of emotional distress. Scenario 1 concerned vaginal discharge caused by a Sexually Transmitted Disease (STD); Scenario 2 concerned Period Pain (PP) resulting in absenteeism from work. For each scenario four videotaped doctors were selected with different levels of communication performance. These were evaluated by the examiners and the simulated patient involved according to the Liverpool Communication Skills Assessment Scale – LCSAS and the Global Simulated Patient Rating Scale – GSPRS respectively [29]. Half of the panels were shown the four videos relating to Scenario 1, with the rest shown the four videos for Scenario 2.

Table 1: Characteristics of the videotaped consultations

| scenario | video characteristics | | |
| | Doctor gender | LCSAS[a] | GSPRS[b] |
| --- | --- | --- | --- |
| Period pain | male | 39 | 10 |
| | male | 28 | 10 |
| | male | 37 | 5 |
| | female | 28 | 6 |
| Sexual transmitted disease | female | 39 | 9 |
| | female | 25 | 9 |
| | female | 37 | 6 |
| | male | 28 | 6 |

[a] LCSAS: score:0- 39 (low<29 – high>36)
[b] GSPRS score: 1- 10 (low$\leq$6 – high$\geq$8)

The type of medical problem presented in the videotaped consultations (sensitive gynaecological problems) influenced the composition of the focus groups in our study. The decision to use single gender focus group for men

and women followed Morgan [30], who advises on this procedure when gender issues are the focus of study. People are likely to feel more comfortable talking openly and honestly about intimate, taboo or otherwise sensitive topics with others of the same gender [31]. Homogeneous gender groups also allow topics to be explored which are seen as appropriate by some but not all groups – what may be of relevance or concern to female participants may not necessarily be so to male participants [31]. A final reason to choose same-gender focus groups is that while mixed groups seem to be more effective in problem-solution tasks, they tend more towards conformity. It seems that homogeneous groups are more suitable when the aim of the study is to find a diversity of opinions, ideas and views [32], which was primarily the aim of our study.

In line with this aim, we decided to choose the mixed-method approach for the analysis of the data. Compared to more traditional qualitative methods, this may have the disadvantage that nuances or subtleties of the discussions might get lost, but it has two important advantages: first, by counting the number of times certain topics are discussed, it is possible to get an idea of the importance of these topics for the participants; and second, quantification of the data enables comparison between groups (in this case female vs male participants) and the control of background variables (socio-demographic characteristics) by the use of statistical techniques.

**Participants**

The 259 participants (123 men and 136 women) were recruited from the general population. Recruitment took place via adverts in free local newspapers and by word-of-mouth. To be included, participants had to be over 18 years old and to have visited their GP at least once during the last year. To avoid negative biases, having filed a medical-related complaint or lawsuit over the past few years was used as an exclusion criterion The sample was stratified by age as well as gender, with each focus group consisting of six to eight participants covering three different age groups: 18–30, 31–49 and 50+. There were 64 participants from the Netherlands (NL), 72 from Italy (IT), 75 from the UK and 48 from Belgium (BE).

**Procedure**

The participants attended a one-day meeting, where they watched the four videotaped consultations and carried out various tasks [27]. The videos

were either dubbed (IT) or subtitled (NL and BE) to conform to the accepted practice of displaying English-language audio on television in the various countries. Written transcripts of the consultations were also provided in the language of the participants. Two tasks were the subjects of the present study. After watching each video, participants individually rated the overall communication ability of the doctor on a Likert scale (1–10). In the subsequent focus group they discussed their views on the four doctors observed, shared their views regarding the doctors' approach to communication, and provided underlying reasons for their opinions. Each discussion was audiotaped, transcribed and, apart from the UK material, translated into English. Care was taken to maintain the link between each contributing statement and its author.

**Content analysis**

Content analysis was used to analyse the data. This is a rigorous technique based on clear definitions (coding scheme), reproducibility of the assignment of text to values and reliability of the coding (which is measured using inter-coder agreement statistics) [33]. It is used 'for simplifying phenomena' because it can reduce a large amount of textual data into a small number of variables that can be analysed by using a statistical approach [34,35]. Researchers from each centre applied an inductive content analysis of a selected set of focus group discussions, in order to derive a common coding framework ('GULiVer coding system' – see Appendix) with which to classify each participant's statement, following a rigorous coding protocol [36]. Participants' speech turns were split into more than one statement (hereafter called units of analysis) when consisting of different comments on doctors' performance. The unit was classified into categorical variables, expressing both the topic of participants' comments and their value (coded as 'positive', 'negative' or 'neutral').

**Data analysis**

Table 2 shows the target and independent variables for each of the three research questions and the statistical approach used. A set of generalized linear regression models explored the presence of gender differences which were due to doctors, participants – that is to say the main effects – and their interaction (dyad effect). An appropriate linked function was chosen for each type of dependent variable.

To take into account the nested structure of the study design – repeated measures within participants or within focus groups – the 'cluster' option was adopted in the Stata commands. GSPRS and LCSAS, together with country and scenario variables, were entered into the regression model for the first research question in order to adjust for design effects. The analyses were performed using Stata 11.2 [37].

Table 2: Variables and statistical approach adopted for each research question

| Research questions | Target variables | Independent variables | Statistical units of analysis | Statistical techniques |
|---|---|---|---|---|
| Are there gender differences in the *quality assessment* of doctors' communication by female and male participants? | Participants' global quality rating (1-10 Likert scale) regarding doctors' ability to communicate | Doctor gender, participant gender, gender interaction, design effects (country, scenario, GSPRS, LCSAS) | n= 1036 individual score (each participant rating 4 doctors) | Linear regression for continuous events |
| Are there any differences in the *kind of topics* that are discussed in male and female focus groups with regard to doctors' ability in communicating?" | Focus group comments made about the doctor's observed behaviour and coded by 12 categories of GULiVer framework | Doctor gender, participant gender, gender interaction | n=3821 focus group statements | Multinomial regression for categorical data |
| Are there differences between male and female participants in *what is liked or not liked* in the way the doctors communicate? | Positive and negative classification of participants' comments on the doctor behaviours | Model 1: Doctor gender, participant gender, gender interaction, design effects (country, scenario, GSPRS, LCSAS) Model 2: GULiVer communication topics, doctor gender, participant gender | n=3486 focus group statements (excluding the 335 neutral statements) | Logistic regression for binary data |
| What importance is given to *specific gender issues* in male and female focus group discussions and in what terms are these discussed? | Focus group comments related to "gender issues" by GULiVer framework | Concordant and discordant gender dyads (doctor and participant) | n=104 focus group statements | Count frequencies and qualitative description |

## Results

### Are there gender differences in the quality assessment of doctors' communication by female and male participants?

The global quality rating of male and female doctors' ability to communicate did not differ between male and female participants. The mean rating of female participants was 6.8 (sd 1.9; range 6.4–7.5) for male doctors and 6.6 (sd 1.7; range 6.3–6.9) for female doctors; that of male participants 6.9 (sd 1.6; range 6.6–7.3) and 6.7 (sd 1.8; range 6.6–6.9) respectively. These results were confirmed by the linear regression: no significant main effects (relating to the doctor and participant gender), nor interaction effect were identified (see Table 3).

Table 3: The effect of gender and design features on participants' ratings of doctors' communication quality evidenced by linear and logistic models

| Variables | Linear regression on 10 point likert scale | | Logit regression on pos/neg statements | |
|---|---|---|---|---|
| | β | 95% C I | OR | 95% C I |
| *Participant characteristics* | | | | |
| Doctor gender (female vs male) | -0.07 | -0.38-0.25 | 0.97 | 0.69-1.38 |
| Participant gender (female vs male) | -0.07 | -0.39-0.24 | **0.70** | **0.51-0.96** |
| Gender interaction | -0.08 | -0.49-0.32 | 1.25 | 0.76-2.03 |
| *Design effect* | | | | |
| Country: IT vs. NL | -0.13 | -0.60-0.34 | 1.18 | 0.89-1.57 |
| UK vs. NL | -0.20 | -0.59-0.20 | 1.08 | 0.83-1.42 |
| BE vs NL | -0.11 | -0.66-0.44 | 1.07 | 0.80-1.43 |
| Scenario: PP vs STD | -0.07 | -0.46-0.32 | 0.87 | 0.69-1.09 |
| GSPRS | **0.08** | **0.02-0.13** | **1.15** | **1.07-1.24** |
| LCSAS | **0.03** | **0.01-0.04** | **1.03** | **1.00-1.05** |
| constant | 5.63 | 4.88-6.38 | - | |

C I=Confidence Interval
Significant coefficients in bold

### Are there any differences in the kind of topics that are discussed in male and female focus groups with regard to doctors' ability to communicate?

Overall, the number of statements made in the focus group discussions about male and female doctors was fairly similar (1915 and 1906 respectively), while participants made more comments on behaviours of doctors of the opposite gender ($X^2_{(1)}$=5.04, p=0.03).

Overall, there were more similarities than differences between the gender groups, and when differences reached significance, they were usually rather small. The most important differences are presented below. Doctor's gender: In Table 4, the multinomial regression findings show that female doctors attracted more comments on their non-verbal behaviour than male doctors (11% vs 7%; RRR =1.70 – 'Because despite the fact she had eye contact, it was minimal. It really was minimal.' [man, NL]) and their being judgmental or too personal in their remarks (5% vs 2%; RRR =3.41 – 'This digression was not very pleasant, I did not like it, seemed a bit malicious. Sure she had fun but, not […].' [woman, IT]). Male doctors evoked more comments on how they opened or closed the interview (5% vs 2%; RRR =0.20 – 'But right at the start all he says his name and then says "I have been asked to speak to you today to see why you have come in today, is that alright with you".' [man, UK]). This was discussed in particular by female participants (interaction effect RRR =2.96). Male doctors also evoked more comments about how they handled time issues ('He went through the whole thing fast. Too fast.' [man, NL]). This was discussed in particular by male participants (interaction effect RRR =0.22). Interestingly, male doctors also induced more discussion among both male and female participants about their affective-oriented communication in terms of being inviting (4% vs 2%; RRR =0.39 – 'He also asked "if there is anything you don't understand, please indicate." That was a very strong point. […] That was good about him.' [man, NL]), facilitating (2% vs 1%; RRR =0.31 – 'I liked very much when he asked her if there was another question she would like to ask, to help her to talk.' [woman, IT]), or listening (2% vs 1%; RRR =0.39 – 'Some of them really listened to the patient and what she had to say.' [man, UK]). Participant's gender: Female participants commented more frequently that doctors' behaviour was perceived as self-confident (6.5% vs 4.3%; RRR =2.20 – 'Yes, much more self-confidence than that female doctor. […] Well yes, he knew how to go along […].' [woman, BE]). Male participants discussed more often how doctors were providing solutions (3.6% vs 2.4%; RRR =0.42 – 'I appreciated him. […] He promised a solution of the problem, two or three times.' [man, IT]) and showed empathy (3.3% vs 1.4%; RRR =0.23 – 'That is also how she asked questions, she could empathize very well.' [man, NL]). With regard to empathy, participants talked most about empathy issues related to the doctor of their own gender (interaction effect RRR =3.29).

Table 4: Focus group comments by communication topics, doctor and participant gender

| Communication categories | Frequency distribution | | | | Relative Risk Ratio (multinomial regression) | | |
|---|---|---|---|---|---|---|---|
| | male participant | | Female participant | | Doctor effect | participant effect | Interaction effect |
| | Male doctors | female doctors | male doctors | female doctors | female vs male | female vs male | female-female dyad vs other |
| Nonverbal behaviour | 55 | 102 | 82 | 107 | 1.70* | 1.05 | 0.93 |
| Structuring — Changing of topics and signposting | 26 | 18 | 23 | 19 | 0.61 | 0.59 | 1.71 |
| Flexibility | 40 | 46 | 61 | 48 | 1.02 | 1.10 | 0.86 |
| Time issues | 17 | 25 | 35 | 9 | 1.38 | 0.56 | 0.22** |
| Opening or closing of the interview | 40 | 9 | 50 | 26 | 0.20** | 0.94 | 2.96* |
| Summarizing | 19 | 42 | 26 | 49 | 1.96 | 1.00 | 1.12 |
| Patient involving | 33 | 32 | 41 | 48 | 0.86 | 0.82 | 1.69 |
| Speaking peculiarities | 32 | 39 | 64 | 43 | 1.11 | 1.37 | 0.77 |
| Task-oriented attitude of the doctor — Self confident | 24 | 74 | 74 | 63 | 1.84 | 2.20* | 0.53 |
| Complete picture | 41 | 46 | 46 | 43 | 0.71 | 0.81 | 1.52 |
| Businesslike/straight to the point | 29 | 33 | 33 | 35 | 0.64 | 0.66 | 2.23 |
| Other/general | 20 | 24 | 24 | 18 | 0.66 | 0.84 | 1.29 |
| Clarity of interview | 13 | 29 | 29 | 15 | 0.61 | 1.52 | 0.77 |
| Competency | 62 | 98 | 98 | 81 | 0.78 | 0.98 | 1.39 |
| Collecting information | 70 | 78 | 103 | 90 | Ref. | - | - |
| Giving information | 36 | 52 | 30 | 66 | 1.25 | 0.59 | 2.04 |
| Providing solution | 30 | 32 | 18 | 32 | 0.94 | 0.42* | 2.32 |
| Affective oriented attitude of the doctor — Inviting attitude | 36 | 16 | 36 | 28 | 0.39* | 0.73 | 2.30 |
| Pleasant attitude | 37 | 40 | 53 | 26 | 0.96 | 1.03 | 0.61 |
| Showing interest/committed | 30 | 25 | 56 | 45 | 0.74 | 1.27 | 1.33 |
| Empathic | 32 | 23 | 11 | 19 | 0.64 | 0.23** | 3.29* |
| Facilitating | 17 | 6 | 29 | 17 | 0.31* | 1.29 | 2.27 |
| Reassurance/trust | 50 | 55 | 39 | 49 | 0.97 | 0.54 | 1.51 |
| Neutral/no personal remark | 14 | 54 | 15 | 26 | 3.41** | 0.68 | 0.65 |
| Listening | 18 | 8 | 18 | 18 | 0.39* | 0.57 | 3.37 |
| total | 821 | 886 | 1094 | 1020 | | | |

* p<0.05; ** p<0.01

**Are there differences between male and female participants in what is liked or not liked in the way the doctors communicate?**

Inspection of the positive and negative values attached to the statements showed that the female participants were less positive than male participants about both female and male doctors (46% vs 52%; $X^2_{(1)}$=12.0 p<0.01). This participant gender effect was confirmed by the logistic regression adjusted for design effect (OR=0.70), with no doctor gender or gender interaction effect, as shown in Table 3.

Table 5 shows the findings of a parsimonious model, which explored the main effects of communication topics, the doctor's and the participant's gender, the two-way interactions between topics and the doctor's and the participant's gender, respectively. Independent of the doctor's or the participant's gender, the most appreciated behaviours overall were: *Pleasant attitude* (72%; OR=4.53 – '…and I thought I could tell her anything. She was very, very relaxed and friendly.' [woman, UK]); *Reassurance* (67%; OR=2.25 – 'I found that he could have reassured her more.' [woman, NL); and *Empathy* (75%; OR=2.52). Other factors were more likely to be discussed in negative terms (range from 69–89%; OR from 0.20–0.30). Among these were S*peaking peculiarities* ('I didn't think it was bad, but all those double questions and answers, no, […] uh, I wouldn't send my daughter or wife to him.' [man, NL]); *Structuring behaviours* of the doctor like *Changing of topics* ('[…] in conversations changing the subject all the time, like yes we are getting back once more to […], then all of the sudden uh, yes, back, we are going back to that problem." [woman, BE]); *Flexibility* ('Because it can be very systematic can't it, it's like filling in an application form for something.' [man. UK]); and *Time issues* ('In the end she did not have time to explain more about it.' [woman, BE]).

A participant gender effect was limited to comments that showed women were more likely to comment positively on doctors' approachability (53% vs 44%; OR=2.64), empathy (79% vs 72%; OR=3.06) and directness (69% vs 43%; OR=4.20), despite their general tendency to be more critical (main effect OR=0.60); a doctor gender effect showed that participants disapproved more often the loss of neutrality shown by female doctors (78% vs 54%; OR=0.27 – 'I felt that was very dangerous. Simply because at that moment, that was towards the end of the interview, she mixed her personal opinion and her professional opinion.' [man, NL]).

Table 5: Positive and negative comments by communication topics, doctor (doct) and participant gender

| Communication categories | Frequency distribution (pos %) | | | | Odds Ratio (logistic regression) | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | male participant | | female participant | | areas effect (main effect) | doct gender female vs male | participant gender female vs male |
| | male doct | female doct | male doct | female doct | | | |
| Nonverbal behaviour | 58 | 33 | 41 | 33 | 1.00 | 0.55 | 1.22 |
| Structuring — Changing of topics and signposting | 20 | 47 | 30 | 32 | 0.30* | 1.91 | 1.73 |
| Structuring — Flexibility | 23 | 32 | 18 | 44 | 0.20** | 2.50° | 1.92 |
| Structuring — Time issues | 13 | 43 | 14 | 13 | 0.21** | 2.69 | 0.87 |
| Structuring — Opening or closing of the interview | 41 | 22 | 38 | 15 | 0.64 | 0.35 | 1.35 |
| Summarizing | 72 | 69 | 39 | 76 | 1.26 | 2.29 | 1.24 |
| Patient involving | 55 | 56 | 53 | 41 | 1.27 | 0.73 | 1.31 |
| Speaking peculiarities | 20 | 6 | 16 | 7 | 0.20** | 0.35° | 1.42 |
| Task-oriented attitude of the doctor — Self confident | 71 | 36 | 40 | 33 | 1.26 | 0.52 | 0.96 |
| Task-oriented attitude of the doctor — Complete picture | 66 | 71 | 62 | 61 | 1.74 | 1.21 | 2.27 |
| Task-oriented attitude of the doctor — Businesslike/straight to the point | 39 | 50 | 66 | 71 | 0.58 | 1.44 | 4.20** |
| Task-oriented attitude of the doctor — Other/general | 41 | 29 | 58 | 38 | 0.63 | 0.55 | 3.08° |
| Task-oriented attitude of the doctor — Clarity of interview | 60 | 67 | 48 | 69 | 1.10 | 0.08 | 1.31 |
| Task-oriented attitude of the doctor — Competency | 56 | 42 | 43 | 41 | 1.00 | 0.75 | 1.33 |
| Collecting information | 54 | 52 | 40 | 44 | Reference | - | - |
| Giving information | 58 | 67 | 50 | 70 | 1.06 | 1.96 | 1.68 |
| Providing solution | 70 | 67 | 44 | 62 | 1.61 | 1.43 | 0.89 |
| Affective oriented attitude of the doctor — Inviting attitude | 46 | 40 | 62 | 42 | 0.80 | 0.60 | 2.64* |
| Affective oriented attitude of the doctor — Pleasant attitude | 80 | 89 | 61 | 58 | 4.53** | 1.24 | 0.74 |
| Affective oriented attitude of the doctor — Showing interest/committed | 57 | 84 | 57 | 58 | 1.67 | 1.59 | 0.99 |
| Affective oriented attitude of the doctor — Empathic | 72 | 71 | 82 | 78 | 2.52° | 0.80 | 3.06° |
| Affective oriented attitude of the doctor — Facilitating | 47 | 100 | 63 | 69 | 1.09 | 2.55 | 1.97 |
| Affective oriented attitude of the doctor — Reassurance/trust | 68 | 71 | 74 | 57 | 2.25* | 0.80 | 1.27 |
| Affective oriented attitude of the doctor — Neutral/no personal remark | 71 | 20 | 21 | 26 | 1.06 | 0.27* | 1.08 |
| Affective oriented attitude of the doctor — Listening | 71 | 57 | 33 | 29 | 1.89 | 0.79 | 0.33 |
| total | 53 | 50 | 45 | 47 | | 0.94 | 0.60° |

° $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$

*Making doctor-patient communication more effective from a patient's perspective*

Responses to doctors' use of facilitations is also noteworthy. The male participants expressed only positive comments on female doctor behaviours (100% – 'She said: "I am going to ask you a question a bit awkward, if you like to respond." […] Maybe this was a form of female solidarity.' [man, IT]), but were critical when associated with male doctors (53% negative – 'he did interrupt that he didn't let her finish and so on.' [man, NL]). Conversely, in the female focus groups, the discussions on this topic were equally distributed over male and female doctors (63% and 69% of positive comments respectively).

## Discussion

The present study examined whether communication of male and female doctors is valued differently by men and women. Adopting a mixed-method approach – specifically the quantitative analysis of qualitative data – made it possible to explore potential gender effects from different points of view. Overall, there were few differences between male and female focus groups when discussing the quality of male and female doctor communication. The doctor's gender and the participant's gender had no effect on the individual quality ratings of doctors' communication ability, and there were few main effects of participant gender or doctor gender on the chosen discussion topics and expressed likes and dislikes. Female participants did, however, tend to be slightly more critical; the only exception is represented by comments on doctors' inviting/straightforward attitude, where women showed a higher appreciation compared to male counterparts. The only significant doctor gender difference that we found was that female doctors were more criticized than male doctors when they were overtly neutral or impersonal. For all other types of communication we did not find any significant difference in the positive or negative appreciation within the four gender dyads. This is remarkable, firstly because of the study design, having separate focus groups for male and female participants, and secondly because of the kind of medical consultation, namely gynaecological problems with psychosocial elements. These create a situation which is most likely to provoke gender-specific reactions in participants. At first sight this lack of clear and substantial gender differences seems surprising. There is convincing evidence that female and male doctors act differently towards patients. Female doctors have longer consultations [38-39], are more patient-centred [40], show more partnership and empathy [4] and have a stronger psychosocial orientation

[9]. These are all types of communication which are highly appreciated by most patients [41]. However, a recent meta-analysis of studies reporting patients' satisfaction with male and female doctors also found a statistically significant – but very small and barely clinically relevant – gender difference in patient satisfaction [42]. This might mean that for female doctors, 'female behaviour' – such as empathy, positive non-verbal behaviour and showing support and partnership – is expected. Therefore it is taken for granted and not seen as part of their professional quality. But for male doctors, being empathic and emotionally oriented is seen as a bonus that fosters their professional skills [43]. A gain, the women were more critical than the men. It is striking that the women talked in quite critical terms about one particular female doctor who did not live up to the expectations women have for a female doctor. The male participants, meanwhile, tended to be more condoning about the male doctor who evidently had problems talking about sensitive issues, perhaps because from their own experience, they could easily imagine how difficult it is for a man to talk about sensitive female issues. Anyway, it is possible that these expectations have been reinforced by the particularly sensitive female condition presented in the two scenarios. This is suggested by the literature indicating that both male and female patients prefer to see physicians of the same gender, particularly for consultations that involve examination of the genitalia or sexually related topics [44]. Unfortunately the OSCE communicative station did not include consultations based on typical sensitive male problems, but it would be interesting to repeat this study with such material. One particular strength of the study is that the participants watched the same set of videos for each scenario, meaning that the participants all had the same stimuli to react to. Another strength is that the study design (separate focus groups for male and female participants) and choice of medical problem (sensitive gynaecological complaints) maximizes, in theory, the chance of finding gender differences. However, for male participants it will have been harder to identify with the female problems discussed and therefore the results for male participants cannot be generalized to responses to sensitive issues at large. Nevertheless, perhaps because we invited the men to put themselves in the shoes of their sisters or girlfriends, the discussions in the male groups were as lively and open as those in the female groups. Should gender issues become part of communication training programs? Our findings suggest that for lay persons, gender-related issues in doctor–patient communication are of low priority for both men and women. This is

particularly true for highly appreciated behaviours by doctors, which convey empathy, support, understanding and pleasantness, or conversely for highly criticized inadequate behaviours, such as completing a checklist instead of engaging in a real conversation. A warm, empathic, personal approach is valued by all participants and appears to transcend patient and doctor gender differences and even the bias of prior role expectations, at least with regard to doctor–patient dyads sharing a European cultural background, as in our study. A clinical approach tailored to the individual, including taking gender into account, thus remains the fulcrum of communication courses.

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## Appendix A: The GULiVer framework

| | | |
|---|---|---|
| **Non verbal communication** (all behaviours a GP expresses in nonverbal form) | **Non verbal behavior** | Facial expression<br>Eye contact<br>Touch<br>Others<br>Reading and Writing<br>Laughing |
| **Process-oriented expressions** (all comments regarding the manner in which a doctor manages the conversation) | **Structuring** | Changing of topics and signposting<br>Flexibility<br>Time issues<br>Opening or closing of the interview |
| | **Summarizing** | Summarizing |
| | **Patient-involving** | Sharing plans/ideas<br>Asking permission<br>Verifying |
| | **Speaking peculiarities** | Repetition<br>Fillers<br>Comprehensibility |
| **Task-oriented/problem-focused expressions** (all expressions that concern the instrumental tasks of an interview) | **Attitude of the doctor** | Self-confident<br>Complete picture<br>Businesslike / Straight to the point<br>Other attitudes<br>Clarity of interview<br>Competency |
| | **Collecting information (ex Asking questions)** | Medical<br>Psychosocial |
| | **Giving information** | Medical<br>Psychosocial |
| | **Providing Solution** | Providing solutions |
| **Affective/emotional expressions** (all behaviours focused on affective/emotional components of an interview) | **Attitude of the Doctor** | Inviting attitude<br>Pleasant attitude<br>Showing interest in patient/commitment<br>Empathic<br>Facilitating<br>Reassurance / trust<br>Neutral / No personal remark<br>Listening |
| **General** (all statements that concern the doctor personal characteristics) | **Socio demographic characteristics** | Doctor's gender<br>Doctor's age<br>Doctor's ethnicity |
| **Other** (statements, like "continuity of care", "objective examination" or "getting distracted, excluded from the previous categories) | | |

# 5

# How do focus group participants judge the doctors' responses to patients' negative emotions expressed as cues or concerns in medical consultations?

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## Abstract

**Objectives:** to establish which kind of physician communicative responses to patient cues and concerns are appreciated by lay people.

**Methods:** A balanced sample (259 people) was recruited in public places to participate in a full day observation of four videotaped standardized medical consultations. In a two-step procedure participants gave their individual quality ratings of the whole consultations and then of a set of four fragments from each consultation. They contained a patient negative emotional expression and the subsequent physician response, according to the VR-CoDES.

**Results:** Higher quality ratings were given to physician responses which provided space to the patient to talk and to the explicit expressions of empathy. The explicit responses were favored above non-explicit responses. Participants' global evaluation of the whole consultation affected their quality assessments of the fragments (halo-effect). In a multivariate model, lay people's background characteristics appeared to be relevant: to be female, of lower educational level and living in Belgium or Italy predicted higher ratings.

**Conclusions:** Providing space to patients is appreciated by all participants, combined with the need for tailor made communication.

**Practice implications:** To teach physicians listening skills and how to show empathy with distressed patients should be a core element in medical education.

**Keywords**: GULiVer; physicians' communicative responses; patient perspective; emotional expressions; VR-CoDES

## Introduction

There is growing plea for incorporating the public's experiences in the quality assessment of health care [1]. Doctor-patient communication is a domain 'par excellence' to include the public's perspective in quality assessments, as (a) health care users often have different priorities from health care providers [2], (b) tend to stress the importance of good communication [3,4], (c) often report quality problems in this area [5], and (d) these communication problems contribute to many adverse patient outcomes, such as non-adherence [6], formal and informal complaints [7], medical lawsuits [8] and patient dissatisfaction [5]. In short: doctor–patient communication is an area which is under scrutiny of the general population and could benefit from patients' input when trying to make improvements.
A key concept in research on doctor–patient communication, which reflects this orientation, is 'patient-centred care' (PCC). In a Cochrane review, patient-centeredness was defined as 'a philosophy of care that encourages shared control of the consultation, decisions about management of the health problems with the patient, and/or a focus in the consultation on the patient as a whole person who has individual preferences situated within social contexts (in contrast to a focus in the consultation on a body part or disease)'. This review also concluded that 'patient-centeredness' is hard to define, and that more research is needed [9]. The concept 'patient-centeredness' claims to cover divergent areas: exploring the experience and expectations of disease and illness, understanding the whole person, finding common ground (partnership), health promotion, enhancing the doctor–patient relationship, and the realistic use of time [3,10]. However, there is little empirical evidence from the patients' perspective to support the precise structure of the model or to identify the components most important to patients [3].
De Haes et al. suggested to deconstruct communication in a number of meaningful elements, by – theoretically – deriving specific communication behaviours from the different aims and functions of the medical encounter, and – empirically – link these behaviours to predefined endpoints [11]. The following core functions of the medical encounter were distinguished: fostering the doctor–patient relationship, gathering information, providing information, (shared) decision making, enabling the patient and stimulating self-management, and responding to emotions.

Inspired by this approach, we decided to undertake a study in which ONE core function of the medical consultation was selected, which is vital for patient centred care, i.e. 'responding to negative emotions', and ONE relevant endpoint is defined, i.e. lay people's' views on the quality of physicians' responses. We decided to focus on a particularly sensitive area: physician's response to patients' cues or concerns, because, from the literature, we know that patients are often reluctant to reveal their real problems directly, providing subtle cues or concerns, instead [12]. This means that dedicated effort is required to get patients' emotions in the open. However, the literature also shows that health care providers often ignore patient cues and concerns [12–14], thus leaving potential important topics unspoken [15]. For doctors, this seems to be a delicate area to maneuver, where a 'faux pas' is easily made. The quality assessment of lay people, who do not have specialized or professional knowledge of the subjects, could be helpful to develop empirically based guidelines and targeted skills training.

Lay people's perspective on the quality of physicians' response to emotions is a relevant topic, because up to date little is known about which physicians' responses to patients' cues or concerns are appreciated or disliked by those on the receiving end: potential patients. When patients or the public are approached for the evaluation of health care, usually only general assessments are tapped from the respondents, such as whether there was sufficient time or attention, but without a clear benchmark, which would make it possible to compare people's opinions on the quality of care, based on the same concrete examples of communication. Yet, knowledge about which kind of communication is approved or disapproved by the public in situations where a physician has to deal with sensitive issues, could be helpful for physicians in choosing a communication strategy for those situations. It is also important to know when physician's communication evokes different reactions, because that would mean that physicians need to tailor their communication to patient preferences and expectations in those situations.

For this study we presented to lay people an identical set of various examples of a specific doctor–patient interaction in which the physician replies to patient's expression of a negative emotion, cue or concern.

The aims were to explore how lay people with different backgrounds assess the quality of the physician responses and how universal their quality assessments are. Are some types of communication always favoured over others, or do they evoke differential responses in different respondents?

We are also interested to learn whether people assess the doctor or his/her behaviour: in other words to what extent is people's assessment of concrete communicative behaviours directly related to the type of communication at the micro-level, or determined by their general image of the doctor (halo-effect). The added value of studying these aspects in an international study with a wide variety of participants is, that we get to know how universal lay people's assessments of physician responses to patient cues and concerns are, putting to test the assumption that 'patient-centred communication' has the same meaning for all people, regardless who they are, and where they live.

## Methods

### Design

The study is an international observational study which draws its name (GULiVer) from the four centers involved: Ghent University (Belgium), Utrecht University/NIVEL (the Netherlands), Liverpool University (United Kingdom) and the University of Verona (Italy). The benchmark material consists of an identical set of 2 x 4 = 8 videotaped OSCE's (Objective, Structured, Clinical Examinations), used to examine the quality of communication of medical students as part of their final exams. The videotapes cover two different scenarios (period pain and vaginal discharge) and were selected to represent a maximum variation in the quality of communication according to the examiners. For the present study these videos were subtitled (the Netherlands and Belgium) or dubbed (Italy), reflecting the common way international television programs are handled in the respective countries. In each country, the same videotaped OSCE consultations were shown to 8 or 9 lay panels, each consisting of 6–8 citizens. Each lay panel observed (in random order) four different examples of the same scenario. In all four countries the same procedures were followed according to a detailed protocol [16], approved by the local ethics committee.

### Sample

Participants were recruited in public areas, via calls in free local newspapers and word of mouth. Inclusion criteria were: age over 18 years; at least one GP-visit over the last 12 months; speaking the country's language. In order to ensure a heterogeneous distribution of the sample, the selection of

participants was stratified by gender (separate male and female panels) and age (18–30; 31–49; $\geq$50). The overall sample consisted of 259 participants, equally distributed across the centers and the stratification variables, as established by the study design and confirmed by the Generalized Linear Model (GLM) analysis [17] (deviance = 21.2 (df = 40); p = 0.99).

**Physicians' responses to patient cues and concerns**

For the selection of consultation fragments all videotaped consultations had been coded to identify patient cues and concerns as well as doctor responses, applying the Verona Coding Definitions of Emotional Sequences (VR-CoDES) [18–20]. This system consists of two parts for respectively patients' cues and concerns (VR-CoDES-CC) and provider responses (VRCoDES- P). Cues are defined as ''verbal or nonverbal hints which suggest an underlying unpleasant emotion and that lack clarity''. Concerns are defined as ''clear and unambiguous expressions of an unpleasant current or recent emotion that are explicitly verbalized with or without a stated issue of importance''. The VR-CoDES-CC has a satisfactory interrater-reliability: Cohen's kappa of 0.70 (±0.03), percentage agreement 81.46 [18]. The validity of the coding system was confirmed by Eide et al., who replayed videotaped medical consultations to the patients involved and invited them to comment their contributions [21]. The VRCoDES-P has two main axes for classifying provider responses, corresponding to the explicitness of the response (yes/no) and the amount of space for the patient (yes/no). As in the original study [19], the interrater reliability in this study was good with a percentage agreement of 90.2%; kappa = 0.86.

**Quality assessments**

The lay people gave their quality assessment in a two-step procedure. In the morning-session, each group of lay people observed four consultations from the same scenario without any group discussion. The participants then, individually, rated each consultation on a 1 (''not at all satisfying'') to10 (''very satisfying'') Likert-scale for the overall quality of communication. In the afternoon session, participants, individually, assessed the quality of four very short preselected fragments from each of these consultations, in which the patient on the video offers a cue to an underlying worry, or expresses a concern. The participants were asked to observe how the student doctors respond to these patient expressions and

to rate the appropriateness of these responses on a 1–10 Likert scale (1=''I do not like the answer at all''; 10=''I really like the answer'').

**Background characteristics of participants**
In this study the following background characteristics of the participants were considered: age, gender, nationality and educational level (low, medium and high).

**Statistical analyses**
As there were no differences between quality ratings of physicians' responses to cues and concerns (mean= 6.1, sd= 2.1 versus mean= 6.3, sd = 2.1 respectively; t(4048)=-1.69, p= 0.09), these were lumped together. Crombach's alpha was used to determine the internal consistency. Partial and Pearson's correlations were calculated to determine the interdependency of fragments within the same consultation, and their relationship with the global quality rating of that particular consultation given during the morning session (see Tables 2 and 3). The relative contribution of the presented stimulus (physician, type of response) and the lay people's background characteristics on the quality ratings was determined applying a series of multilevel regression analyses (see Table 4). In a stepwise procedure, four different models were used which estimate each fragment quality assessment, starting with the empty model, adding blocks of information step by step, according to different sources: physician response to cue/ concern (model 1), participants' global assessment (model 2) and their socio-demographic characteristics (model 3). The models were compared (see goodness of fit row) in terms of their explained proportion of variance with respect to the first level and second level analysis [22]. The multilevel analysis recommends considering the specific variance component at the two levels, and not the overall variance as used in ordinary regression [23].

## Results

**What kind of physician responses is positively or negatively valued?**
The quality assessments by the lay people were normally distributed, had good internal consistency (Crombach's α= 0.81 and 0.84 for the two scenarios), and showed a large range in scores of the perceived quality of physicians' responses on patient cues and concerns. The highest quality

rating (mean 7.6; sd 1.8) was for a student-doctor who expressed empathy and partnership to a patient who was struggling with telling her story (Patient: *'no, mmm, to be honest I've always been a little bit uncomfortable coming to talk about. I don't know why. I just am really'*; Doctor: *'well I know it might, it's always uncomfortable talking to people about your sex life and very personal issues but we are always here to talk to'*). The lowest rating (mean 3.7; sd 2.0) was for a student-doctor who shut the patient down when she expressed her worries (Patient: *'well they do know about it because they know the reason I I don't hide the reason I'm taking it off, but obviously for them if I'm taking a week off every month it's not very good is it?'* Doctor: *'no. OK. Are you married at the moment?'*).

Responses which provide space to the patients were generally more appreciated than responses which reduced space (mean 6.5; sd 1.0, versus mean 5.6; sd 1.2; p < 0.01). Whether the responses were explicit or non-explicit made a smaller, but still significant difference in the quality rating of the respondents (mean 6.3; sd 1.1, versus mean 6.0; sd 1.2; p < 0.01). Combining both axes, the average quality rating for explicit, providing space responses (EP) was 6.5 (sd 2.0; 95% CI: 6.4–6.6), which is comparable to the average quality rating for non-explicit providing space responses (NP): mean = 6.5 (sd 2.2; 95% CI: 6.3–6.7). The average quality rating for explicit reducing space responses (ER) was 5.7 (sd 2.1; 95% CI: 5.5–5.8), while non-explicit reducing space responses (NR) had the lowest average quality rating: 5.4 (sd 2.1; 95% CI: 5.2–5.6).

Table 1 presents an overview of the identified types of physician responses to patient cues and concerns. The types of responses are ordered from high to low quality assessments.

The overall most positively valued type of physician responses is: EP-empathic response, with an average score of 7.3, followed by NP-back channels (mean 6.8). Interestingly, non-explicit empathy, despite providing space to the patient, was not appreciated by the participants, (mean 5.2), in particular when this was followed by switching the topic of the conversation (Patient: *'and I'm just a bit worried that I've caught something'*; Doctor: *'right'*; Patient: *'cause I've not had it before'*; Doctor: *'yeah, totally understand, right, mmmm, just going back to your history again; mmmm, so you have been with the same partner for three years and, mmmm, just gonna ask you a bit about your menstrual cycles: have they been regular?'*).

Table 1: Quality assessment of specific types of student-doctor responses to patients' cues and concerns

| VR-CoDES-P | example | No. of fragments | No. of participants' assessment | mean | st dev | 95% CI |
|---|---|---|---|---|---|---|
| EP - Empathic response | P: no mmm to be honest I've always been a little bit uncomfortable coming to talk about I don't know why I just am really   **D: well I know it might its always uncomfortable talking to people about your sex life and very personal issues but we are always here to talk to** | 5 | 200 | **7.3** | 1.7 | 7.1 - 7.6 |
| NP – Back channel | P: no it's its' not been too bad mmm I mean every things been ok from that's concerned it did kind a make I thought it made my period a little bit heavier   D: **right** | 5 | 246 | **6.8** | 1.8 | 6.6 – 7.1 |
| EP - Affective Acknowledgement | P: in the last few months I've had loads of time off half because of the pain and the other half because I'm not sleeping very good so I'm just knackered   **D: so always playing on your mind as well** | 4 | 124 | **6.7** | 1.3 | 6.5 – 7.0 |
| NP - Acknowledgement | P: I've never I mean I've had normal period pains like normal period cramps but this is like 10 times worse   **D: right I've got the jist of what's happening** | 1 | 131 | **6.5** | 1.9 | 6.2 – 6.9 |
| EP - Content Exploration | P: is definitely getting heavier and the pain I've never had the pain like that before   **D: ok can you control the pain with pain killers or does it not really make a difference?** | 7 | 211 | **6.4** | 1.3 | 6.2 – 6.6 |
| NR – Information advice | P: and it's just not very nice   **D: ok it's a really common problem; lots and lots of people come with this kind of thing; are you on any medication at the moment?** | 1 | 122 | **6.3** | 1.6 | 6.0 – 6.6 |
| EP - Content Acknowledgement | P: not particularly I mean I've kind of I've had you know I've taken sick days and I've used holidays and when it's been over a weekend I've only had to take a couple of days off either side but they have actually asked to see me the next week and I think this is because of the amount of time I'm taking off   **D: right so you don't think they are taking your problem seriously or** | 1 | 124 | **6.2** | 2.0 | 5.9 – 6.6 |
| NR - Ignoring | P: and I'm a bit worried about what the outcome of the meeting is gonna be really   **D: all right so just to write it down you said you've had problems with periods and its heavy period that you got together with pain as well?** | 5 | 253 | **6.1** | 1.4 | 5.9 – 6.3 |
| ER - Switching | P: and I went like abroad and slept with someone and I'm just worried I caught something   **D: ok ok have you it's a general question have you ever contracted anything before sexually?** | 5 | 253 | **5.9** | 1.5 | 5.7 – 6.1 |
| EP - Affective Exploration | P: in a way not that we want any children anyway but it's just horrible   **D: yeah you feel inadequate sort of compared to anybody else?** | 1 | 124 | **5.8** | 2.0 | 5.4 – 6.1 |
| NP - Active Invitation | P: but it's having to change on such regular intervals it's just impossible to work or do any normal things   **D: yeah so what are you main concern regarding?** | 2 | 246 | **5.5** | 2.3 | 5.2 – 5.7 |
| NR - Shutting down | P: well they do know about it because they know the reason I I don't hide the reason I'm taking it off but obviously for them if I'm taking a week off every month it's not very good is it?   **D: no ok are you married at the moment?** | 2 | 124 | **5.4** | 1.4 | 5.2 – 5.7 |
| ER – Information advice | P: I just just feel a bit worried in case is something really serious you know   **D: hopefully like the doctor will come in and like should be able to like help allay your fears have a look at this discharge and do some tests to find out what's been going on and hopefully everything will be ok and he never need know** | 2 | 122 | **5.3** | 1.6 | 5.0 – 5.6 |
| NP - Implicit empathy | P: and I'm just a bit worried that I've caught something **D: right** P: 'cos I've not had it before   **D: yep I understand totally understand....** | 2 | 122 | **5.2** | 1.7 | 4.9 – 5.5 |

EP = explicit providing space; NP = non-explicit providing space ; ER = explicit reducing space; NR = non-explicit reducing space

Table 2: Correlations between the global quality assessments and the specific quality assessments of student-doctor responses to patient cues and concerns

| Specific assessment | Global assessment[+] | | | |
|---|---|---|---|---|
| | Doctor A<br>mean = 7.4<br>sd = 1.8 | Doctor B<br>mean = 6.8<br>sd = 1.7 | Doctor C<br>mean = 6.8<br>sd = 1.8 | Doctor D<br>mean = 6.5<br>sd = 1.8 |
| Scenario: Period Pain | | | | |
| Doctor A, fragment 1 | **0.41**** | 0.08 | 0.26** | 0.03 |
| Doctor A, fragment 2 | **0.40**** | 0.07 | 0.13 | 0.05 |
| Doctor A, fragment 3 | **0.25**** | 0.26 ** | 0.02 | 0.31** |
| Doctor A, fragment 4 | **0.39**** | 0.01 | -0.01 | -0.09 |
| Doctor B, fragment 1 | -0.01 | **0.53**** | 0.09 | 0.08 |
| Doctor B, fragment 2 | 0.01 | **0.36**** | 0.11 | 0.05 |
| Doctor B, fragment 3 | 0.12 | **0.39**** | 0.13 | 0.15 |
| Doctor B, fragment 4 | 0.22* | **0.30**** | 0.21* | 0.14 |
| Doctor C, fragment 1 | 0.11 | 0.08 | **0.13** | 0.14 |
| Doctor C, fragment 2 | 0.31** | 0.03 | **0.25**** | -0.13 |
| Doctor C, fragment 3 | 0.10 | 0.13 | **0.25**** | 0.12 |
| Doctor C, fragment 4 | 0.13 | 0.11 | **0.29**** | -0.09 |
| Doctor D, fragment 1 | 0.02 | 0.05 | 0.06 | **0.47**** |
| Doctor D, fragment 2 | -0.15 | 0.10 | 0.05 | **0.47**** |
| Doctor D, fragment 3 | -0.02 | 0.17 | 0.06 | **0.15** |
| Doctor D, fragment 4 | -0.20* | 0.23* | -0.04 | **0.55**** |
| Specific assessment | Global assessment | | | |
| | Doctor E<br>mean = 6.7<br>sd = 1.8 | Doctor F<br>mean = 6.8<br>sd = 1.7 | Doctor G<br>mean = 6.6<br>sd = 1.7 | Doctor H<br>mean = 6.5<br>sd = 1.6 |
| Scenario: Vaginal Discharge | | | | |
| Doctor E, fragment 1 | **0.15** | 0.02 | 0.08 | -0.02 |
| Doctor E, fragment 2 | **0.16** | 0.14 | 0.23* | 0.22* |
| Doctor E, fragment 3 | **0.16** | -0.01 | 0.06 | 0.12 |
| Doctor E, fragment 4 | **0.22*** | 0.19* | 0.13* | 0.18 |
| Doctor F, fragment 1 | 0.04 | **0.26**** | -0.01 | 0.15 |
| Doctor F, fragment 2 | 0.02 | **0.41**** | 0.16 | 0.35** |
| Doctor F, fragment 3 | 0.12 | **0.48**** | 0.14 | 0.32** |
| Doctor F, fragment 4 | 0.09 | **0.39**** | 0.24** | 0.31** |
| Doctor G, fragment 1a | 0.10 | 0.25* | **0.26*** | 0.07 |
| Doctor G, fragment 1b | 0.08 | 0.08 | **0.48**** | 0.23* |
| Doctor G, fragment 2 | 0.04 | 0.04 | **0.34**** | 0.20* |
| Doctor G, fragment 3 | 0.19* | 0.17 | **0.25**** | 0.20* |
| Doctor G, fragment 4 | 0.24** | 0.06 | **0.50**** | 0.24** |
| Doctor H, fragment 1 | 0.21* | 0.01 | 0.14 | **0.27**** |
| Doctor H, fragment 2 | 0.10 | 0.02 | -0.01 | **0.30**** |
| Doctor H, fragment 3 | 0.12 | 0.16 | 0.17* | **0.31**** |
| Doctor H, fragment 4 | 0.29** | 0.23** | 0.31** | **0.42**** |

Boldface number =possible halo-effect (fragment nested in consultation)
[+] Global assessment = "How do you rate the quality of the communication of this doctor?"
* $0.05 \leq p \leq 0.01$   ** $p < 0.01$

Ignoring the words of the patients, switching to another topic, giving unsolicited information and advice, or shutting the patient down have all quality ratings below 6, which can be considered as 'insufficient quality'.

**Are the quality assessments independent?**

Table 2 shows that the specific fragment assessments of each consultation are related to the global quality assessment of the morning session.
Moreover, there is a moderate and positive relationship between pairs of assessments within each student-doctor (see Table 3), as shown by the Pearson's correlation (column 4) and the partial correlation between pairs of fragments, when accounting for the presence of the global assessment (column 5). The positive relationship is confirmed, when the correlation is used to measure the variability among fragment assessments within each doctor (ICC, see column 3), with the exception for doctor A and B.

Table 3: Specific quality assessments of student-doctors' responses to cues and concerns

|  | Mean | Standard deviation | Intraclass correlation (ICC) | Range of correlations within doctor | Range of partial* correlations |
|---|---|---|---|---|---|
| Scenario: Period Pain | | | | | |
| Doctor A | 6.5 | 2.0 | 0.07 | 0.15 - 0.53 | 0.05 - 0.44 |
| Doctor B | 6.3 | 1.9 | 0.04 | 0.30 - 0.56 | 0.19 - 0.48 |
| Doctor C | 6.5 | 2.0 | 0.18 | 0.19 - 0.49 | 0.16 - 0.46 |
| Doctor D | 5.5 | 2.4 | 0.30 | 0.23 - 0.79 | 0.18 - 0.71 |
| Scenario: Vaginal Discharge | | | | | |
| Doctor E | 6.6 | 1.9 | 0.14 | 0.30 - 0.57 | 0.28 - 0.56 |
| Doctor F | 6.0 | 1.9 | 0.13 | 0.32 - 0.54 | 0.23 - 0.45 |
| Doctor G | 5.9 | 2.2 | 0.15 | 0.27 - 0.58 | -0.01 - 0.45 |
| Doctor H | 6.2 | 2.2 | 0.25 | 0.28 - 0.52 | 0.19 - 0.46 |

* Partial correlation is obtained removing the global assessment effect

**Are quality assessments only linked to type of physician responses, or also 'in the eye of the beholder?**

Table 4 presents the results of the multilevel analyses in four models, following a hierarchical procedure.
Model 1 shows that participants appreciate a doctor who provides space to the patient (p-value < 0.05), while they do not pay attention to whether a doctor's response to the patient is explicit or non-explicit (p-value > 0.10). They also distinguish among different student-doctors, who could generically be classified into a ''low-valued communication style'' (doctors B, D and G) versus a ''high-valued communication style'' (doctors A, C, E, F

and H). This first informative block results in 11% of variance explained at the first level (R2 level one). In this model no additional variance is explained at the participant level. The addition of the global assessment of each consultation (Model 2) improves the proportion of variance explained at the first level (17%) but unexpectedly also at the second level (29%), revealing an effect of participants individual characteristics on their global assessments. Therefore in Model 3, the participants' characteristics were introduced, which added about another 19% of explained variance at the second level of analysis. The estimated parameters of the second level show that being elderly, female, of lower educational level, and from Belgium and Italy predicted significantly higher quality ratings as compared to being male, younger, of better education and from the United Kingdom and the Netherlands. Table 4 shows that the fourth model obtains the highest proportion of variance explained (17% and 42% at levels 1 and 2, respectively) compared to the ''empty model'', also showing the best goodness of fit value (lowest AIC).

## Discussion and Conclusion

### Discussion

In this study the quality of communication was measured for one of the six core functions of the medical encounter [11], i.e. responding to patient emotions. This function is seen as highly important by patients, but is at the same time most problematic for physicians [24]. The relevance of this function for patients was one of the main reasons for choosing lay people's assessments of physicians' response to patients' cues and concerns as the primary outcome for this study. The study shows some interesting results. The lay people were able to discriminate between different student-doctors in a consistent way. These findings support the validity of the VR-CoDES-system for measuring cue-response sequences, and give empirical support to the feasibility of including lay people in the quality assessment of medical communication. An important finding is the congruence of the lay people's quality assessments with the theoretical literature on doctor– patient communication: 'providing space', and in particular physician's explicit showing of empathy, indeed seems to have an universal value as the most adequate response to patient's implicit (cue) or explicit (concern) expressions of emotional distress. The study participants were very appreciative when a doctor expressed empathy in such a situation.

Table 4: Multilevel linear regression models on specific quality assessments (n=3537) of student-doctors' responses to cues and concerns.

| | Intercept only Model (0) | + fragments info Model (1) | +halo effect Model (2) | +responders info Model (3) |
|---|---|---|---|---|
| | Coeff. (s.e) | Coeff. (s.e) | Coeff. (s.e) | Coeff. (s.e) |
| *Fixed part* | | | | |
| *First level variables:* | | | | |
| Explicit vs non-explicit | | -0.06 (.08) | -0.06 (.08) | -0.06 (.08) |
| Provide space vs reduce sp | | 1.36 (.08)* | 1.36 (.08)* | 1.36 (.08)* |
| Video: | | | | |
| DoctorA vs DoctorE | | -0.60 (.17)* | -0.85 (.15)* | -0.86 (.15)* |
| DoctorB vs DoctorE | | 0.12 (.17) | 0.08 (.15) | 0.08 (.15) |
| DoctorC vs DoctorE | | 0.29 (.16) | 0.27 (.15) | 0.26 (.14) |
| DoctorD vs DoctorE | | -1.09 (.16)* | -1.00 (.15)* | -1.01 (.14)* |
| DoctorF vs DoctorE | | 0.22 (.14) | 0.22 (.13) | 0.22 (.13) |
| DoctorG vs DoctorE | | -0.67 (.11)* | -0.63 (.11)* | -0.61 (.11)* |
| DoctorH vs DoctorE | | -0.15 (.12) | -0.05 (.12) | -0.03 (.12) |
| Global assessment to consultation | | | 0.34 (.02)* | 0.34 (.02)* |
| *Second level variables:* | | | | |
| Gender (female vs male) | | | | 0.22 (.10)* |
| Age in class: | | | | |
| 31-50 vs <30 | | | | -0.06 (.13) |
| >50　vs <30 | | | | -0.30 (.13)* |
| Education: | | | | |
| medium vs lower | | | | -0.41 (.18)* |
| higher vs lower | | | | -0.64 (.18)* |
| Country: | | | | |
| IT vs NL | | | | 0.40 (.15)* |
| UK vs NL | | | | 0.01 (.15) |
| BE vs NL | | | | 0.38 (.16)* |
| Constant | 6.18 (.06)* | 5.60 (.13)* | 3.32 (.18)* | 3.70 (.31)* |
| *Random part* | | | | |
| ICC | 0.17 (.02) | 0.20 (.02) | 0.16 (.02) | 0.13 (.02) |
| residual std deviation (within participants) | 1.90 (.02) | 1.79 (.02) | 1.73 (.02) | 1.73 (.02) |
| std deviation of random intercept (between participants) | 0.89 (.05) | 0.89 (.05) | 0.75 (.05) | 0.68 (.04) |
| *Goodness of fit* | | | | |
| AIC | 17085 | 14602 | 14335 | 14263 |
| (a) $R^2$ level-one (responses) | | 0.11 | 0.17 | 0.17 |
| (a) $R^2$ level-two (participants) | | 0.00 | 0.29 | 0.42 |

(a)　Explained proportion of variance (by fixed effects) using the Snijders-Bosker approach ([24]; pp. 99)

* $p < 0.05$

Empathic statements obtained the highest quality rating from all participants, independently from their background characteristic and nationality. This result provides a firm empirical base for including expressions of empathy by physicians as a must in clinical guidelines for all health problems which evoke emotions. While 'providing space' seems to be universally valued by lay people over 'reducing space' types of communication, the other main dimension of the VR-CoDES-P system (explicit versus non-explicit) does not evoke such an unequivocal reaction

from the participants in this study. There is a small significant effect in favour of explicit responses, but this seems to have hardly any clinical relevance. An in-depth analysis of the results from Table 1 suggests that this dimension mitigates the impact of the providing/reducing space dimension, both in a positive and a negative way. For instance, when student-doctors reduced patients' space by giving information or advice, this was higher appreciated when it happened in a non-explicit way. Inversely, an empathic statement was less appreciated when it occurred in a non-explicit manner, as if the space-providing character of this communication was not picked up by the participants. Another important result was that the quality assessments were interrelated and also related to the global assessment of the quality of communication, suggesting a halo-effect: it seems that the general atmosphere of the consultations had a radiating effect on the assessments of student-doctors' responses to patients' emotions. This finding suggests that a physician can switch topics, without receiving a very low quality rating for this space reducing behaviour, as long as changing the topic of the conversation is embedded in space-providing communication, such as backchannels or an acknowledgement of patients' emotions. This is reassuring, because it means that physicians can make a 'faux pas', without being blamed, as long as his/her overall performance is appreciated. It also means that shutting patients down, for instance when moving to the next phase (or to the end) of the consultation (which is something that needs to be done!) does not necessarily result in low quality ratings, as long as it is embedded in a room providing atmosphere. Whether the specific quality assessments may influence global quality assessments cannot be answered with this study. This would require a design, which systematically varies the order of assessments. The last issue that needs reflection is the influence of the lay people's background characteristics on the quality assessments. While the type of physicians' response ('providing space') was the strongest explaining factor in the models, a substantial proportion of the variance was explained by the individual characteristics of the participants. The more critical appraisal from younger, higher educated people is consistent with the literature, which shows that older and lower educated patients are usually more satisfied with the care delivered [4]. A plausible, but not yet empirically founded explanation could lie in the different stage of development of the vocational training for General Practitioners in these countries, with the UK and the Netherlands having a longer and stronger tradition in this area, in particular with regard to communication skills training. This suggests that English and Dutch patients are used to General

Practitioners who are more proficient in communication as compared to Belgian and Italian patients, but more research on this issue is needed. A strength of this study is that all participants have been exposed to the same identical set of video-fragments of medical consultations. To our knowledge, this is the first time that an international study on this scale has been performed. 259 participants from four countries have observed the same sets of videotapes according to the same strict protocol. Another strength is that the participants observed four different consultations of the same scenario, which made it possible to compare the performance of different student-doctors under the same conditions, and to set their standards about communication examples that they preferred. The third strong point is that the type of physician communication was standardized by applying the VR-CoDES to identify patients' negative emotional expressions and physicians' responses, which made it easier to compare the student-doctors communication performance. Together, this means that the quality assessments were highly standardized, which gives support to the robustness of our results. The study also has limitations. The first is that we used videotaped OSCE-consultations which were recorded to test the medical students' communication skills during their final exams. The type of physician communication shown does not necessarily represent the communication of regular doctors. However, we saw a wide variation in student-doctors' responses, and we believe that the advantages of the standardized situation in which the observers could compare various communication styles in the same type of medical consultation, outweigh the disadvantage of working with medical students instead of regular doctors. The second limitation is that lay people were used for giving quality assessments. Although these people had experienced at least one medical consultation in the last year, they were not personally involved in the observed interactions and therefore not emotionally engaged. At the same time the absence of a personal involvement is one of the strengths of the present study, since it reduces the risk of complacency effects leading to an overestimation of positive and/or negatives behaviors. Although the use of lay persons is a widely used methodology [4,25,26], the validity of these assessments as compared to the assessments by real patients still needs to be confirmed. Finally, only Western-European countries were involved in the study, which means that results cannot automatically be generalized to other cultures. Replication in other countries could be worthwhile.

**Conclusion**

Some types of physician responses are differently valued by people. This would require from physicians personal sensitivity and tailor-made communication when discussing sensitive issues with patients from different backgrounds. Therefore, the overall conclusion of this study is: providing space to patients who show signs of distress is universally appreciated by all participants. This means that doctors have one important trump card in these situations: 'when in doubt, express empathy!'.

**Practice implications**

Space providing listening skills and expressions of empathy, which appear to make people forgive other occurring communication shortcomings of the health provider, should be core clinical skills to be targeted in medical education programs.

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# 6

# What makes the doctor patient consultation more successful from the patients' point of view?

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**Abstract**

**Objective**: In a previous qualitative study (GULiVer-I), a series of lay-people derived recommendations ('tips') was listed for doctor and patient on 'How to make medical consultation more effective from the patient's perspective'. This work (GULiVer-II) aims to find evidence whether these tips can be generally applied, by using a quantitative approach, which is grounded in the previous qualitative study

**Methods:** The study design is based on a sequential mixed method approach. 798 patients, representing United Kingdom, Italy, Belgium and the Netherlands, were invited to assess on four point Likert scales the importance of the GULiVer-I tips listed in the 'Patient Consultation Values questionnaire'.

**Results:** All tips for the doctor and the patient were considered as (very) important by the majority of the participants. Doctors' and patients' contributions to communicate honestly, treatment and time management were considered as equally important (65, 71 and 58% respectively); whereas the contribution of doctors to the course and content of the consultation was seen as more important than that of patients.

**Conclusions:** The relevance of GULiVer-I tips is confirmed, but tips for doctors were assessed as more important than those for patients.

**Practice implications:** Doctors and patients should pay attention to these ''tips'' in order to have an effective medical consultation.

**Keywords:** doctor-patient communication; general practice; patient perspective; sequential mixed method approach.

## Introduction

While there is a growing number of studies on the role of doctor–patient communication in the quality of care [1–3], most of these are based on the doctor's perspective [4–6]. Doctors usually have clear goals in the medical consultation [7]. However, patients usually have their own goals which may or may not coincide with the doctors' goals [8–11]. Moreover, patient goals may be diverse and are not always easy to predict beforehand [12]. A recent special issue of Patient Education and Counseling on the 'Quality of Communication from a Patient Perspective' shows what patients want [13–15]. However, doctors are only partially aware of what patients expect from the medical consultation [16–18], and patient goals are still seldom integrated into medical curricula or clinical guidelines [19].

Only recently have patient expectations, preferences and suggestions regarding doctor–patient communication been systematically analysed [20–22]. Yet, there is an emerging body of literature which shows the positive effects of engaging patients in playing a more active role in the consultation, ranging from a better adherence to treatment, to lower drop out from treatment and higher satisfaction [23,24]. Strengthening the patients' voice in research on medical consultations can therefore be an important goal in itself [25].

It is not surprising, given an understanding on how diverse patient goals may be, that the exploration of the patients' perspective presents some methodological challenges and potential pitfalls. Qualitative methods present the great advantage of enabling researchers to capture the richness and complexity of the object of observation; but at the same time they run the risk of selection biases in the recruitment of study participants and the introduction of subjective undertones in the interpretation of the non-standardized data. This often results in limitations on how generally the findings can be applied [26]. Quantitative methods may, on the other hand, guarantee a more structured and replicable study design and data collection. But many quantitative studies risk representing the researchers' frame of reference rather than the perspectives of real patients. This might lead to a selection bias in the construction of the research instruments [27]. The combination of these two systems of analysis in a mixed method, or multi-method, approach seems to represent an effective solution, which exploits the advantages of both and, at the same time, mitigates their limitations [28]. More specifically, integrating qualitative with quantitative

methods increases the ''credibility'' of the research findings, as suggested by Bryman [29]. Bryman referred to the complementary task, both at the level of research questions, which are the same items but being explored differently, and the explanation of results, when one study is used to help explain findings generated by the other.

A sequential mixed method approach [30] has been adopted in the present study. The word ''sequential'' stresses the temporal relationship between the qualitative and quantitative strands both regarding the timing of data collection (the qualitative phase being followed by the quantitative ones) and their respective analyses (the hypothesis of the latter are based on the results of the previous one).

Table 1: Main steps of sequential mixed-method study

| GULiVer-I results | GULiVer-II hypotheses | Mixed methods aims |
|---|---|---|
| **Feasibility** to involve laypeople in a quality assessment task: positive and critical opinions were articulated in the same balanced way and the participants took their work seriously | To what extent the lay people's opinions are congruent with patients' opinions right after a medical visit? | |
| **List** of tips for doctors and patients | **Ranking** the tips in order of preference | |
| **Similarity over the four countries** was sticking in many tips. More critical opinions were expressed by NL and UK, IT evidenced the power distance between doct-pt; Belgium was more focused on doct behaviours than on pt ones. The tip related to triage system (a receptionist/nurse as gatekeeper the access to the doctor) took different time. | Is there **homogeneity** among the four countries about the importance attributed to each tip? | **To compare the results of the two studies, in order to confirm or disconfirm the generalizability of the Guliver-I findings** |
| **Similarity in tips for docts and pts.** Many tips for doctors are mirrored in comparable 'tips' for patients, showing a more balanced doctor–patient relationship and the maturing of patient empowerment | In the patient opinion, is the **responsibility** for a **successful encounter** equally balanced for doct behaviours? | **Gathering information on unexpected results** |
| **Dilemmas on some pt needs** (Pt involvement in decision making, the use of new communication technologies; the triage systems in General Practice), which are translated into tips with difficulties | **Exploring some controversial topics**, in order to check if they are related to specific pt groups (gender, age, education)? | |

The aim is to test whether a series of 'tips on how to make the medical consultation more effective from a patient perspective', can be generally applied. These 'tips', addressed to doctors and patients, were collected in a previous, qualitative study (GULiVer-I) [31]. In this follow-up study (GULiVer-II), these 'tips' were translated into a questionnaire which was sent to larger samples of people in the same four countries in which the first study took place.

This paper aims to strengthen the evidence of what constitutes an effective medical consultation from the patients' perspective (clinical aim; see Table 1 for a list of specific aims) and, consequently, to confirm the results from a previous qualitative study in further and larger samples, in a different setting, using standardized questionnaires (methodological aim).

## Methods

### Study Design

The overall study design includes two studies which have been carried out in sequence:

(1) A qualitative focus-group study (GULiVer-I) in which participants watched four videotaped medical consultations involving different doctors treating the same medical condition. The participants were asked, subsequently, to comment on what they had seen and to formulate tips for doctors as well as patients to help make the medical consultation more effective from a patient perspective. The details of this study as well as the main results have been published elsewhere [31,32]. The Dutch Federation of Patients and Consumer Organizations (NPCF) used the tips in the development of a 'communication chart' and translated the tips into illustrated cartoons (see Fig. 1). These tips were used to generate questions for the standardized questionnaire to be used in the second study.

(2) A quantitative survey study (GULiVer-II), where patients were given a standardized questionnaire, the 'Patient Consultation Values questionnaire' (PCVq) (see also Appendix A), to measure patients' views on 'how doctors, as well as patients, might make the medical consultation more effective from a patient perspective'. For practical reasons, the questionnaire for the GULiVER-II study was developed within the framework of another, larger European study, which also took responsibility for the data collection. This was the multicentre

study of the Quality and Costs of Primary Care in Europe ('QUALICOPC'), funded by the European Union (EU) and running in 34 countries. This study was coordinated by the Netherlands Institute for Health Services Research (NIVEL), which was also responsible for both GULiVER-studies. The details of the development of the study protocol and questionnaire, including information on translation procedures, and tests of validity, reliability and readability, have been published elsewhere [33,34]. While the QUALICOPC Patient Value questionnaire (PVq), had a broad remit, the questions derived from the GULiVER-I study form a recognizable separate section, named 'Patient Consultation Values questionnaire' (PCVq). Ethical approval was acquired in accordance with the legal requirements in each country.

**Study samples**

The GULiVer-I sample (n = 259) was drawn from the general population of four European countries (NL, IT, UK and BE) during 2008–2009. Recruitment was undertaken in the public domain, via calls through free local newspapers and by word of mouth. Sample characteristics (see Table 2) were published, in more detail, elsewhere [32].

The GULiVer-II sample (n = 798) was a selection of the QUALICOPC sample, drawn from general practice patients during 2011–2013, composed of patients coming from the four GULiVer-I countries (for detailed background information, see Table 2).

Table 2: Demographic characteristics of GULiVer samples by country
       (frequency distribution within country)

|  | Total | BE | IT | NL | UK |
|---|---|---|---|---|---|
| GULIVER-II |  |  |  |  |  |
| Sample size (row %) | 798 | 201 (20.0) | 220 (21.9) | 222 (22.1) | 155 (15.4) |
| Gender: female | 482 (61%) | 123 (62%) | 136 (62%) | 130 (59%) | 93 (60%) |
| Age: mean (sd) | 52 (18) | 49 (18) | 52 (17) | 53 (18) | 56 (18) |
| Occupation: employed | 342 (43%) | 95 (47%) | 90 (41%) | 92 (41%) | 65 (42%) |
| Education: post-secondary | 309 (39%) | 83 (42%) | 67 (30%) | 70 (32%) | 89 (57%) |
|  |  |  |  |  |  |
| GULIVER-I |  |  |  |  |  |
| Sample size (row %) | 259 | 48 (18.6) | 72 (27.9) | 64 (24.4) | 75 (29.1) |
| Gender: female | 136 (53%) | 27 (56%) | 39 (54%) | 29 (45%) | 41 (55%) |
| Age: mean (sd) | 40 (15) | 39 (16) | 41 (15) | 40 (16) | 42 (15) |
| Occupation: employed | 146 (57%) | 23 (48%) | 40 (56%) | 18 (29%) | 65 (87%) |
| Education: post-secondary | 122 (47%) | 27 (56%) | 26 (36%) | 24 (38%) | 45 (60%) |

Figure 1: 'Communication chart' of The Dutch Federation of Patients and Consumer Organisations (NPCF) (www.mijnzorgveilig.nl)

## GULiVER-study

| Tips for doctors | Tips for patients |
|---|---|
| **Before the consultation** *Who is coming to surgery today?*<br><br>- Don't create doctor-patient distance by having the receptionist perform a pre-consultation triage<br>- Prepare the consultation; know who is coming and what their medical background is<br>- Be aware of the patient's cultural background<br>- Avoid prejudice; keep an open mind<br>- Write on the wall: "what do you expect from this consultation?" in order to stimulate patients to think before entering | **Before the consultation** *What do you want from your doctor?*<br><br>- Go to the doctor if you need to, but don't use him/her as a substitute for your social life<br>- Prepare yourself well:<br>  - keep a diary of your symptoms<br>  - write down what you want to ask<br>  - reflect on your expectations<br>  - know which medicines you are taking<br>- Take a companion, if you think that you might need support<br>- Keep your appointment! |
| **During the consultation** *Listen and take the patient seriously*<br><br>- Introduce yourself to patients you don't know<br>- Show patients that they are welcome<br>- Make and maintain eye contact<br>- Listen and don't interrupt the patient<br>- Show compassion and empathy<br>- Pay attention to psychosocial issues<br>- Take your time; don't show you are in a hurry<br>- Treat patients as human beings and not as a bundle of symptoms<br>- Take the patient seriously<br>- Be honest without being rude<br>- Avoid jargon, check that the patient understands<br>- Know your limits; know when you have to refer a patient<br>- Invest in a common agenda<br>- Avoid interruptions by computer or telephone | **During the consultation** *Be honest and ask questions*<br><br>- Take notes if you think this is necessary<br>- Be honest about your medical problem, don't exaggerate, don't underplay your symptoms, and don't be embarrassed<br>- Tell your doctor what steps you have already taken to relieve the symptoms, including non-prescription drugs and complementary medicine<br>- Be assertive: tell the doctor what you expect<br>- Ask for clarification if something is not clear<br>- Tell about relevant psychosocial issues<br>- Ask about benefits, side effects and alternative options<br>- Ask about what you can do yourself<br>- Be realistic; don't expect miracles<br>- Be aware that other patients may be waiting<br>- Don't leave before you are satisfied with the treatment plan, or ask for a new appointment |
| **After the consultation** *Avoid any loose ends*<br><br>- Always give the patient the test results, even if these are normal<br>- Give the patient clear instructions what to do under certain circumstances<br>- Provide clear opportunities for email contact<br>- Offer other sources of information, including websites, leaflets | **After the consultation** *Take your responsibility*<br><br>- Adhere to the agreed treatment plan<br>- Inform your doctor on treatment results (could be done per email)<br>- Collect additional information from trusted sources<br>- Respect your doctor's privacy<br>- Find another doctor if you are not satisfied, but before doing so talk about your discontentment |

Tips are based on the GULiVER-study: NIVEL, Universities of Utrecht, Verona, Liverpool and Gent. Cartoons: copyright Dutch Federation of Patients and Consumer Organisations (NPCF). Free available for public use. For commercial use, contact NPCF for copyright, www.npcf.nl

**Measuring instrument**

Apart from some questions about patient demographic and health characteristics, the Patient Consultation Values questionnaire (PCVq) contains 33 items about the patient's perspective on having an effective medical consultation: 21 items related to preferred doctor behaviours and 12 to preferred patient behaviours.

The answering format of items is a four-point Likert scale (from ''not important'', ''somewhat important'', ''important'' to ''very important''). The Cronbach's alpha values, estimated on the GULiVer-II sample, were 0.88 (between country range: 0.87–0.89) and 0.82 (between country range: 0.77–0.83) respectively in the doctor and patient item subsets. They show a good internal consistency.

**Statistical analysis**

Frequency distributions were used to describe which doctor and patient behaviours were generally seen as 'very important' tasks (>50% very important), and 'not important' tasks (>15% not important). The counts of items assessed as ''very important'', separately for groups of items concerning respectively doctor and patient tips, were compared using Student's t-test for paired data. A Kruskal–Wallis $H$ test, based on ranks to compare independent groups, was applied to check the stability of frequency distributions among countries.

A logistic regression explored the demographic characteristics of participants who attributed the assessment 'unimportant' to tips. The independent variables, which were explored, were: country, gender, age, education, and occupation. The parsimonious models were shown. The goodness of fit index, based on the Hosmer-Lemeshow-Sturdivant formulation [35], verified that the models fit reasonably well. The analyses were carried out using STATA 13 (StataCorp., 2013).

# Results

***Main findings: the most important tips for doctors and patients, respectively.***

Table 3 shows the frequency distributions of the 21 tips for doctors to make the consultations more effective from a patient perspective. It can be noted

that the "very important" response is both mode and median (meaning that at least half the participants selected it) in five types of doctor behaviours.

Table 3: Tips for doctors before, during and after the consultation: frequency distribution of each item and Kruskal-Wallis H test for equally distributions of groups
(within the cells, the numbers indicate the median category relating to frequency distribution conditioned by country and are associated to each country: ①= BE; ②= IT; ③= NL; ④= UK)

| PVQ Items How important are the following to you: | N | Not important | Somewhat important | Important | Very important | Chi$^2$(4) p-value |
|---|---|---|---|---|---|---|
| *Before consultation* | | | | | | |
| 6.1 That I don't need to tell a receptionist or nurse about details of my health problem before seeing my doctor | 777 | 18.5 | 22.8 | 36.5 ①②③④ | 22.1 | 13.4 <0.01 |
| 6.2 That the doctor has prepared for the consultation by reading my medical notes | 786 | 8.3 | 17.3 | 48.1 ①②③④ | 26.3 | 37.5 <0.01 |
| 7.5 That the doctor is not prejudiced because of my age, gender, religion or cultural background | 788 | 5.8 | 10.3 | 45.7 ①②③ | 38.2 ④ | 13.6 0.01 |
| *During consultation* | | | | | | |
| 7.1 That the doctor makes me feel welcome by making eye contact | 789 | 4.4 | 13.6 | 52.5 ①②③④ | 29.5 | 11.0 <0.01 |
| 7.2 That the doctor listens attentively | 792 | 0.3 | 2.4 | 40.6 | 56.7 ①②③④ | 1.57 0.69 |
| 7.3 That the doctor does not give me the feeling to be under time pressure | 790 | 1.0 | 4.8 | 44.7 ①③ | 49.5 ②④ | 0.78 0.85 |
| 7.4 That the doctor is aware of my personal, social and cultural background | 786 | 12.1 | 25.2 | 42.2 ①②③④ | 20.5 | 5.85 0.09 |
| 7.6 That the doctor treats me as a person and not just as a medical problem | 792 | 0.8 | 4.0 | 39.5 | 55.7 ①②③④ | 1.65 0.65 |
| 7.7 That the doctor is respectful during physical examination and by not interrupting me | 789 | 2.3 | 11.2 | 50.4 ①②③④ | 36.1 | 9.98 <0.01 |
| 7.8 That the doctor takes me seriously | 792 | 0.1 | 3.2 | 39.5 ② | 55.7 ①③④ | 9.6 0.02 |
| 7.9 That the doctor understands me | 786 | 0.4 | 4.7 | 45.0 ①② | 49.9 ③④ | 5.33 0.15 |
| 7.10 That the doctor asks me if I have any questions | 785 | 2.7 | 12.9 | 52.3 ①②③④ | 32.1 | 31.39 <0.01 |
| 7.11 That the doctor asks if I have understood everything | 777 | 1.8 | 11.2 | 48.3 ①②③④ | 38.7 | 22.9 <0.01 |
| 7.12 That the doctor knows when to refer me to a medical specialist | 780 | 0.5 | 2.8 | 33.2 | 63.5 ①②③④ | 6.90 0.08 |
| 7.13 That the doctor asks how I prefer to be treated | 750 | 6.4 | 20.0 | 46.8 ①②③④ | 26.8 | 60.56 <0.01 |
| 8.1 That the doctor avoids disturbances of the consultation by telephone calls etc. | 788 | 8.9 | 25.3 ① | 42.4 ②③④ | 23.5 | 38.48 <0.01 |
| 8.2 That the doctor gives me additional information about my health problem e.g. Leaflets | 787 | 10.8 | 29.4 ② | 44.9 ①③④ | 15.0 | 48.22 <0.01 |
| 8.3 That the doctor informs me about reliable sources of information e.g. Websites | 781 | 18.1 | 32.9 ② | 39.1 ①③④ | 10.0 | 66.31 <0.01 |

- Table 3 continues -

- Table 3 continued -

| PVQ Items<br>*How important are the following to you:* | N | Not<br>important | Somewhat<br>important | Important | Very<br>important | Chi2(4)<br>p-value |
|---|---|---|---|---|---|---|
| *After consultation* | | | | | | |
| 9.1 That the doctor gives me all test results, even if they show no abnormalities | 785 | 4.8 | 16.1 | 45.5<br>①②③ | 33.6<br>④ | 46.52<br><0.01 |
| 9.2 That the doctor offers me to have telephone or email contact if I have further questions | 787 | 5.5 | 19.3 | 51.2<br>①②③④ | 24.0 | 1.40<br>0.71 |
| 9.3 That the doctor gives me clear instructions on what to do when things go wrong | 790 | 0.4 | 3.0 | 39.8 | 56.8<br>①②③④ | 2.13<br>0.55 |

These were: knowing when you have to refer a patient to a specialist (64%); listening attentively (57%); treating the patient as a person (56%); taking the patient seriously (57%); and giving the patient clear instructions on what to do when things go wrong (57%). The ''important'' choice is median in 15 items. Note that the tip 'give time to the patient and do not hurry' was substantial for the vast majority (94%) of the participants (50% very important and 45% important).

In a similar way, Table 4 shows the distributions of tips for patients. Here we see that the ''important'' category is both median and modal choice for the whole set of 12 items.

The tips for doctors were assessed as more important than the tips for patients. The mean number of tips per participant for doctors assessed as 'very important' is 7.5 (sd: 5.6; on a possible range of 0–21); while it is 3.6 (sd = 3.2; on a possible range of 0–12) for tips addressed to patients. The comparison of these results, taking into account the different number of items in each group, showed that the participants generally attached less importance to patient behaviours (34% vs 43% of doctor behaviours; t-test$_{(793)}$ =11.5; p<0.01).

## Similarity between countries with regard to patient preferences

A view on the stability of the main results among countries is summarized in Tables 3 and 4. The median values, conditioned by groups, show that ''important'' and ''very important'' are the dominant choices (the distributions are right asymmetric). This mainly happens in Dutch and UK groups both for doctor and patient tips. The differences between country medians are not substantial, because the reference categories are adjacent in all cases. Moreover, four out of five most important doctor tips in the overall analyses were also found within each specific country. No differences were observed for: doctor listening (frequency range for ''very

important'' choice: 53–61%); treating patients as a person (range: 51–59%); knowing when to refer the patient to a specialist (range: 58–73%); and giving patient clear instructions about when things go wrong (range: 52-63%). However, a statistically relevant gap was found in taking the patient seriously (range: 50–64%) due to lower values for Italians.

Table 4: Tips for patients before, during and after the consultation: frequency distribution of each item and Kruskal-Wallis H test for equally distributions of groups
(within the cells, the numbers indicate the median category relating to frequency distribution conditioned by country and are associated to each country: ①= BE; ②= IT; ③= NL; ④= UK)

| PVQ Items How important are the following to you: | N | Not important | Somewhat important | Important | Very important | $Chi^2(4)$ p-value |
|---|---|---|---|---|---|---|
| *Before consultation* | | | | | | |
| 6.3 That I have prepared for the consultation by keeping a symptom diary or preparing questions | 780 | 18.0 | 29.7 ① | 38.1 ②③④ | 14.2 | 16.78 <0.01 |
| 6.4 That I can bring a family member/friend to the consultation if I think this is useful | 782 | 21.1 | 22.1 ①② | 43.6 ③④ | 13.2 | 62.42 <0.01 |
| 6.5 That I know which doctor I will see | 784 | 6.2 | 11.5 | 49.4 ①②③④ | 32.9 | 3.48 0.25 |
| 6.6 That I keep to my appointment | 756 | 1.6 | 6.3 | 47.5 ①②③④ | 44.6 | 43.35 <0.01 |
| *During consultation* | | | | | | |
| 8.4 That I tell the doctor what I want to discuss in this consultation | 783 | 6.4 | 16.5 ② | 52.2 ①③④ | 24.9 | 98.58 <0.01 |
| 8.5 That I am prepared to ask questions and take notes | 776 | 16.2 | 26.6 ② | 43.4 ①③④ | 13.8 | 81.32 <0.01 |
| 8.6 That I am honest and not feel embarrassed to talk about my health problem | 787 | 0.8 | 6.8 | 45.9 ①②③ | 46.5 ④ | 13.77 <0.01 |
| 8.7 That I am open about my use of other treatments, such as self-medication or alternative medicine | 780 | 2.7 | 11.4 | 46.7 ①②③④ | 39.2 | 4.73 1.19 |
| 8.8 That psychosocial issues (for example personal worries) can be discussed if needed | 783 | 5.7 | 14.6 | 46.6 ①②③④ | 33.1 | 82.42 <0.01 |
| After consultation | | | | | | |
| 9.4 That I adhere to the agreed treatment plan | 782 | 0.1 | 8.5 | 48.3 ①③ | 47.2 ②④ | 10.61 <0.01 |
| 9.5 That I inform the doctor how the treatment works out | 779 | 2.6 | 8.5 | 50.2 ①②③④ | 33.8 | 1.37 0.71 |
| 9.6 That I can see another doctor if I think it is necessary | 757 | 5.5 | 18.1 | 52.1 ①②③④ | 24.3 | 21.87 <0.01 |

The differences between countries seem more evident when attention is focused on lower scores (''not'' or ''somewhat important'') mainly expressed by Belgians and Italians on three doctor and four patient tips.

The Belgian group differs from others in giving a low importance to patients' responsibility for preparing for the consultation (55%), the presence of a family member during consultation (52%) and the possibility disturbances due to answering a telephone (51%).

The Italians attached little value to doctors giving additional health information, either by using leaflets (60%) or through a website (71%), to letting patients be accompanied by a family member (62%) and by patients assuming an active approach during the conversation by asking questions and taking notes (65%), nor by patients telling the doctor what they want to discuss (52%).

**Responsibility for a successful medical consultation: mirroring doctor/patient behaviours**

The results from the GULiVer-I study (see Table 1) showed that several tips for doctors on how these might make the consultation more effective from a patient perspective were mirrored in similar tips addressed to patients themselves [28]. The patient perspective on the importance attributed to the doctor or the patient regarding these joint doctor–patient tips, that is the shared responsibility for a successful medical consultation, is explored in more detail in GULiVer-II.

Fig. 2 shows the ten joint doctor/patient tips in descending order of agreement. There is agreement on a shared commitment in some topics that are related to creating good human relationships and useful collaboration (respect and honesty, sharing information, time management, open-mindedness about treatments, treatment management). Doctors, meanwhile seems to be given more responsibility than patients for stimulating active patient participation, in terms of disclosure of agenda (48% vs 5%) and understanding (51% vs 8%), and knowing when to see another doctor (53% vs 5%). Patients only seem to be attributed more responsibility than doctors in the case of sharing information after the consultation (34% vs 11%).

Finally, the patient perspective on the responsibility for a careful preparation before the consultation, shows that about half of all participants (46%) agree that both the patient and the doctor have to be prepared. A substantial group (43%) attributed the responsibility for a good preparation of the consultation primarily to the doctor, but only 11% of the participants primarily saw here an active role for the patient.

Figure 2: Bar charts of respondent opinions on "responsibility allocation" of mirroring doctor-patient behaviours.
(in brackets the couples of numbers correspond to the paired doctor-patient items, see tables 1 and 2)
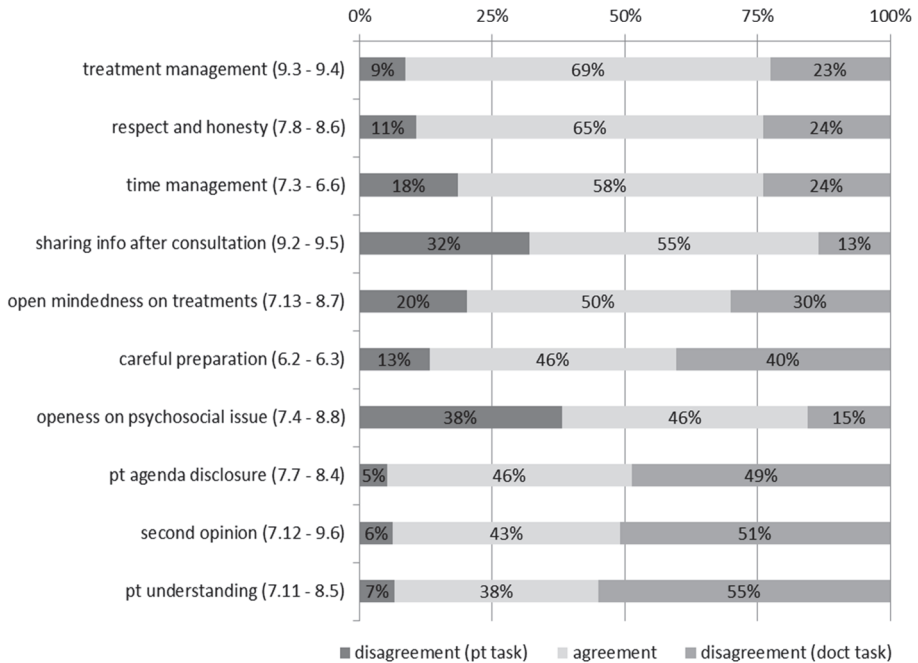


**Tips generating discordant opinions**

Some tips raised mixed feelings among the respondents. Two behaviours of doctors have been classified ''not important'' by a fifth of the participants. These are: ''I do not need to tell a receptionist or nurse about details of my health problem before seeing my doctor'' and ''the doctor informs me about reliable sources of information, e.g. websites''. Regarding patient behaviours, being prepared and taking notes both before and during the consultation, and bringing a family member to the medical consultation are found ''not important'' by a similar amount of participants.

Table 5 presents the associations of these tips with the demographic characteristics of participants, using logistic models (''not important'' vs other choices). The prevalent presence of ''country'' among the predictors, specifically with positive and significant odds ratios for Belgian and Italian participants, confirms what was found in the bivariate analysis (see Section 3.2).

Gender differences were found in the preferences related to the presence of a receptionist or nurse prior to a consultation with a doctor, to indications of reliable websites from a GP and to the presence of a family member or friend during the medical consultation. Here men expressed higher frequencies of ''not important'' (24% vs 15% for women; 22% vs 15%; 28% vs 17% respectively).

Younger people more often gave the score ''not important'' both to taking notes of symptoms before the consultation (29% of under- 30 vs 14% of over-50) and to asking for information during the consultation (20% vs 14% respectively). Elderly people did not find it important to receive indications of reliable websites from their GP (24% of ''not important'' among people aged over 60 years vs 15% under 60).

## Discussion and Conclusion

### Discussion

At least half of the people interviewed expressed a positive opinion for 32 items of the 33 investigated, the last one being on doctors' recommended reliable medical websites. It can, therefore, be concluded that GULiVer-I tips are largely appreciated in this wider sample as well. This confirms that GULiVer-I's qualitative results can be generally applied. GULiVer-II's quantitative approach, unlike the previous study, has allowed patients to pay attention to each tip, which means that the internal validity can be considered very good.

Four doctor behaviours should always be part of doctor– patient communication: listening attentively; taking the patient seriously; treating the patient as a person; and granting enough time. These behaviours are typically seen as required for achieving a good rapport with the patient, and fit perfectly within the first function of the six-function model of the medical consultation [36], establishing a relationship. These types of behaviour by doctors are aimed at creating an authentic partnership, and satisfying patients' needs to have a doctor who really cares for them and their well-being [37]. This fits well within the relatively new concept of 'relationship-centred care' as an alternative for patient-centred care [38].

Table 5: Logistic models on critical behaviours ("not important" vs other) related to respondent demographic characteristics

| | Doctor behaviours | | | | Patient behaviours | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Receptionist as a filter | | Doctor suggests websites for info | | To prepare a list of symptoms and questions | | Be accompanied by a family member | | Asking and taking notes during consultation | |
| | OR | 95%CI | OR | 95%CI | OR | 95%CI | OR | 95%CI | OR | 95%CI |
| Country: Be | 1.50* | 1.06-3.06 | 1.86 | 0.97-3.57 | 2.47* | 1.48-4.12 | 3.02* | 1.72-5.31 | 2.97* | 1.34-6.60 |
| IT | 2.26* | 1.37-3.74 | 7.83* | 4.44-13.82 | 1.63 | 0.96-2.76 | 5.90* | 3.45-10.07 | 15.42* | 7.47-31.85 |
| NL | Ref. | - | Ref. | - | Ref. | - | Ref. | - | Ref. | - |
| UK | 1.19 | 0.65-2.15 | 1.05 | 0.50-2.20 | 1.03 | 0.55-1.92 | 1.18 | 0.60-2.33 | 1.68 | 0.66-4.25 |
| Gender: Male | 1.84* | 1.27-2.66 | 1.68* | 1.13-2.52 | | | 2.09* | 1.45-3.08 | | |
| Age | | | 1.02* | 1.01-1.03 | 0.98* | 0.97-0.99 | | | 0.99* | 0.97-0.99 |
| constant | 0.11* | 0.07-0.18 | 0.02* | 0.00-0.05 | 0.34* | 0.18-0.65 | 0.07* | 0.05-0.12 | 0.09* | 0.04-0.52 |
| Goodness of fit index: | | | | | | | | | | |
| HLS Chi$^2$ (dof); p-value | 2.93 (4) | 0.71 | 4.47 (8) | 0.81 | 6.10 (8) | 0.64 | 3.40 (5) | 0.64 | 7.19 (8) | 0.52 |

Note: Parsimonious criteria were adopted in selecting predictors; grey cells indicate that the variables were not included in the model, because not significant in preliminary bivariate analysis

Two other doctor behaviours which are highly appreciated are connected to doctors looking beyond the medical consultation itself – giving clear information on what to do when something goes wrong, and assessing the need for referral in a timely fashion. The entire set of doctors' tips fits experts' opinions on effective medical consultations [39–42]. Regarding the tips for patients, three types of behaviour (frequency > 90%) seem to represent the basic elements of patients' responsibility for making the medical consultation effective. These are: speaking openly about health history and symptoms; adhering to the agreed treatment plan; and keeping appointments. High value was also attributed to patient disclosure and openness in the medical consultation (frequency range: 75–90%), for instance on informing the doctor about the result of treatment, speaking openly about other treatments used, such as self-medication or alternative medicine, and psychosocial issues when appropriate. Our respondents believe patients should be assertive in talking about these topics in order to make the medical consultation more effective.

By comparing the most preferred behaviours of doctors and patients, respectively, an important observation is that our respondents give doctors a greater responsibility than the patient for making the consultation effective. Not a single patient tip was given the highest value by more than half of our respondents. While this highest score was given in five out of 21 of the doctor's tips, meaning that patients are perceived as having either less responsibility or less power than doctors, who are clearly seen as the ''leader'' of this interaction between two people. A more detailed exploration of ''mirroring behaviours'' confirms this picture. Some responsibilities are equally ascribed to doctor and patient, such as being respectful and honest, sharing information, managing treatments and time. These are typically collaborative behaviours, which are required in the dynamics of any communicative encounter. Our data show that the respondents believe that patients contribute to building a doctor–patient relationship based on reciprocal exchanges. However, our data also show that our respondents prefer the doctor to take the lead in determining the course and content of the medical consultation. Perhaps the clearest example is our finding that, while our respondents found that patients themselves should take responsibility for talking about psychosocial issues when needed, they also believe that it is primarily the doctor's responsibility to disclose the patient's agenda, and doctor's responsibility too to check if the patient properly understands his or her situation, and

not vice versa as would have been logical in a completely balanced relationship.

Another issue that deserves more attention in research on the doctor–patient communication is the influence of national culture on the study results. This was already apparent in the previous, qualitative study [31], but becomes even more clear in this larger study, where we included more participants from the same countries. Compared to demographic characteristics such as age, gender and education, the country of origin shows a higher discriminant value in the explanation of each of the critical items. For example the disregard for the ''receptionist as a filter'' which we saw in the United Kingdom, and – to a lesser degree – in the Netherlands, but not at all in Belgium and Italy, might be ascribed to the fact that this 'triage system' was not yet widespread in Belgium and Italy at the time of data collection. Thus the respondents from the latter countries did not yet have any experience with the relatively recent introduction of this concept into primary care. These national differences raise a caveat for the interpretation of study results without first taking into account of the country setting of the studies. More research is needed to study the impact of variations in health care organization on patient experiences and preferences.

**Strengths and limitations**

The main strength of this ''confirmatory'' study is that it strengthens the evidence on how to make the medical consultation more effective from a patient perspective, by using different research strategies as compared to the previous qualitative study which explored the same research question. In this, we followed Barnes et al. [43], who recommended that, in order to guarantee the degree to which previous results were generally applicable, three features are important. The findings need to be checked (a) in a different setting, (b) with different instruments and (c) on a larger sample size. We complied with this methodological standard by undertaking the following actions in this study: a sample was selected from primary care patients who are more involved in the health care system than the lay people selected for the previous study; we structured the tips, obtained in the previous study from a focus group summary list, into a questionnaire which harmonized and standardized the data in this study; we used a set of probability samples to represent national subsamples of GPs [33], increasing the sample size by approximately 340%.

Another strength of the present paper is that an ecological approach [44] has been followed in order to take into account some contextual variables related to the patient such as age and, probably most importantly, the country of origin. This approach shows clearly that patients are different from each other and have different needs and preferences. Elderly people do not always want to be troubled with finding information on the internet, but some do, and people tend to be neutral about issues with which they are not acquainted, but people who are acquainted with an issue, might have strong opinions. Again, these results show that medical curricula should pay attention to patient diversity in their communication training and research. There should be no 'one size fits all' in guidelines on doctor-patient communication.

A limitation of this study is that we did not consider potential confounders linked to patients' views on doctor–patient communication. For instance the levels of health literacy (poor literacy skills are considered a risk factor because they adversely influence health outcomes and overall health status [45]), the presence of chronic diseases (a positive correlation between multi-morbidity and more severe expectations was found by Fung et al. [46]) or the continuity of care with the same general practitioner (which is associated with increased patient satisfaction and trust in the doctor [47]). This is certainly an area for further studies. In addition more research is required between countries on the similarities and differences in what patients value in medical consultations. This study suggests that some values, such as being taken seriously, being listened to and having an unhurried consultation seem to be universal, while other values seem more country specific. However, since only four countries were involved in this paper, which all belonged to western Europe, more studies are needed to explore this issue.

### Conclusion

This quantitative study (GULiVer-II) can be considered a successful demonstration of how one can apply a sequential mixed method in which the same research question is approached in a new and larger sample, using different research methods and instruments. This has strengthened the degree of evidence found in the findings from the first study and provided innovative knowledge, in particular about the balance in the roles and responsibilities of the doctor and patient in determining the degree of effectiveness of medical consultations. While doctors and patients are both seen as equally responsible for a straightforward and open conversation, it

is also clear that patients attribute the leading role in determining the course and content of the medical consultation primarily to the doctor. Within the consultation room, the relationship between the doctor and patient remains unequal, and this is not only fed by doctor's behaviour, but also by patients' own perspective on what is needed to make the medical consultation effective. Doctors should be aware of the responsibility given to them.

**Practice implications**
This patient perspective can be seen both as food for thought on the critical role of communication and relationships in health care and as a pragmatic approach to encouraging patient and doctor competencies in carrying out the recommended behaviours (see Fig. 1), for example by informative posters or leaflets in waiting rooms and doctor offices, selected websites or media programmes. It shows a nuanced picture of the two-way relationship between the patient and doctor, stressing the importance for doctors of being sensitive to individual patients' needs, and the importance of taking responsibility for opening the patient's agenda. Many patients are perfectly able to communicate honestly with their doctor on several topics, including psychosocial and sensitive issues, but prefer the doctor to take the lead in approaching these types of discussions.

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| 6. How important are the following to you: Before the consultation with your GP | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|
| 1. That I don't need to tell a receptionist or nurse about details of my health problem before seeing my doctor | ❏ | ❏ | ❏ | ❏ |
| 2. That the doctor has prepared for the consultation by reading my medical notes | ❏ | ❏ | ❏ | ❏ |
| 3. That I have prepared for the consultation by keeping a symptom diary or preparing questions | ❏ | ❏ | ❏ | ❏ |
| 4. That I can bring a family member/friend to the consultation if I think this is useful | ❏ | ❏ | ❏ | ❏ |
| 5. That I know which doctor I will see | ❏ | ❏ | ❏ | ❏ |
| 6. That I keep to my appointment | ❏ | ❏ | ❏ | ❏ |
| 7. From the abovementioned 6 items, which one do you find the most important one? | Most important is item number: ___ (fill in) | | | |

| 7. How important are the following to you: During the consultation with your GP | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|
| 1. That the doctor makes me feel welcome by making eye contact | ❏ | ❏ | ❏ | ❏ |
| 2. That the doctor listens attentively | ❏ | ❏ | ❏ | ❏ |
| 3. That the doctor does not give me the feeling to be under time pressure | ❏ | ❏ | ❏ | ❏ |
| 4. That the doctor is aware of my personal, social and cultural background | ❏ | ❏ | ❏ | ❏ |
| 5. That the doctor is not prejudiced because of my age, gender, religion or cultural background | ❏ | ❏ | ❏ | ❏ |
| 6. That the doctor treats me as a person and not just as a medical problem | ❏ | ❏ | ❏ | ❏ |
| 7. That the doctor is respectful during physical examination and by not interrupting me | ❏ | ❏ | ❏ | ❏ |
| 8. That the doctor takes me seriously | ❏ | ❏ | ❏ | ❏ |
| 9. That the doctor understands me | ❏ | ❏ | ❏ | ❏ |
| 10. That the doctor asks me if I have any questions | ❏ | ❏ | ❏ | ❏ |
| 11. That the doctor asks if I have understood everything | ❏ | ❏ | ❏ | ❏ |
| 12. That the doctor knows when to refer me to a medical specialist | ❏ | ❏ | ❏ | ❏ |
| 13. That the doctor asks how I prefer to be treated | ❏ | ❏ | ❏ | ❏ |
| 14. From the abovementioned 13 items, which one do you find the most important one? | Most important is item number: ___ (fill in) | | | |

| 8. How important are the following to you: During the consultation with your GP | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|
| 1. That the doctor avoids disturbances of the consultation by telephone calls etc. | ❏ | ❏ | ❏ | ❏ |
| 2. That the doctor gives me additional information about my health problem e.g. leaflets | ❏ | ❏ | ❏ | ❏ |
| 3. That the doctor informs me about reliable sources of information e.g. websites | ❏ | ❏ | ❏ | ❏ |
| 4. That I tell the doctor what I want to discuss in this consultation | ❏ | ❏ | ❏ | ❏ |
| 5. That I am prepared to ask questions and take notes | ❏ | ❏ | ❏ | ❏ |
| 6. That I am honest and not feel embarrassed to talk about my health problem | ❏ | ❏ | ❏ | ❏ |
| 7. That I am open about my use of other treatments, such as self-medication or alternative medicine | ❏ | ❏ | ❏ | ❏ |
| 8. That psychosocial issues (for example personal worries) can be discussed if needed | ❏ | ❏ | ❏ | ❏ |
| 9. From the abovementioned 8 items, which one do you find the most important one? | Most important is item number: ___ (fill in) | | | |

| 9. How important are the following to you: After the consultation with your GP | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|
| 1. That the doctor gives me all test results, even if they show no abnormalities | ❏ | ❏ | ❏ | ❏ |
| 2. That the doctor offers me to have telephone or email contact if I have further questions | ❏ | ❏ | ❏ | ❏ |
| 3. That the doctor gives me clear instructions on what to do when things go wrong | ❏ | ❏ | ❏ | ❏ |
| 4. That I adhere to the agreed treatment plan | ❏ | ❏ | ❏ | ❏ |
| 5. That I inform the doctor how the treatment works out | ❏ | ❏ | ❏ | ❏ |
| 6. That I can see another doctor if I think it is necessary | ❏ | ❏ | ❏ | ❏ |
| 7. From the abovementioned 6 items, which one do you find the most important one? | Most important is item number: ___ (fill in) | | | |

*Finally we would like to ask you some questions about your personal background*

*- questionnaire continued -*

| | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|

**6. How important are the following to you:**
**Before the consultation with your GP**

| | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|
| 1. That I don't need to tell a receptionist or nurse about details of my health problem before seeing my doctor | ☐ | ☐ | ☐ | ☐ |
| 2. That my doctor has prepared for the consultation by reading my medical notes | ☐ | ☐ | ☐ | ☐ |
| 3. That I have prepared for the consultation by keeping a symptom diary or preparing questions | ☐ | ☐ | ☐ | ☐ |
| 4. That I can bring a family member/friend to the consultation if I think this is useful | ☐ | ☐ | ☐ | ☐ |
| 5. That I know which doctor I will see | ☐ | ☐ | ☐ | ☐ |
| 6. That I keep to my appointment | ☐ | ☐ | ☐ | ☐ |
| 7. From the abovementioned 6 items, which one do you find the most important one? | Most important is item number: ____ (fill in) | | | |

**7. How important are the following to you:**
**During the consultation with your GP**

| | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|
| 1. That the doctor makes me feel welcome by making eye contact | ☐ | ☐ | ☐ | ☐ |
| 2. That the doctor listens attentively | ☐ | ☐ | ☐ | ☐ |
| 3. That the doctor does not give me the feeling to be under time pressure | ☐ | ☐ | ☐ | ☐ |
| 4. That the doctor is aware of my personal, social and cultural background | ☐ | ☐ | ☐ | ☐ |
| 5. That the doctor is not prejudiced because of my age, gender, religion or cultural background | ☐ | ☐ | ☐ | ☐ |
| 6. That the doctor treats me as a person and not just as a medical problem | ☐ | ☐ | ☐ | ☐ |
| 7. That the doctor is respectful during physical examination and by not interrupting me | ☐ | ☐ | ☐ | ☐ |
| 8. That the doctor takes me seriously | ☐ | ☐ | ☐ | ☐ |
| 9. That the doctor understands me | ☐ | ☐ | ☐ | ☐ |
| 10. That the doctor asks me if I have any questions | ☐ | ☐ | ☐ | ☐ |
| 11. That the doctor asks if I have understood everything | ☐ | ☐ | ☐ | ☐ |
| 12. That the doctor knows when to refer me to a medical specialist | ☐ | ☐ | ☐ | ☐ |
| 13. That the doctor asks how I prefer to be treated | ☐ | ☐ | ☐ | ☐ |
| 14. From the abovementioned 13 items, which one do you find the most important one? | Most important is item number: ____ (fill in) | | | |

**8. How important are the following to you:**
**During the consultation with your GP**

| | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|
| 1. That the doctor avoids disturbances of the consultation by telephone call etc | ☐ | ☐ | ☐ | ☐ |
| 2. That the doctor gives me additional information about my health problem e.g. leaflets | ☐ | ☐ | ☐ | ☐ |
| 3. That the doctor informs me about reliable sources of information e.g. websites | ☐ | ☐ | ☐ | ☐ |
| 4. That I tell the doctor what I want to discuss in this consultation | ☐ | ☐ | ☐ | ☐ |
| 5. That I am prepared to ask questions and take notes | ☐ | ☐ | ☐ | ☐ |
| 6. That I am honest and not feel embarrassed to talk about my health problem | ☐ | ☐ | ☐ | ☐ |
| 7. That I am open about my use of other treatments, such as self-medication or alternative medicine | ☐ | ☐ | ☐ | ☐ |
| 8. That agreements and tasks (for example personal worries) can be discussed if needed | ☐ | ☐ | ☐ | ☐ |
| 9. From the abovementioned 8 items, which one do you find the most important one? | Most important is item number: ____ (fill in) | | | |

**9. How important are the following to you:**
**After the consultation with your GP**

| | Not important | Somewhat important | Important | Very important |
|---|---|---|---|---|
| 1. That the doctor gives me all test results, even if they show no abnormalities | ☐ | ☐ | ☐ | ☐ |
| 2. That the doctor offers me to have telephone or email contact if I have further questions | ☐ | ☐ | ☐ | ☐ |
| 3. That the doctor gives me clear instructions on what to do when things go wrong | ☐ | ☐ | ☐ | ☐ |
| 4. That I adhere to the agreed treatment plan | ☐ | ☐ | ☐ | ☐ |
| 5. That I inform the doctor how the treatment works out | ☐ | ☐ | ☐ | ☐ |
| 6. That I can see another doctor if I think it is necessary | ☐ | ☐ | ☐ | ☐ |
| 7. From the abovementioned 6 items, which one do you find the most important one? | Most important is item number: ____ (fill in) | | | |

*Finally we would like to ask you some questions about your personal background*

# 7

# What are the preferred roles and responsibilities of doctors and patients in the view of primary care patients from 31 European countries and are they affected by personal and cultural characteristics?

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**Abstract**

**Objective:** To assess European patients' preferences about seven aspects of doctor-patient communication

**Methods:** 6049 patients from 31 European countries evaluated 21 doctor and 12 patient behaviours responsible for an effective consultation. Factor analysis reduced the 33 items into 3 patient and 4 doctor factors. Multilevel models assessed the effects of patient characteristics and cultural dimensions (Hofstede) on preferences.

**Results:** Minor differences were due to the Hofstede dimensions Indulgent vs Restrained and Individualistic vs Collectivistic. Patients from countries with an indulgent background like Ireland and Iceland, attributed greater importance to doctor and patient roles than those from countries with a more individualistic orientation like Latvia and Italy. Women attributed more importance to all factors, younger patients to Additional information and Active participation , lower educated patients to Treating patient as a person and Thoughtful planning. The patients value more doctor than patient factors, in particular being treated as a partner and as a person and Continuity of care.

**Conclusions:** Treating the patient as a person and providing continuity of care emerged as a universal value independent of country or individual characteristics

**Practice Implications:** The findings should represent a landmark for the adaptation of patient-generated communication guidelines and programs in Europe.

**Key-words:** Patient Consultation Values questionnaire; cross-national research; multilevel linear regressions; patients' preferences; primary care communication; contextual and individual features

## Introduction

Primary care consultation deserves to be considered a "meeting between experts" [1], where the doctor's and patient's perspectives should be synergistically balanced and integrated [2]. In this view, the effectiveness of the medical encounter relies on the shared responsibility that both parties assume for making the communication fruitful. Patients, who were asked to express their opinion on reciprocal duties in the consultation, indicated that it was equally important for doctors as well as patients to communicate honestly, to be open about treatment and information, and to manage time effectively [3]. In the last decades, doctors have broadened and enriched their agendas in order to include these requirements among their goals [4], but the existing evidence suggests that patient health beliefs, preferences and emotions have hardly been explored yet and that doctors sometimes fail to understand how complex patients' preferences are [5,6]. The heterogeneity of patient needs is linked to numerous factors, which comprise personal characteristics such as socio-demographic status, health conditions, personality or health literacy [7–10]. The development of personal preferences in healthcare seems to be affected by both environmental context [11,12], and cultural background in terms of dominant value systems [13–15]. Other environmental characteristics, represented by national healthcare systems, public resources allocated to financing prevention and health education, service access and organization in terms of continuity of care, general practitioners' role and their workload and waiting-times, have also been identified as potential mediating factors [16–18].

Healthcare providers, who deal with this heterogeneity daily in their clinical practice, often rely on the indications given by official guidelines in order to decide which are the most appropriate behaviours to assume in the interaction with patients. Consequently most of international guidelines on doctor-patient communication, patient empowerment and shared decision making have been collected in the last years for a wide range of pathologies [19–21]. However, these recommendation are often developed in a specific national context and then spread worldwide, based on implicit assumptions of "interpersonal" and "cross-cultural" generalizability of what to consider an appropriate doctor-patient communication.

Until now, the few studies which have explored the potential effects of these individual and contextual factors analysed data using one-level models which were unfit to assess the joint effect of such characteristics.

In order to overcome this limitation, we present a multilevel approach aimed to assess the effect of individual and contextual variables on patients' preferences regarding the respective responsibilities of doctors and patients for an effective medical consultation. Patient preferences were collected using a patient-based questionnaire (the Patient Consultation Value questionnaire - PCVq), administered to a sample composed of patients in 31 European countries.

More specifically, the research questions are:

- which of the specific behaviours of doctor and patient are indicated by patients as most important?
- are these preferences shared by all patients or are there different preferences according to specific socio-demographic profiles?
- are cultural dimensions and environmental conditions, at country level, relevant for explaining cross-national differences in patient preferences?

## Methods

The data base of the present study is part of the data collected in a multicentre international survey named QUALICOP (Quality and Costs of Primary Care in Europe). GPs and patients from 31 European countries and 3 non-European countries (Australia, Canada, New Zealand) were invited to participate. The aim was to get a nationally representative sample of general practitioners (GPs) in each country. Data collection took place between October 2011 and December 2013. Ethical approval was acquired in accordance with the legal requirements in each country.

The PCVq, which is a part of the Patient Values' questionnaire (PVq), was administered with other standardized questionnaires. Details about the study protocol, recruitment and questionnaire development have been published elsewhere [22,23], as well as the results of several parallel sub-studies [24–28].

### Study design and sample

For the present study only the 31 European countries were considered, corresponding to 6129 patients who filled out the PCVq. Eighty patients with incomplete data were excluded so that the final sample consisted of 6049 patients.

The sample comprised 3714 women (62%), the mean age was 49 (sd 17) and 7% were immigrants (3% from another EU country and 4% extra EU). Most patients were currently living in a family (46% with other adults and

33% also with children). About half were employed (55%) and a quarter were retired (23%); 34% had received higher education (post-secondary or higher).

Educational level and age varied among countries (intra-class correlation coefficient - ICC=9.5% and 5.3% respectively). Higher education ranged from a minimum of 12% in Turkey to a maximum of 73% in Latvia, while mean age ranged from a minimum of 39 in Turkey to a maximum of 57 in Finland.

**Patient Consultation Value questionnaire (PCVq)**

The PCVq evaluates patients' preferences regarding doctor and patient behaviours before, during and after the medical encounter. It is composed of 33 items, 21 on doctor and 12 on patient behaviours, which should contribute to the doctor-patient relationship building process and to the identification of the role and the degree of responsibility that patients attribute to the two protagonists of the consultation (see Table A2 in Appendix). The patient is asked to express a preference on a 4-point Likert scale (from 1 "not important" to 4 "very important).

The items composing the questionnaire were generated from a list of tips gathered in a previous qualitative study. This study took place in four countries (Italy, United Kingdom, Belgium and the Netherlands) and elicited tips from lay people on how doctors as well as patients could make the medical consultation more effective, after all 259 participants, divided in 32 focus groups, had watched, rated and discussed the same set of videos of medical consultations [3,29].

Detailed information on translation procedures, analysis of reliability and readability have been published elsewhere [30].

The 33 items have been pooled into seven factors, based on an exploratory (EFA) and a confirmative factor analysis (CFA), for doctor and patient behaviours separately. The Appendix shows the translation of the PCVq items into factors. Doctors should: 1) treat the patient as a partner; 2) treat the patient as a person; 3) guarantee continuity of care; 4) deal with other sources of information. Patients should: 1) be open and honest about health problems and self-medication; 2) actively participate and 3) plan thoughtfully. The seven PCVq factors show good psychometric properties (see Appendix).

**Potential predictors at individual and country level**

The patient characteristics here explored which could explain the heterogeneity of patient preferences are: age, gender, education (low: no qualification to lower secondary education; medium: upper secondary level; and high: post-secondary or higher level), household income (below, around or above perceived country average), perceived health (answer to "How would you describe your own health in general?" from very good to fair or poor) and chronic conditions (yes or no answer to "Do you have a longstanding disease or condition?").

The EU country characteristics comprise information on healthcare organization and society value systems, derived from administrative sources. The structure of healthcare systems is measured by Health Expenditure per capita, the percentage of public expenditure on total health expenditure, the numbers of physicians, nurses and midwives per 1000 people (The World Bank, 2016), the health financing systems classified as National Health Service - NSH, Social Security Health service - SSH, and "In transition" to SHI, which describes the countries of the former Soviet Union [31].

The information on cultural values was explored using the six Hofstede dimensions (retrieved from http://www.geerthofstede.nl/research--vsm/dimension-data-matrix). Hofstede's model [32] is one of the most frequently used systems designed to highlight differences in cultural values among countries; it identifies six dimensions expressed on a 100 point scale: power distance (PDI), uncertainty avoidance (UAI), individualism (IDV), masculinity (MAS), long-term orientation (Ltowvs) and indulgence versus restraint (IVR).

**Statistical analysis**

The dataset has a two-level hierarchical structure with questionnaire scores and socio-demographic variables of patients at level 1 (micro) and cultural and environmental conditions of each country at level 2 (macro). Since each level is potentially a source of variability to be explained, an approach which parcels out the variance into the two levels was adopted in order to identify which set of explanatory information deserved exploration [33]. Intra-class Correlation Coefficient (ICC) and "caterpillar-plot" were calculated to disentangle the percentage of variance due to countries (variance *between* cluster on *total* one) and patients (variance *within* cluster on *total* one), and to highlight countries with higher heterogeneity.

Thematic maps were used to represent the geographical distribution of each PCVq. A customized method was used to identify two cut-offs (2.8 and 3.2) resulting in low, medium and high valued preferences. This choice was made to account for the skewed distributions of each factor.

A set of two-way ANOVA and a Pearson's correlation matrix were used, respectively at micro and macro level, to select the predictors of the multilevel analysis.

The combined effects of patient and country characteristics, on each PCVq factor, were estimated using a set of three multilevel models. The model (a), called "intercept only", was designed without explicative variables (not shown and used as reference) in order to estimate the heterogeneity due to country-level. Model (b) estimated the joint effects of micro information on each factor. In the model (c), the country-level variables were added to those included in the previous model, estimating the contribution of macro information. Following the decomposition of variance approach [34], level-specific pseudo-$R^2$ was calculated to compare the models and estimate the global contribution of each set of micro and macro information, considering the explicative variables at each level as a whole. Akaike information criterion (AIC) and Bayesian Information Criterion (BIC) were also performed as goodness of fit statistics and to assess competing models (following an empirical rule based on differences: the most favourable model is linked to the lowest value).

In order to facilitate the interpretation of regression coefficients, Hofstede's cultural dimensions and patients' age were rescaled.

All analyses were performed using STATA 14.2.

## Results

### Which of the specific behaviours of doctor and patient are indicated by patients as most important?

Figure 1 displays the box-plot of the four doctor and three patient PCVq factors for the whole sample. It can also be seen that the distributions are negatively skewed (index range: -0.55;-0.14), present no floor effects (the frequencies of 1, "not important" anchor-point, are less than 1.5%), but moderate ceiling effects (range: 3-18%, "very important"). Three quarters of the patients highly valued the following doctor factors: *Treating the patient as a partner (mean=3.3; sd=0.5)* and *as a person* (mean=3.2; sd 0.5) and *Continuity of care* (3.3; 0.6). The last factor, *Additional information,* was less appreciated (mean=2.7; sd 0.6) and only a quarter of them totalized a

mean score higher than 3. The three patient factors tend to assume lower values: *Being open and honest* (mean 3.2; sd 0.5), *Thoughtful planning* (3.0; 0.6) and *Active participation* (2.8; 0.7).

Figure 1: Boxplots of the PCVq roles and responsibilities for doctors and patients respectively
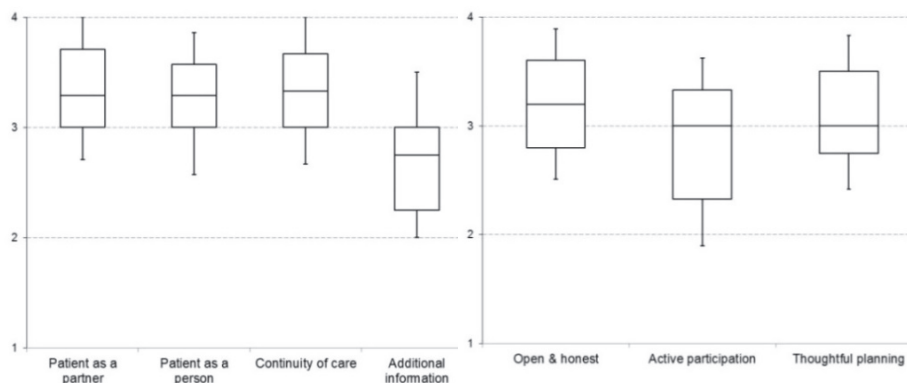


The graphs show: median (horizontal line inside box), interquartile range (box) and bars (10th and 90th percentile)

## Are these preferences shared by all patients or are there differences according to specific socio-demographic profiles?

Table 1 shows the impact of single patient characteristics on the PCVq factors. The ANOVAs took into account both main effects (country membership and each individual characteristic) and their interaction. The country membership effect proved significant in each of the ANOVA performed for the six patient characteristics. A visual inspection on the mean values of different subgroups showed modest effects: despite significant F-tests, the mean values of subgroups are very close to each other. For instance, the mean importance was similar for men and women for all the seven PCVq factors, but showed a systematic trend for higher values in the female group.

The set of models (b) modulates the joint effects of individual patient characteristics on each factor and reduces the number of predictors (Tables 3 and 4). These findings confirm that patient gender discriminates in all the seven factors. Suffering of a chronic condition promotes a positive orientation of patients towards *Thoughtful planning,* and *being treated as a partner* and *as a person* by the doctor. Older more than younger patients

value their *active participation* in the consultation and being *treated as a person*, while younger patients seem to appreciate *additional information*.

Table 1: The two-way ANOVA comparisons of doctor and patient roles and responsibilities by patient characteristics, including country membership (unit of micro-level analysis: patient; n= 6049)

| | Doctor roles and responsibilities | | | | Patient roles and responsibilities | | |
|---|---|---|---|---|---|---|---|
| | Patient as a partner | Patient as a person | Continuity of care | Additional information | Open and honest | Active participation | Thoughtful planning |
| **Gender:** | | | | | | | |
| Male | 3.26 (.48) | 3.15 (.51) | 3.20 (.56) | 2.67 (.60) | 3.13 (.54) | 2.73 (.67) | 2.95 (.55) |
| Female | 3.29 (.47) | 3.29 (.49) | 3.29 (.53) | 2.75 (.62) | 3.24 (.52) | 2.81 (.67) | 3.08 (.54) |
| F(gender) | 48.23; ** | 122.11;** | 54.18; ** | 44.49; ** | 65.58; ** | 31.67; ** | 106.9; ** |
| F(country) | 16.12; ** | 23.45; ** | 11.98; ** | 19.91; ** | 23.28; ** | 21.14; ** | 18.15; ** |
| F(interaction) | 1.92; ** | 2.86; ** | 1.32; .11 | 1.95; ** | 1.25; .17 | 1.74; ** | 3.23; ** |
| **Age-class:** | | | | | | | |
| 18-29 | 3.28 (.47) | 3.20 (.50) | 3.24 (.56) | 2.74 (.63) | 3.16 (.54) | 2.65 (.69) | 3.01 (.55) |
| 30-49 | 3.29 (.48) | 3.22 (.50) | 3.26 (.55) | 2.74 (.60) | 3.20 (.53) | 2.74 (.67) | 3.01 (.55) |
| 50-69 | 3.33 (.47) | 3.26 (.50) | 3.26 (.52) | 2.73 (.60) | 3.22 (.52) | 2.86 (.64) | 3.05 (.53) |
| $\geq$70 | 3.34 (.48) | 3.27 (.52) | 3.25 (.58) | 2.61 (.65) | 3.20 (.55) | 2.84 (.70) | 3.08 (.58) |
| F(age) | 0.55;.65 | 0.39; .76 | 0.30; .83 | 10.11; ** | 0.81; .49 | 14.02; ** | 1.49; .21 |
| F(country) | 11.43; ** | 17.31; ** | 9.64; ** | 13.87; ** | 16.07; ** | 15.33; ** | 11.03; ** |
| F(interaction) | 1.21;.09 | 1.05; .35 | 1.43; ** | 1.26; * | 1.35; * | 1.67; ** | 1.12; .21 |
| **Education:** | | | | | | | |
| pre-primary | 3.35 (.58) | 3.29 (.51) | 3.27 (.56) | 2.72 (.65) | 3.22 (.54) | 2.83 (.67) | 3.07 (.57) |
| upper secondary | 3.30 (.54) | 3.22 (.48) | 3.25 (.55) | 2.73 (.61) | 3.18 (.53) | 2.75 (.67) | 3.01 (.54) |
| post-secondary | 3.28 (.47) | 3.22 (.50) | 3.26 (.53) | 2.72 (.59) | 3.20 (.52) | 2.77 (.67) | 3.03 (.53) |
| F(education) | 1.26; .28 | 3.70; * | 4.79; ** | 4.990; ** | 3.97; * | 0.84; .43 | 3.50; * |
| F(country) | 13.82; ** | 17.59; ** | 9.04; ** | 15.62; ** | 17.16; ** | 17.89; ** | 15.19; ** |
| F(interaction) | 1.12; .25 | 1.26; .09 | 1.33; * | 1.51; ** | 1.11; .26 | 1.44; * | 1.29; .07 |
| **Household income** | | | | | | | |
| below country average | 3.33 (.49) | 3.26 (.52) | 3.26 (56) | 2.73 (.65) | 3.20 (.54) | 2.82 (.68) | 3.05 (.56) |
| around country average | 3.31 (.47) | 3.23 (.50) | 3.25 (.54) | 2.73 (.60) | 3.20 (.53) | 2.77 (.67) | 3.02 (.54) |
| above country average | 3.26 (.47) | 3.21 (.49) | 3.30 (.53) | 2.69 (.60) | 3.18 (.53) | 2.72 (.67) | 3.01 (.53) |
| F(income) | 2.80; .06 | 3.12; * | 2.91; * | 1.09; .34 | 0.70; .50 | 3.03; * | 1.11; .33 |
| F(country) | 10.54; ** | 15.80; ** | 7.14; ** | 10.80; ** | 14.84; ** | 12.95; ** | 8.89; ** |
| F(interaction) | 1.22; .12 | 1.44; * | 1.33; * | 1.01; .45 | 1.46; * | 1.30; .06 | 1.21; .13 |
| **Chronic condition:** | | | | | | | |
| Yes | 3.33 (.47) | 3.25 (.52) | 3.25 (.55) | 2.71 (.61) | 3.22 (.54) | 2.82 (.67) | 3.06 (.54) |
| No | 3.29 (.48) | 3.22 (.50) | 3.27 (.55) | 2.73 (.62) | 3.18 (.53) | 2.75 (.67) | 3.01 (.55) |
| F(chronic) | 14.65; ** | 6.45; * | 0.01; .94 | 2.38; ** | 3.18; .07 | 13.89; ** | 18.41; ** |
| F(country) | 16.26; ** | 24.84; ** | 11.64; ** | 18.43; ** | 23.14; ** | 20.21; ** | 16.35; ** |
| F(interaction) | 1.25; 1.16 | 1.12; .30 | 1.55; * | 1.45; * | 1.16; .25 | 1.95; **5 | 1.56; * |
| **Perceived health:** | | | | | | | |
| very good | 3.31 (.48) | 3.25 (.51) | 3.29 (.57) | 2.74 (.62) | 3.22 (.55) | 2.75 (.70) | 3.04 (.59) |
| good | 3.30 (.47) | 3.24 (.49) | 3.26 (.54) | 2.74 (.61) | 3.19 (.52) | 2.78 (.67) | 3.01 (.54) |
| fair or poor | 3.31 (.48) | 3.23 (.53) | 3.25 (.55) | 2.69 (.62) | 3.19 (.55) | 2.79 (.67) | 3.05 (.54) |
| F(health) | 1.88; .15 | 1.06; .35 | 0.35; .71 | 1.68; .19 | 1.52; .22 | 2.80; ** | 6.80; ** |
| F(country) | 12.98; ** | 15.84; ** | 7.82; ** | 14.53; ** | 18.27; ** | 17.60; ** | 13.69; ** |
| F(interaction) | 1.59; ** | 1.43; * | 1.67; ** | 1.04; .39 | 1.36; * | 1.43; ** | 1.57; ** |

\* p-value$\leq$0.05; ** p-value$\leq$0.01

Figure 2: Maps of the 4 doctor roles and responsibilities



Patient as a partner (ICC=7.7%)
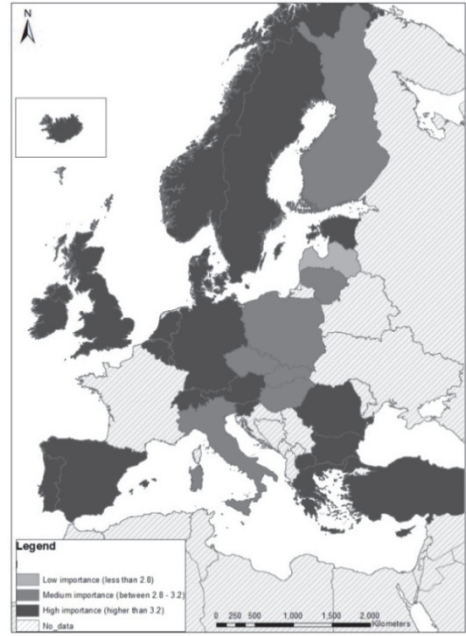


Patient as a person (ICC=10.0%)
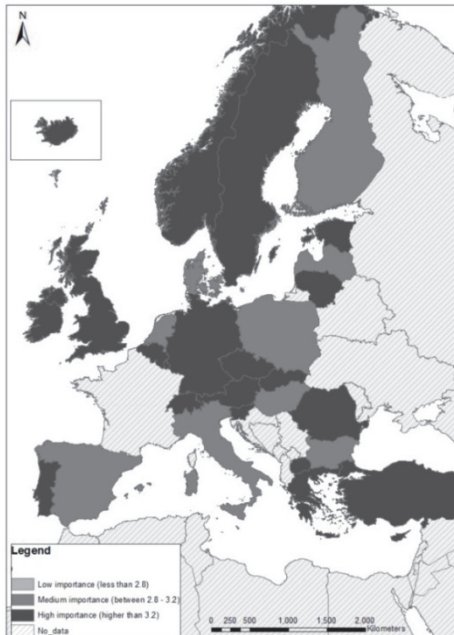


Continuity of care (ICC=9.2%)



Additional information (ICC=9.3%)

Figure 3: Maps of the three patient roles and responsibilities


Open and honest (ICC=7.8%)


Active participation (ICC=10.9%)


Thoughtful planning (ICC=5.8%)

**Are cultural dimensions and environmental conditions relevant for explaining cross-national differences in patient preferences?**

The maps, shown in Figures 2 and 3, indicate the distribution of the PCVq factors across Europe. As also confirmed by the intra-class correlation coefficient (see ICC), the heterogeneities among countries are moderate and vary from 11% (Active participation) to 6% (Thoughtful planning). The mean values differ little between countries, although some cross-national differences become more important when interpreted using the original item scale scores. For instance the Czech, Italian and Bulgarian patients gave the lowest scores to *Active participation* (mean values around 2.3, corresponding to 'somewhat important') while the patients from Cyprus, Sweden and Spain gave the highest scores (3.0-3.3; corresponding to important). A similar trend can be observed for *additional information* (ICC=9%), to which Italy, Latvia, Belgium and the Czech Republic assigned least importance (mean values were around 2.3) compared to Turkey, Slovenia and Cyprus (close to 3.1). The caterpillar plots (not shown here) show that the range of country confidence intervals are similar.

Moving to specific national characteristics, Table 2 shows Pearson correlations calculated between the mean values of the PCVq factors per country and the six cultural dimensions and five healthcare systems indicators. There was a generally weak relationship between PCVq factors and some Hofstede's dimensions, which are: *The Indulgence versus Restraint, Long term perspective and Individualism*.

The structure of healthcare systems, in particular the number of health workers, such as physicians, nurses and midwives, and health financing systems, marginally affects doctor and patient roles and responsibilities. The amount of health expenditure seems not informative, with the exception of the positive relationship between expenditure per capita and the *open and honest* patient role (0.4).

An exploration among the country characteristics to check possible collinearity effects demonstrates some moderate correlation values both within Hofstede's dimensions (for instance between PDI with IDV, UAI and IVR; from -0.58 and -0.52) and between Hofstede' dimensions and health expenditure (PPP2013 with PDI and IVR, -0.53 and 0.57 respectively), indicating that the informative power of these variables partially overlaps .

As expected, the joint effects of the macro-level information on PCVq factors, which are explored using model (c), were confirmed for Hofstede's two cultural dimensions: Restraint (IVR) and Individualism (IDV). Other

context variables, such as healthcare system and financial characteristics, did not show any effect on outcomes.

Table 2: Doctor and patient roles and responsibilities by country characteristics (Pearson correlations)
(unit of macro-level analysis: country; n= 31; aggregated data of PCVq factors)

| | Doctor roles and responsibilities | | | | Patient roles and responsibilities | | |
|---|---|---|---|---|---|---|---|
| | Pt as a partner | Pt as a person | Continuity of care | Additional information | Open and honest | Active participation | Thoughtful planning |
| Hofstede's ranking | | | | | | | |
| PDI | -0.17 | -0.01 | 0.08 | 0.13 | -0.16 | -0.10 | -0.16 |
| IDV | -0.22 | -0.30 | -0.31 | -0.40* | -0.15 | -0.17 | -0.26 |
| MAS | -0.01 | 0.10 | 0.11 | 0.01 | -0.02 | -0.12 | -0.10 |
| UAI | -0.22 | -0.02 | -0.04 | 0.03 | -0.22 | -0.26 | -0.08 |
| Ltowvs | -0.38 | -0.43* | -0.08 | -0.32 | -0.36* | -0.35* | -0.33 |
| IVR | 0.56 ** | 0.49** | 0.28 | 0.30 | 0.62** | 0.51** | 0.50** |
| Healthcare system | | | | | | | |
| Expenditure per capita (PPP$) | 0.24 | 0.24 | 0.20 | -0.10 | 0.42* | 0.14 | 0.19 |
| Public Expenditure (% tot) | -0.16 | -0.09 | -0.11 | -0.12 | -0.02 | -0.20 | -0.25 |
| HC systems transition | -0.42** | -0.54** | -0.15 | -0.18 | -0.58** | -0.41* | -0.36* |
| Physician (per 1000 people) | -0.25 | -0.17 | -0.12 | -0.37* | -0.05 | -0.21 | -0.20 |
| Nurses & Midwives (1000 people) | 0.23 | 0.13 | 0.19 | -0.12 | 0.35* | 0.08 | 0.16 |

significant correlation: * $p \leq .05$; ** $p \leq .01$

All doctor factors and the patient factor *openness* are more positively evaluated in countries where a collectivistic culture is prevalent; while the significant IVR coefficients confirm the effect of an indulgent society system on all seven PCVq factors (Table 3 and 4).

The heterogeneities of the phenomena investigated are mainly due to individual differences, as estimated by ICCs of "empty models" (range: 6-11%), which means that about one-tenth of variation is between countries. The contribution of our micro-level variables can explain only a small part of heterogeneity (pseudo $R^2$ of patient level range: 1-2%), even if the comparisons between "empty" and "micro-info" models, in terms of goodness of fit statistics, are always favourable to the latter. The overall contribution of the information at macro level (model c) is relevant, although modest, only for two doctor factors, which are *patient as a partner* and *as a person* (level two Pseudo $R^2$=55% and 52%; explaining 5% and 8% of the total variance, respectively) and one patient factor, o*pen and honest (Pseudo $R^2$=55%,* corresponding to 6%).

Table 3: Multilevel linear models on four doctor roles and responsibilities related to patient and country characteristics.

| | Patient as a partner | | Patient as a person | | Continuity of care | | Additional information | |
|---|---|---|---|---|---|---|---|---|
| | Model (b) Coeff. (s.e) | Model (c) Coeff. (s.e) | Model (b) Coeff. (s.e) | Model (c) Coeff. (s.e) | Model (b) Coeff. (s.e) | Model (c) Coeff. (s.e) | Model (b) Coeff. (s.e) | Model (c) Coeff. (s.e) |
| **Fixed part** | | | | | | | | |
| Constant | 3.25 (.03)** | 3.31 (.02)** | 3.16 (.04)** | 3.23 (.03)** | 3.21 (.03)** | 3.26 (.03)** | 2.67 (.03)** | 2.75 (.03)** |
| *Micro-level* Gender (female vs male) | 0.09 (.01)** | 0.09 (.01)** | 0.15 (.01)** | 0.15 (.01)** | 0.10 (.01)** | 0.10 (.01)** | 0.08 (.02)** | 0.09 (.02)** |
| Age (centred; mean=49) | | | | | | | -0.002(<.01)** | -0.002(<.01)** |
| Education: medium vs lower | | | -0.04 (.02)* | -0.04 (.02)* | | | | |
| higher vs lower | | | -0.01 (.02) | -0.01 (.02) | | | | |
| Chronic condition (yes vs no) | 0.05 (.01)** | 0.05 (.01)** | 0.04 (.01)** | 0.04 (.01)** | | | | |
| *Macro* Hofstede's IDV | | -0.004 (.001)** | | -0.006 (.001)** | | -0.004 (.001)** | | -0.006 (.002)** |
| Hofstede's IVR | | 0.005 (.001)** | | 0.006 (.001)** | | 0.003 (.001)** | | 0.005 (.001)** |
| **Random part** | | | | | | | | |
| variance of intercept (country) | 0.02 (.01) | 0.008 (.002) | 0.03 (.01) | 0.02 (.01) | 0.02 (<.01) | 0.01 (<.01) | 0.03 (<.01) | 0.02 (<.01) |
| residual variance (patients) | 0.21 (<.01) | 0.206 (.004) | 0.22 (<.01) | 0.22 (<.01) | 0.28 (.01) | 0.28 (.01) | 0.34 (<.01) | 0.34 (<.01) |
| ICC % | 8.2 (2.1) | 3.7 (1.1) | 11.5 (2.7) | 5.7 (1.5) | 6.0 (1.6) | 4.3 (1.2) | 7.9 (2.0) | 4.7 (1.3) |
| **Goodness of fit** | | | | | | | | |
| AIC | 7555.95 | 7536.25 | 7919.91 | 7901.88 | 9498.55 | 9492.79 | 10690.27 | 10678.41 |
| BIC | 7589.38 | 7583.06 | 7966.66 | 7961.98 | 9525.37 | 9533.01 | 10723.76 | 10725.31 |
| Pseudo $R^2$ level-one (patients) | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Pseudo $R^2$ level-two (country) | <0.01 | 0.55 | <0.01 | 0.52 | <0.01 | 0.28 | <0.01 | 0.41 |

significant coefficient (*: p<.05; ** p<0.01)

Model b: individual explicative variables; country is a random effect (intercept was calculated for each country)

Model c: individual and contextual explicative variables; country is introduced as a "fixed effect", measured by its "contextual "explicative variables

Table 4: Multilevel linear models on three patient roles and responsibilities related to patient and country characteristics

| | | Open and honest | | Active participation | | Thoughtful planning | |
|---|---|---|---|---|---|---|---|
| Fixed part | | Model (b) Coeff. (s.e) | Model (c) Coeff. (s.e) | Model (b) Coeff. (s.e) | Model (c) Coeff. (s.e) | Model (b) Coeff. (s.e) | Model (c) Coeff. (s.e) |
| | Constant | 3.13 (.03)** | 3.20 (.02)** | 2.74 (.04)** | 2.75 (.04)** | 2.96 (.04)** | 2.98 (.03)** |
| | Gender (female vs male) | 0.12 (.01)** | 0.12 (.01)** | 0.10 (.02)** | 0.10 (.02)** | 0.13 (.01)** | 0.13 (.01)** |
| Micro-level | Age (centred; mean=49) | | | 0.004 (.001)** | 0.004 (<.01)** | | |
| | Education: medium vs lower | | | | | -0.04 (.02)* | -0.04 (.02)* |
| | higher vs lower | | | | | -0.01 .02 | -0.01 (.02) |
| | Chronic condition (yes vs no) | | | | | 0.06 (.01)** | 0.06 (.01)** |
| Macro | Hofstede's IDV | | -.004 (.001)** | | | | |
| | Hofstede's IVR | | 0.007 (.001)** | | .005 (.011)** | | .004 (.001)** |
| Random part | | | | | | | |
| | variance of intercept (country) | 0.03 (<.01) | 0.01 (<.01) | 0.04 (.01) | 0.03 (.01) | 0.03 (.01) | 0.02 (.01) |
| | residual variance (patients) | 0.25 (<.01) | 0.25 (<.01) | 0.40 (.01) | 0.40 (.01) | 0.27 (.01) | 0.27 (.01) |
| | ICC % | 10.3 (2.5) | 4.8 (1.3) | 9.2 (2.2) | 7.3 (2.8) | 9.5 (2.4) | 7.2 (1.9) |
| Goodness of fit | | | | | | | |
| | AIC | 8847.78 | 8827.99 | 11638.05 | 11632.45 | 9084.95 | 9078.14 |
| | BIC | 8874.59 | 8868.22 | 11671.54 | 11672.65 | 9131.69 | 9131.56 |
| | Pseudo R² level-one (patients) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | <0.01 |
| | Pseudo R² level-two (country) | <0.01 | 0.55 | 0.02 | 0.24 | <0.01 | 0.26 |

significant coefficient (*: p<.05; **: p<0.01)

Model b: micro information (individual explicative variables); country is a random effect (intercept was calculated for each country)

Model c: micro and macro information (individual and contextual explicative variables); country is introduced as a "fixed effect", measured by its "contextual" explanatory variable

*Making doctor-patient communication more effective from a patient's perspective*

## Discussion and conclusions

### Discussion

In the present study, European patients' preferences on seven aspects of doctor-patient communication were assessed through the application of multilevel methodology. This approach enabled the joint exploration of the relationship between compositional differences, using explicative information both at individual and contextual level (within and between countries). To our knowledge, this represents an innovative contribution to the existing evidence, which until now has been based on studies where the impact of individual and contextual variables on patient preferences were explored separately through association measures or one level analysis of variance [14,35].

Our results reveal a cross-national and inter-individual appreciation of the doctors' and patients' responsibilities here explored, as indicated by the ceiling effect shown in the boxplots, the low intra-class correlations and the small differences demonstrated by the regression models at both levels, contextual and individual. The factors assessed were patient generated - that is, they were derived from patients' tips collected in focus groups [36] - and the sample of the present study confirmed their validity. It is therefore reasonable to conclude that this set of roles and responsibilities of doctors and patients in contributing to an effective consultation represent a milestone for the development or adaptation of patient-generated European clinical guidelines and healthcare training programs.

Special attention deserves the issue of reciprocal engagement and commitment of doctors and patients during the consultation. Participants attributed greater responsibility for an effective consultation to doctors; for example patients want to be recognized as partner but, at the same time, they attribute less importance to their own *active participation*. This finding in some way contrasts with international guidelines which promote patients' active participation, according to evidence of clinical benefits in terms of satisfaction [37], adherence to treatments [38] and prognosis [39]. However, in the last few years, several studies have underlined how personal and cultural patient variables can modulate their preferences regarding the degree of involvement [9,40,41]. The impact of such variables on *active participation* has been also confirmed by our regression model which identified gender, age and other contextual information as explanatory characteristics, suggesting caution in the implementation of this communication aspect to different settings and populations. A final

reinforcement comes indirectly from a slight but potentially meaningful trend, which is that suffering from a chronic condition predisposes patients to invest more in the partnership and to assume a proactive attitude, embodied by their personal involvement in *planning thoughtfully* their contribution to the therapeutic process. Interestingly, patients show awareness that dealing with a long-lasting condition necessarily implies their concrete commitment to preserving their health, and that this role cannot be completely delegated to their healthcare providers.

Although doctors' contributions were 'universally' appreciated by the sample, one role 'dealing with *additional information',* gathered less consensus than the others. Using a receptionist as a filter, avoiding disturbances (i.e. telephone calls during the consultation), suggesting other sources of information (leaflets and website) were considered important but not among the priorities of the doctor. This implies that generally patients consider essential the achievement of the core functions of the consultation (i.e. being treated as a person, continuity of care etc.), and show a more tolerant attitude towards the use of filters and a lower interest in alternative sources of information. Our results seem to confirm the findings of Dearden and colleagues [42], who reported that only a few patients (18%) had negative feelings about interruptions while the majority had no problem in continuing the consultation after being interrupted. An exception to this trend is represented by younger patients who particularly valued the dimension '*additional information*', probably because they are more familiar with alternative sources of information that triangulate the traditional dual model of doctor-patient communication, like e-communication or web-based sources of support.

Concerning the explicative power of the cultural and environmental characteristics selected in order to explain the influence of contextual effects on patients' preferences, only two of the Hofstede dimensions proved to be partially informative: Indulgent vs Restrained and Individualistic vs Collectivistic. Participants who live in countries characterized by a more indulgent and collectivistic cultural background, for example Ireland and Iceland, appreciated doctor-patient roles and responsibilities more than those coming from nations such as Latvia and Italy, which have a more restrictive and individualistic cultural orientation. Indulgent societies are characterized by a positive and optimistic attitude towards life, active participation and perception of personal life control [32]. It is reasonable to suppose that all these characteristics foster patients' attitude to playing an active role in the management of their

health and facilitate their engagement in the consultation, making them feel involved and co-responsible for its effectiveness.

The interpretation of the individualism/collectivism effect is less self-evident. Former studies have adopted this dimension as a framework for assessing cultural influences on communication [13]; some of them suggested that an individualistic culture leads people to act on their own, make their own choices and refer to themselves as separate individual entities. In contrast, a collectivistic society relies on mutual interdependence [43], where citizens are group- oriented and pursue the common interest. For this reason they might be more oriented towards a doctor-patient partnership where both protagonists collaborate for the common goal of patients' health and well-being.

The explanatory variables of the present study were selected on the basis of the existing literature. However, their exploratory power proved to be limited, since only a minimal part of the moderate variance among countries and subjects was explained. Future research should look for additional patient and contextual characteristics that might influence patient preferences. Examples of other potentially explicatory patient variables whose impact on communication has been checked by previous studies are personality traits (extra-introversion) [44], state and trait anxiety [45], trust [46], attachment style [47], and health literacy [10,47]. Contextual characteristics could include for instance the accessibility, continuity of care, coordination with other levels of health care and comprehensiveness, which describe the quality of healthcare systems [48,49].

**Limitations and strengths**

The main strengths of this study are threefold: the involvement of patients as partners in the research process, the application of multilevel methodology in this setting and the sample size, which included almost all the European countries.

Patients' involvement in the development of the items and in the application of the questionnaire is in line with what has been advocated during the last decades by several sources who emphasized the importance of user involvement in clinical research [50,51]. This effort is particularly valuable in a setting where often the definition of what is "patient-centred" is incongruently based on the indication given by a pool of experts, from which patients are excluded.

The multilevel framework made it possible to quantify the effect of a set of contextual information measured at macro level, on some outcomes of interest measured at micro level. If on the one hand this represents an advantage, on the other hand it was hard to discern the appropriate information at the macro-level and to harmonize data coming from different sources, such as administrative and survey datasets. Another potential limitation is that we targeted our contextual variables at the country level, thereby excluding from the analysis other potentially more explicative variables - in terms of micro-cultures - collectable at a lower level, like for example rural vs urban area [53].

## Conclusions

Our results reveal a cross-national and inter-individual appreciation of doctors' and patients' responsibilities as explored here. These might therefore represent a landmark for the development or the adaptation of patient-generated clinical guidelines and healthcare training programs for European countries. The implementation of some specific communication aspects, such as for example patients' active participation in the consultation, has to be tuned according to some personal and contextual variables.
Further studies might further explore the role played by contextual variables, which according to our results seems only partially explained by national differences.

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## Appendix

### The development of PCVq factors

The factor structure of the questionnaire was investigated in stages:

1) Exploratory Factor Analysis: two sets of EFA, one each for patient and doctor behaviours, were performed to investigate how items collapsed together and how many dimensions could be derived. In this preliminary phase, attention was focused specifically on two statistical topics: the categorical dimension of the item responses ( expressed on a 4-point Likert scale) using correlation matrices with the polychoric formulation, and the stratified nature of sample, which is made up of country subsamples. So exploratory non-hierarchical (i.e. single-level) factor analyses were applied to the pooled sample and then repeated on the *between* and *within* country components of the correlation matrix in order to check the stability of the results.

2) Confirmatory Factor Analysis : a CFA was performed - following the approach of Structural Equation Model with Satorra-Bentler adjustments (in order to have estimations robust to non-normality) - in order to select the best model. The final model shows that data fitted well for three indices (RMSEA-SB=0.059, SRMR-SB =0.054, CD=0.998) and moderately for two indices (CFI-SB =0.831, TLI-SB =0.812). The likelihood ratio of the model vs a saturated one, was $CHI^2_{(474)}$-SB=8201.64, p<1%. The Bentler-Raykov squared multiple correlation coefficient ranges from 0.12 and 0.62 respectively for items "*The receptionist or nurse as filter before seeing doctor*" (item 6.1) and "*That the doctor gives me additional information about my health problem e.g. Leaflets*"(8.2).

(3) The reliability properties for each factor were investigated using ordinal's alpha (which is analogous to Cronbach's alpha, but is based on the polychoric correlation matrix) in order to account for 4-point response format. It was made possible by the Stata routine kindly received from professor Garcia-Granero, University of Navarra, Spain.

In Table A1 the correlation matrix between factor scores is shown; it can be noted that these values range from 0.41 to 0.69, indicating a moderate positive correlation.

Table A2 displays unstandardized factor loadings parameters of the CFA model and the reliability properties of each dimension (range: 0.65-0.89).

Table A1: Correlation matrix between PCVq factors (n=6049)

|  | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|
| Patient as a partner (1) | 0.69 | 0.54 | 0.51 | 0.61 | 0.53 | 0.57 |
| Patient as a person (2) | 1.0 | 0.49 | 0.48 | 0.58 | 0.47 | 0.56 |
| Continuity of care (3) |  | 1.0 | 0.41 | 0.53 | 0.41 | 0.47 |
| Additional information (4) |  |  | 1.0 | 0.46 | 0.52 | 0.46 |
| Open and honest (5) |  |  |  | 1.0 | 0.53 | 0.54 |
| Active participation (6) |  |  |  |  | 1.0 | 0.49 |
| Thoughtful planning (7) |  |  |  |  |  | 1.0 |

Table A2: The PCVq factor structure (CFA factor loadings and their error variance) and reliability (ordinal alpha)

| How important are the following to you: | Factor loadings | Error variance |
|---|---|---|
| **Patient as a partner (ordinal alpha=0.89)** | | |
| 6.2 The doctor has prepared for the consultation by reading my medical notes | 1 | 0.52 |
| 7.8 The doctor takes me seriously | 1.07 | 0.15 |
| 7.9 The doctor understands me | 1.14 | 0.16 |
| 7.10 The doctor asks me if I have any questions | 1.38 | 0.22 |
| 7.11 The doctor asks if I have understood everything | 1.31 | 0.22 |
| 7.12 The doctor knows when to refer me to a medical specialist | 0.88 | 0.21 |
| 7.13 The doctor asks how I prefer to be treated | 1.17 | 0.42 |
| **Patient as a person (ordinal alpha=0.87)** | | |
| 7.1 The doctor makes me feel welcome by making eye contact | 1 | 0.36 |
| 7.2 The doctor listens attentively | 0.80 | 0.17 |
| 7.3 The doctor does not give me the feeling of being under time pressure | 0.92 | 0.28 |
| 7.4 The doctor is aware of my personal. social and cultural background | 0.97 | 0.68 |
| 7.5 The doctor is not prejudiced because of my age. gender. religion or cultural background | 1.06 | 0.44 |
| 7.6 The doctor treats me as a person and not just as a medical problem | 0.98 | 0.23 |
| 7.7 The doctor is respectful during physical examination | 0.99 | 0.25 |
| **Continuity of care (ordinal alpha=0.66)** | | |
| 9.1 The doctor gives me all test results, even if they show no abnormalities | 1 | 0.43 |
| 9.2 The doctor offers to have telephone or email contact with me if I have further questions | 1.09 | 0.43 |
| 9.3 The doctor gives me clear instructions on what to do when things go wrong | 0.87 | 0.19 |
| **Additional information (ordinal alpha=0.68)** | | |
| 6.1 The receptionist or nurse acts as a filter before seeing doctor | 1 | 0.76 |
| 8.1 The doctor avoids disturbances of the consultation by telephone calls etc. | 1.32 | 0.55 |
| 8.2 The doctor gives me additional information about my health problem e.g. Leaflets | 2.00 | 0.25 |
| 8.3 The doctor informs me about reliable sources of information e.g. Websites | 1.97 | 0.37 |
| **Open and honest patient behaviors (ordinal alpha=0.82)** | | |
| 8.6 I am honest and not feel embarrassed to talk about my health problem | 1 | 0.25 |
| 8.7 I am open about my use of other treatments (self-medication or alternative medicine) | 1.17 | 0.44 |
| 8.8 Psychosocial issues (for example personal worries) can be discussed if needed | 1.23 | 0.46 |
| 9.4 I adhere to the agreed treatment plan | 0.94 | 0.21 |
| 9.5 I inform the doctor how the treatment works out | 1.11 | 0.30 |
| **Active participation of patient(ordinal alpha=0.71)** | | |
| 6.3 I have prepared for the consultation by keeping a symptom diary or preparing questions | 1 | 0.33 |
| 8.4 I tell the doctor what I want to discuss in this consultation | 1.34 | 0.31 |
| 8.5 I am prepared to ask questions and take notes | 1.05 | 0.55 |
| **Thoughtful planning of patient (ordinal alpha=0.65)** | | |
| 6.4 I can bring a family member/friend to the consultation if I think this is useful | 1 | 0.37 |
| 6.5 I know which doctor I will see | 0.81 | 0.34 |
| 6.6 I keep my appointment | 1.11 | 0.63 |
| 9.6 I can see another doctor if I think it is necessary | 0.97 | 0.45 |

**8**

**General discussion**

The research described in chapters 2 to 7 aimed to determine the criteria European patients and lay people adopt in assessing the quality of various aspects of doctors' communication approach, and to identify the reciprocal doctor and patient behaviours which, in their view, contribute to making doctor-patient communication more effective. A mixed method approach was used to integrate qualitative and quantitative data derived from focus group discussions, questionnaires and rating scales, in order to better account for the complexity of the communication process between patients and doctors. Lay persons and primary care patients were chosen as research subjects because all are supposed to be familiar with primary care. Collecting the perspectives of patients and lay persons from different European countries made it possible to check whether there are shared values or possible cultural differences, controlling for individual characteristics such as age, gender and health status, and context variables related to existing healthcare systems.

## Summary of main findings

The first part of this chapter summarizes the findings of the three studies relating to the research questions addressed in GULiVer-I and described in detail in chapters 3 to 5. Here, the views which emerged in focus groups of citizens from the Netherlands, Italy, Belgium and United Kingdom were assessed using both qualitative and quantitative methods. Choosing the focus group approach complied with recommendations to involve patients and potential patients in quality assessments of clinical communication [1]. The second part recapitulates the findings of the two quantitative studies described in chapters 6 and 7 relating to the research questions dealt with in GULiVer-II. Here, the patient-generated Patient Consultation Values questionnaire, developed on the basis of some qualitative GULiVer-I findings, was put to the test, first in a subsample of 798 primary care patients from the countries listed above extracted from the QUALICOPC multicentre study and second, in a wider sample of 6049 primary care patients from the 31 European countries of the QUALICOPC study.

*How do focus groups of lay people evaluate doctors' communication approach when observing videoclips of medical consultations?*

This research question was investigated in the study described in chapter 3. In 35 focus groups 259 participants discussed their likes and dislikes on the quality of specific communication behaviours of doctors and commented

on the reasons for these positive and negative judgments while observing video clips of doctor-patient consultations. The high level of standardization in terms of focus group recruitment and conduction, of video presentations and qualitative analysis shared by the four centres involved in the Netherlands, United Kingdom, Italy and Belgium - described in detail in chapter 2 - made it possible to analyse the 35 groups as a whole and to generate an ordered list of relevant topics by using a joined and validated coding system [2]. The main topic areas identified were nonverbal communication, process and task oriented expressions, expressions of empathy and doctors' demographic characteristics. The task- and problem-oriented expressions of the doctors observed, which are typical of biomedical exchanges, were the most frequently discussed topics, followed by affective expressions. Showing an inviting attitude by conveying empathic listening and support was the most commonly appreciated behaviour, so long as it stayed at a professional level and did not become too personal. Repetitions and conventional back channelling ("right", "ok") received negative comments; they were perceived as trite, superfluous and as showing lack of attention. Among the nonverbal behaviours, 'reading and writing' and lack of eye contact also were disliked. Expressions such as asking for permission or apologizing proved problematic, being associated with insecurity and low self confidence on the part of the doctor. Many behaviours caused conflicting opinions, for example laughing, sharing or involving patients in treatment plans, or the use of humour. Such mixed reactions emphasised the need for tailored approaches in the consulting room and challenged the idea of general communication guidelines.

*Is there a gender effect when evaluating doctors' communicative performance?*

The study described in chapter 4 examined in detail whether the communication of male and female doctors was valued differently by the male and female focus groups of the previous study. Adopting a 'framework method' [3,4] and a mixed method approach [5] – specifically the quantitative analysis of qualitative data – made it possible to explore potential gender effects from different points of view.
Overall, there were few differences between male and female focus groups when discussing the quality of male and female doctors' communication approaches. Neither the doctor's nor the participant's gender had any effect on how the overall quality of each doctor was rated individually by

the participants. However, there were a few main effects of participant and doctor gender when examining the frequency of the chosen discussion topics and the negative or positive content of the related comments. Female participants made slightly more critical statements, the only exception being comments on doctors' inviting/straightforward attitude, where women more frequently made positive comments compared to their male counterparts.

A significant doctor gender difference was that female doctors received a greater number of negative comments than male doctors when they were overtly neutral or impersonal. For all other types of communication no significant difference was found in the positive or negative appreciation within the four gender dyads. Such findings suggested that for lay persons, gender-related issues in doctor-patient communication are of low priority for both men and women. This is particularly true for highly appreciated behaviours of doctors, which convey empathy, support, understanding and pleasantness, or conversely for highly criticized inadequate doctor behaviours, such as completing a checklist instead of engaging in a real conversation. A warm, empathic, personal approach was valued by all participants regardless of gender and appeared, where present, to transcend patient and doctor gender differences and even the bias of prior role expectations.

*How do focus group participants judge the doctors' responses to patients' negative emotions expressed as cues or concerns in medical consultations?*

This research question was investigated in the study described in chapter 5, because in fact little is known about how patients or potential patients judge the doctor's handling of emotional expressions, one of the six core functions of the medical encounter [6].

In this study, the focus group participants from the four centres were asked to watch 16 video-fragments attentively. These fragments were selected from the four video clips of doctor-patient consultations and contained a negative expression of emotion by the patient and the subsequent response by the doctor, defined according to the VR-CoDES [7,8]. Providing space for patients to express their emotions and explicit empathic responses were found to have a universal value for the focus group participants as the most adequate response to patients' expressed emotions, without differentiating between direct (concern) and indirect (cues) emotional expressions. Empathic responses received the highest

quality ratings from all participants, independently of their background characteristics and nationality.

Interestingly, a non-explicit, compared to an explicit, empathic response, despite in theory providing space, was not appreciated, in particular when followed by a topic switch by the doctor. Responses such as switching the topic, ignoring the words of the patient, giving unsolicited information and advice, all received quality ratings of cue and concern responses below six , indicating insufficient quality.

Participants' global assessments of the general communication quality of the doctor were positively related to the ratings given to the doctors' responses to expressions of negative emotions, suggesting a halo-effect: it seems that the perceived general communicative quality of the doctor had a radiating effect on the assessments of his/her responses to patients' emotions. For example, a 'Shutting down' response did not necessarily result in low quality ratings when the overall quality of the doctor had received a high rating.

The individual characteristics of the participants and the country of origin, together with the "halo" effect, influenced the quality assessments of the doctor responses. Being elderly, female, of low educational level and being from Belgium and Italy predicted significantly higher ratings as compared to being male, younger and of better education and being from the United Kingdom and the Netherlands. Regarding individual characteristics, our finding is consistent with the literature: older and less educated people tend to be more satisfied with the care received [9]. The fact that people may have different preferences regarding doctors' handling of emotions is therefore another reason to plead for tailor-made communication.

*What makes the doctor patient consultation more successful from the patients' point of view?*

This research question was addressed by the studies described in Chapters 6 and 7 and is part of the GULiVer-II phase.

Chapter 6 describes the external validity study using a sequential mixed-method approach. This quantitative study was based on the findings of the previous qualitative GULiVer-I study conducted by Bensing et al [10] where the focus group participants were invited, in their final task of the day, to formulate tips for doctors as well as patients which could make the medical consultation more successful from a patient perspective; this resulted in 31 recommendations. These tips were used here to formulate questions for

the Patient Consultation Values questionnaire (PCVq), by which to assess their external validity. The general relevance and applicability of the tips in terms of the PCVq was checked on a larger sample size of 798 primary care patients representing national subsamples of General Practitioners (GPs) from the same four countries as the focus group participants. The patients were asked to assess the importance of each tip listed in the PCVq on four-point Likert scales.

The findings confirmed the external validity and generalizability of the qualitative findings of patient-generated tips. All the tips for doctors and patients were considered (very) important by the majority of patients. The doctor should listen attentively, take the patient seriously, treat the patient as a person and grant enough time and give clear information on what to do when something goes wrong. On the other hand, patients should be assertive, contribute actively by keeping appointments, speaking openly about health history, symptoms and, when appropriate, psychosocial issues. They should adhere to the agreed treatment plan, give the doctor feedback on treatment outcome and inform him/her about self-medication or alternative medicine use. This picture is in line with the theoretical approach of 'relationship-centred care' [11]. Some tips raised mixed feelings. Two doctor behaviours were classified as 'not important': "I do not need to tell a receptionist or a nurse details of my health problem before seeing my doctor", and "the doctor informs me about reliable sources of information". Similarly, regarding patient behaviours "taking notes both before and during the consultation", or "bringing a family member" were not considered important.

*What are, in patients' view, the reciprocal responsibilities of doctors and patients in making the consultation successful?*

The data also confirmed two important qualitative findings of the GULiVer-I study by Bensing and colleagues [10]: the leader role assigned to the doctor during the consultation and the differential attribution of responsibility, split between doctor and patient. The quantitative paired comparison of the scores assigned to patient and doctor respectively showed that there are some responsibilities shared equally between the two roles. Doctor and patient should show collaborative behaviours based on reciprocal communicative exchanges, such as being respectful and honest, giving information, managing treatments and time. On the other hand, data reveal a greater responsibility attributed to the doctor, rather than the patient, for

some functions, for example regarding disclosure of the patient's agenda, the course and content of the medical consultation and checking the patient's understanding.

*Are there differences between countries (Netherlands, Belgium, Italy and the United Kingdom) in the preferences of primary care patients regarding different patient and doctor behaviours intended to make consultations more successful?*

No differences between countries were found for four out of the five doctor tips rated as most important: listening, treating the patient as a person, knowing when to refer the patient to specialists, and giving patients clear instructions when things go wrong. However, the Belgian patients differed from all the others in attributing low importance to patients' responsibility for preparing for the consultation, the presence of family members during the consultation and the possible disturbance caused by the doctor answering the telephone. The Italian patients attached low importance to doctors giving additional health information by handing out leaflets or indicating websites, to the presence of family members, to asking questions, taking notes and agenda disclosure by patients. These national differences raise a caveat for the interpretation of study results without first taking into account the country setting, and demand more research on the impact of variations in health care organization, country or culture on patient preferences.

*What are the preferred roles and responsibilities of doctors and patients, in the view of primary care patients from 31 European countries, and are they affected by personal and cultural characteristics?*

The study in chapter 7, based on a sample of 6049 primary care patients representative of 31 European countries, demonstrated that a set of roles and responsibilities of doctors and patients can contribute to the achievement of an effective consultation. These roles and responsibilities were obtained by reducing the 33 items of the PCV questionnaire to seven factors through a confirmatory factor analysis for doctors and patient items separately. Four factors defined doctor roles and responsibilities, three factors patient ones:
Doctors should 1) *treat the patient as a partner*, for example by facilitating patients' questions and exploring their treatment preferences; 2) *treat the patient as a person*, for example by listening attentively, being respectful

and without prejudice; 3) guarantee *continuity of care*, by clear instructions for aftercare and by remaining in touch after the consultation; and 4) give *additional information*, such as leaflets or websites, avoid interruptions during the consultation and not delegate information collection to the receptionist.

Patients should 1) *be open and honest* about health problems, self-medication, other treatments and psychological problems; 2) *be collaborative* by preparing questions, keeping a symptom diary or expressing needs; and 3) *plan thoughtfully*, for example by making arrangements such as bringing a companion or keeping appointments.

Findings showed that patients would like to be recognized as a "partner" and as a "person" in the relationship with doctors. These two aspects of the doctor role, together with continuity of care, were given great importance. Participants attributed greater responsibility for an effective consultation to doctors and less importance to their own active participation, assigning lower values to patient roles. Because of the large sample size, the above-mentioned differential appreciation seems relevant to the robustness of the findings.

An examination of the distribution of patients' preferences among groups, distinguished by personal characteristics and contextual backgrounds, showed some evidence of significant but moderate differences. The main finding was that the core functions of the consultation, i.e. being treated as a person, being involved in the communication, giving clear information, assessing the need for referral and continuity of care were shared by all populations as 'universal' values. As such they fit well with experts' opinions on effective consultations [12,13]. Other aspects, such as getting additional information from doctors and participating actively as a patient, gathered less consensus than others, suggesting that they were sensitive to heterogeneous patient expectations or needs. This seems in line with the recent literature, which has emphasised how patients' characteristics can modulate their preferences regarding the degree of involvement [14–16]. For example, patient gender affected all the seven factors, showing a systematic trend for female patients to give higher ratings, although the differences between men and women were small. Suffering from a chronic condition promoted a positive orientation of patients towards *thoughtful planning, being treated as a partner* and *as a person* by the doctor. Older more than younger patients appreciated their *active participation* in the consultation and being *treated as a person* by the doctor. The younger appreciated doctors who give indications to consult multiple information

sources, such as leaflets or reliable web-sites, but undervalued the importance of preparing themselves for the consultation by taking notes about their symptoms and questions.

The structure of healthcare systems only marginally affected the importance attributed to doctor and patient roles and responsibilities, confirming an earlier observation by Coulter [17] that patients care more about the quality of their everyday interactions with health professionals than about how the service is organized.

Participants from countries characterized by a more indulgent or collectivistic cultural background according to Hofstede's cultural dimensions, such as Ireland and Iceland, attributed greater importance to doctor-patient roles and responsibilities than those from nations like Latvia and Italy which, according to Hofstede [18], are characterized by a more restrictive or individualistic cultural orientation.

In synthesis, only a minimal part of the moderate variance among countries and subjects was explained. Future research should look for additional patient and contextual characteristics that might influence patient preferences.

## What has been learned

In a critical review of 18 General practice communication guidelines, Veldhuijzen and colleagues [19] concluded that they were hardly evidence-based and had seldom involved patients expressing themselves on what they think about good doctor-patient communication. The GULiVer studies addressed this topic with a rigorous research design and provided good evidence from the receiver side.

We learned that lay persons and patients really like to be taken seriously, listened to attentively, treated as a person and a partner by doctors who create an empathic atmosphere. These findings, as will be discussed below in detail, match the recommendations of communication guidelines and are certainly not new for clinicians and trainers. They are new, however, for health policy makers and medical teachers because they provide strong evidence for the importance of many components of patient-centred communication to the patients themselves. Patient-centred communication courses are based not only on theory but also include trainers' personal experience as patients, or with patients in their families or among their friends. It is therefore not surprising that we find the same themes as those

introduced by patients, but these are now supported by strong evidence from the patient point of view.

The GULiVer studies confirmed also that background characteristics of lay persons and patients are involved in their quality assessments of doctor-patient communication. This was observed in particular with regard to actual verbal behaviours at the micro level receiving conflicting opinions. Such findings lead to the conclusion already widely acknowledged in the literature [20,21] that doctors should tailor their approach to the patient by identifying and considering his/her specific needs and preferences.

Patients were very clear that both parties, patients and doctors, have to make a contribution to the success of the medical consultation, although they want the doctor to remain the leader of the interaction. They recognized that they have not only rights but also obligations. This mature view of patient empowerment results in a more balanced doctor-patient relationship and makes a good case for involving lay people and patients in the development of criteria for good care.

*General observations*

During all phases of the GULiVer research projects the lay persons and primary care patients confirmed that they were highly interested in doctor–patient communication: focus group participants were easily recruited and became immediately involved in the project, the discussions in the focus groups were very lively and there was a low refusal rate and few instances of incomplete data among the primary care patients participating in the European survey. Their unrestricted voice as one of the central partners in the medical encounter proved to be essential to understanding what, in their eyes, good patient-doctor communication was all about and how they saw their own and doctors' duties and responsibilities in making the consultation more effective.

The many potential patients and patients who collaborated in this research proved to be very clear on what they want from a doctor. They had communicative expectations, needs and preferences and proved be an essential source of information which could help doctors to be more effective in achieving their consultation goals for each patient in terms of information collection, diagnosis, information giving and shared treatment decisions. Our findings demonstrated that certain types of concrete communication behaviours and related contents were of greater importance or more likely to be appreciated than others, and that the tips

for doctors and patients incorporated in the PCV questionnaire in GULiVer-II were given different priorities according to whether they touched doctors' or their own duties and responsibilities for an effective consultation.

However, mixed reactions to the same observed doctor behaviours in GULiVer-I and to the same tips transformed into the PCV questionnaire in GULiVer-II showed that that there is no such thing as 'one size fits all'. The proportion of negative, positive and mixed evaluations of specific doctor behaviours highlighted the critical communication aspects to which clinicians should pay attention.

The patient perspective investigated in this research therefore demonstrated the need to shift from a classical patient-centred approach to communication in primary care, usually formulated by expert professionals, to a 'person-centred' approach defined by expert patients and potential patients. This approach Implies knowing when and which aspect of doctors' communication evokes different reactions by whom, and the need to tailor doctor communication to patient preferences and expectations in those situations. Personal, sociodemographic characteristics and country contributed to different communication likes, dislikes and preferences, which often were not attributable to specific sub-groups of people. These findings challenged the idea of general communication guidelines and confirmed at an international level previous claims in the existing literature that tailored approaches are always needed in the medical consultation room.

Moving from this general outline of knowledge gained to a more detailed account of confirmatory evidence or new insights from the research presented here, the following subjects will be addressed below: the important communication topics in the focus group discussions and the likes and dislikes about how doctors handle them, the quality assessments of doctors' responses to patient emotions and the possible halo effect of a global quality rating of doctors' communication performance, the role of patients' gender in affecting quality assessments and preferences, the respective patient and doctor responsibilities for an effective consultation, and in conclusion, the contributions of individual and country characteristics. As stated above, some findings are not new, but are important enough to mention because they confirm existing literature and thus the validity of the views of a number of professionals who claim to be patient advocates [22,23].

*Confirmatory evidence and new insights*

The findings to be discussed are tightly linked to the methodological and procedural approaches chosen and have to be considered from this angle. They concern the multicentre approach, the use of internationally based focus groups, the use of standardized videos as stimuli for discussion and quality assessment, the mixed method approach and the quantification of qualitative data. These features, as will be discussed in detail in the section on Methodological Reflections, had inherent strengths, but also some limitations with repercussions on findings.

The constructive contributions to the focus group discussions and the high rate of positive judgments regarding specific communication aspects , confirm that this is a valuable aspect that fosters the process of care [24,25]. In particular, the most frequently discussed topics indicate an interest in two directions: the first has to deal with relationship and emotion handling interventions, the second is more related to task oriented interventions that demonstrate doctors' commitment, honesty, self-efficacy and competence. These indications on what patients consider a reliable doctor - a juxtaposition of relational and biomedical abilities – confirm what was found in previous studies on patients' perspective [26–28]. Moreover, they reinforce what was theorized by several communication experts, who assigned a fundamental role to the function of relationship building and the fostering of care in realizing an efficient medical encounter [6,29,30]. More in general, it can be concluded that our results also represent an external validation of what was defined in the International Charter for Human Values in Healthcare [23] as core elements of care: compassion, respect for persons, commitment to integrity and ethical practice, commitment to excellence.

If at a conceptual level our results reveal a homogeneity in most participants' judgements and confirm what was already suggested by the existing literature, some new indications emerged from our data regarding the process of translating general values into specific behaviours.

A first important consideration deals with the issue of responsibility and reciprocity. According to the shared decision making model [31–33] an active role of patients is favoured by informing them properly and involving them in the decisions regarding their health. The positive judgments expressed by our participants on categories like collecting and giving information, providing solutions or some instrumental aspects of conversation (such as being clear, competent, getting a complete picture of

the patient's problem) confirm that patients appreciate it when doctors indirectly show their commitment to involving them in decisions by providing information on their therapeutic choices. Less universal was patients' appreciation of actions aimed to actively involve them in the decisions, when they responded to the PCV questionnaire: the behaviours proposed for doctors were systematically given greater importance than those for patients. This suggests that patients feel that they are less responsible or, perhaps, less suited to making final decisions than doctors, who are clearly seen as the 'leaders' of this interaction. This assumption is confirmed by examining the 'mirroring behaviours' described in chapter 6. Here, some responsibilities were mainly assigned to doctors: for example to have patients disclose their agenda and checking if they properly understand their health situation are considered doctors' tasks.

In the assessment of those doctor behaviours that gathered less consensus than others, background characteristics of lay persons and patients came into play. This seems in line with the recent literature, which has emphasised how patients' characteristics can modulate their preferences regarding the degree of involvement [14,16,34]. For instance, as shown in chapter 7, suffering from a chronic condition promoted a positive orientation of patients towards *Thoughtful planning,* and *being treated as a partner* and *as a person* by the doctor. Older more than younger patients attributed greater importance to their *active participation* in the consultation and to being *treated as a person* by the doctor. The younger appreciated doctors who gave indications to consult multiple information sources, such as leaflets or reliable web-sites, but undervalued the importance of preparing themselves for the consultation by taking notes of their symptoms and questions.

The effect of gender on lay persons' and patients' quality assessment was assessed qualitatively and quantitatively in GULiVer-I and quantitatively in GULiVer-II, resulting in some contradictory findings. As shown in chapter 4, overall there were more similarities than differences between the gender groups, and when differences reached significance, they were rather small. Similarities regarded the individually rated overall communication quality of each doctor, the positive evaluations of behaviours reflecting a *Pleasant Attitude*, *Reassurance, Empathy,* while behaviours regarding *Speaking Peculiarities*, *Structuring, Flexibility* and *Time issues* were discussed by female and male participants in negative terms. However significant, albeit small, differences emerged in the frequency of the chosen discussion topic in the focus groups and the related negative or positive content, with

women making slightly more negative comments about male as well as female doctors. The lack of clear and substantial gender differences seems surprising in the light of evidence that male and female doctors act differently towards patients [35,36] and given the GULiVer study design (separate focus group for male and female participants and gynaecological scenario) which created a situation most likely to provoke gender specific reactions. In a recent meta-analysis, Hall and colleagues [37] also found statistically significant, but barely clinically relevant gender differences. Our findings suggest that for lay persons when commenting on doctors' communicative performance, gender related issues are of low priority for both men and women. This is particularly true for highly appreciated doctor behaviours which convey empathy, support, and pleasantness, which appear to transcend patient and doctor gender differences.

A systematic gender difference emerged, on the other hand, when the same focus participants were asked to individually rate the quality of doctors' responses to cue and concerns (chapter 4). In this context women gave higher quality ratings than male participants. A systematic tendency to use higher Likert scale ratings was observed also for the female patients of the 31 European country survey when rating the importance of the set of roles and responsibilities of doctors and patients proposed on the on the PCV questionnaire. We might speculate that these contrasting findings are due to the different, although interconnected, methodological procedures: qualitative (chapter 4) versus quantitative analysis (chapter 5 and 7), that is, comments made in shared focus group discussions (chapter 4) versus individual quality ratings (chapters 4, 5 and 7) or the task requested, that is global quality ratings (chapter 5) versus quality ratings of single concrete behaviours at micro level (chapter 5, 7). The gender effect on patients' perspectives on doctor-patient communication, as emerged in the GULiVer studies, thus showed many facets. There are indeed some indications in the literature that focus group discussions may result in more negative views than questionnaire surveys [38]. The lack of a clear and unilateral direction deserves further studies.

Another important result that emerged from our data (Chapter 5), is that the global assessment of the quality of communication was interrelated with the quality assessments of doctors' practical abilities in dealing with patients' emotions, suggesting the presence of a halo-effect [39]. In other words it seems that the better the global quality of each doctor was evaluated, the better the quality ratings regarding doctors' actual responses to patients' expressions of negative emotions. To our knowledge no other

studies on communication issues so far have observed a halo effect in these terms.

Another interesting finding of this study was that the function of "*Responding to emotions"* was highly considered by the focus group participants. Providing space and explicit showing of empathy had the highest quality ratings from all participants as the most adequate response to patient cues and concerns, while space reducing responses received the lowest ratings, indicating a compelling congruence of lay people's quality assessments with the theoretical literature on how to handle patients' emotions [40,41]. Such findings offer a firm empirical base for including expressions of empathy as a must in clinical guidelines for all health problems which evoke negative emotions.

As shown in chapter 6, no differences between patients from Belgium, Italy, the United Kingdom and the Netherlands were found for four out of the five most important doctor tips: doctor listening , treating the patient as a person, knowing when to refer the patient to specialists, and giving patients clear instructions when things go wrong. However, the Belgian patients differed from all the others in attributing low importance to patients' responsibility for preparing the consultation, the presence of family members during the consultation and the possible disturbance caused by a doctor answering the telephone. The Italian patients attached low importance to doctors giving additional health information by handing out leaflets or indicating websites, to the presence of family members or to question asking, taking notes and agenda disclosure by patients. The study suggests that some values seem to be universal, while other values seem more country specific. This was confirmed for the extended sample of patients from 31 European countries (Chapter 7), where three components of doctors' responsibilities, *patient as a partner and a person* together with *continuity of care* were shared as universal values in all participating countries, being given the greatest importance. The variabilities in the preference ratings on the PCVq were similar for all seven components of doctor and patient roles and responsibilities. Among the used covariates, the society value systems according to Hofstede's definition explained these variabilities from 1.6% to 5.8%, confirming the importance of cultural aspects in communication research [42]. No similar effect was observed for the healthcare organization variables, suggesting that doctors' communication in their clinical practice is unaffected by organizational health care systems and is not reflected in patient preferences and priorities.

## Methodological reflections

Since the main focus of the research was to discover patient views, not influenced by communicative theories or by the opinions of the researchers involved, two methodological choices became strategic in planning the studies: the "informative source" and the method of data gathering and analysis. We were aware that our target phenomenon, doctor-patient communication in primary care, is multidimensional and that the research process should address the quality of results, or at least privilege a strand of them. Therefore, from the early phases of the study design, we accounted for different priorities, which were:
- measuring the robustness of the information gathered during the data collection process on the quality of the doctor-patient interaction, as perceived by the patient;
- uncovering whether health care users present homogeneous needs and requirements; thus our intermediate aim was to have the opinions of people with heterogeneous individual characteristics;
- having standardized information, in order to make comparisons between subgroups of people;
- obtaining what, according to patients, are the common features of ''best practice'' in the communication process during medical encounters, which are generalizable to a wider population.

*Is it a good choice to interview lay-people and primary care patients to evaluate medical communication?*

Beside the ethical aspects of citizens' involvement in health research, be they patients or community members [43–45], their knowledge can complement that of researchers, clinicians, educators or other experts. It can contribute to an improved quality and relevance of health communication research, obtained as a result of patients' or citizens' experience of illness and doctors.
From the medical literature of the last decade, a broad debate has emerged around patient and public hearings about health research in its various strands. On the one hand, there is a research approach which favours involving the public and lay-people, considering the patient a 'service user' or consumer, so that increasing attention is focused on the balance between the patient perspective in its different dimensions regarding the perceived quality of care, and health professional skills and goals, addressed to solving biomedical problems [46–48]. In this context, patient

opinions are recognized as a valid measure for evaluating the quality of care [49–51], as demonstrated by many surveys on patient satisfaction, experiences, expectations and priorities of care [52–56].

On the other hand, the main criticism of patient participation concerns the peculiar and subjective nature of health user reports, which lack objective knowledge; for this reason they are often classified as too connected to the empirical context and not generalizable [46]. Unfortunately, nowadays few studies involve lay-people in defining communication research priorities, the theoretical framework or in the formulation of research hypotheses, which are largely driven by professional agendas [57].

Our study supports the legitimacy of patients' experiential knowledge for communication research processes. Our pragmatic approach showed that their contribution is as valid as that of professionals in terms of practical usefulness. This is in line with recent patient engagement strategies which foster, at different levels and also by involving various health professionals, the process of involving and supporting patients in their own active participation in health care and treatment decisions [47,58–61].

GULiVer-I participants were highly motivated in giving their evaluations and opinions on the proposed topics and engaged in performing each task, both individual and collective; for instance: all of them showed interest in the treated themes and participated in the group discussions, as proven in chapter 3, where we showed that nobody remained silent and only 10% of participants exhibited a 'passive' interaction style with speech turns ranging between 1 and 10. When participants expressed divergent opinions, they showed no conflictual or competitive attitudes, so that the discussion maintained a collaborative atmosphere. The various topic areas were balanced among the 35 focus groups; this can be seen as a spontaneous 'saturation' i.e within each group all aspects which were likely to be important were expressed. These collaborative interactions can produce a collective knowledge that is overlooked by the sum of the single experiential knowledges, as suggested by focus group literature [24] (Sought et al., 2011).

Lastly, in GULiVer-I phase the decision to recruit lay-people not directly participating in a consultation had two advantages: to avoid 'courtesy' and a social desirability bias. In fact the participants, being put in a neutral position with respect to the consultations being evaluated, could feel free to judge and comment on the doctors' communicative performance.

*Is multi-centre and international collaboration, in observational research, useful to extend the findings to the European population and gain generalizability?*

This section emphasizes the importance of specific issues regarding the organization of multi-centre observational research. This type of study requires careful organization, collaborative and motivated staff, often composed of different professions (principal investigator, research methodologist, clinical experts and other key individuals), standardized procedures, joint protocols and much time in planning and coordinating.

Conversely, the medical literature stresses the need for evidence-based research findings easily translating into practice (feasibility). This claim has increased the demand for rigorous methods, external validity studies and generalizability of findings [62,63]. Glasgow and colleagues' editorial emphasized the need for more information on the external validity of studies for "practitioners to better judge the applicability of research to local situations, reviewers to have information to abstract and synthesize to draw conclusions about generalization, and policymakers to have a more relevant body of evidence on which to rely" (pg. 107 [64]).

Utilizing a multi-centre approach in both GULiVer phases ensured 1) larger sample sizes, 2) a variety of characteristics linked to people, such as sociodemographic and clinical characteristics, and to healthcare organization systems, and 3) the potential for involving more participant subjects within a much shorter time.

With these considerations in mind, we planned the first phase of the research protocol:

- a purposeful stratified sampling [65], sometimes known as quota sampling, was used to select a group of volunteers; the strata were divided by country and gender and internally balanced by age-class. This is a non-probabilistic strategy which offered the advantage, along with easy and fast recruitment, of maintaining a kind of demographic 'representativeness' in order to have 35 groups balanced by age. While countries were used as level-variables for practical reasons in organizing the international study, the decision to generate gender-specific discussions was made to prevent the potential bias of social desirability and to avoid the possibility that a participant might prefer to give an opinion not exactly conforming to his/her own thought, but perceived as socially agreeable. In fact, it sometimes matters that people feel more comfortable discussing a topic in a same gender group rather than a

mixed gender one [66], particularly when it pertains as here to a gynaecological problem.

- In all four countries the same protocol was rigorously followed: during its preparation, the researchers from the participating centres met regularly in order to describe the procedures in great detail and to safeguard the quality of the data collection. As chapter 2 details, the same prompt for all focus groups was created; the consultations were 'standardized' videos provided by the Liverpool Medical School. They showed students' communicative performance at their final medical exam (OSCE). The dialogue is between the student in the doctor role, whose interviewing skills are assessed by an expert using a checklist (LCSAS), and a simulated patient, who is a healthy person trained to express – in a standardized way – specific social, emotional and physical aspects of a particular health problem in response to questions or statements by the student. The videos used here were selected from a set of 166 videos, using OSCE evaluations [67] in order to maximize the variety in the quality of communication. Those consultations were dubbed for the Italian centre, while subtitles were added in Netherlandish and Belgian centres, conforming to the way foreign television programs are made accessible to the national public. A set of four standardized videos was shown to 259 GULiVer-I participants as stimuli for group and individual tasks (see also Table 3 of chapter 1), using the same template and timetable in the four different countries. This uniform procedure made it possible to gain comparable data, in a multiway dimension, and to create a unique, although complex, dataset.

- great attention was paid to the database design in order to maintain the integrity of data. A relational management system was adopted, where the qualitative data, i.e. the speech turns from the group discussions, as well as the quantitative variables from the questionnaires or from the Likert scale assessments, were linked to their authors. The integrity of information was maintained; all focus group transcripts, split by their coding system classification, both in English and the original language, were stored, so that all researchers could have access to the original data. This ensured the advantage of transparency when comparisons were made: for example, the investigation of participants' and doctors' gender effects on expressed preferences and comments, as described in chapter 3, was made possible by capitalizing this type of database. In a similar way, two other GULiVer-I studies investigated the differences among countries [68] and levels of education [69].

In synthesis, the many efforts made to preserve a transparent rationale in each research step, as mentioned above, increased confidence in the good quality of findings.

*Is the sequential design useful to confirm the validity of qualitative findings?*

A sequential mixed-method approach was adopted in chapter 6, where the aim was to test the generalizability of a series of tips for patients and doctors on how to increase the effectiveness of a medical consultation [10]. These tips represent a synthesis of the lay-people's collective knowledge, since they were generated by the GULiVer-I participants as their last group task after an intense day-meeting. The participants mixed the knowledge acquired during the focus groups with personal experiences in health care, giving a list of suggestions for improving medical communication.

The main goal of the qualitative GULiVer-I study was to gain insights into lay-people's perspective. Hence, the choice of adopting a non-probabilistic sampling and a moderate sample size was in accordance with the need to recruit people who are "information rich" and especially interested in the research topic, since participants were asked to spend a whole day at a meeting (chapter 2). On the other hand, the literature highlights the threats to validity of qualitative methods [70–74]. In particular, a common error at the interpretation stage is the tendency to generalize findings rather than to obtain insights into particular underlying processes, as pinpointed by Onwuegbuzie and Leech: "only when relatively large representative samples are utilized should qualitative researchers attempt to generalize findings across different populations (i.e., population generalizability), locations (i.e., ecological generalizability), settings, contexts, and/or times (i.e., temporal generalizability)" (page 238, [75]). The GULiVer-II study was designed in line with this suggestion, but also to avoid the risk of "*spurious relation between information*"(pag. 239,[75]), which happens when a qualitative relationship is tagged by researchers as causal, without verifying the existence of such an illusory correlation. The GULiVer-II studies aimed to complement the GULiVer-I phase by extending qualitative findings to a general population through a quantitative approach, taking advantage of the European QUALICOPC survey [76]. The GULiVer-II study design meets the criteria suggested by Barnes and colleagues [77]; in fact it uses a larger and representative sample (798 participants, a subsample selected for our confirmatory study, versus 259 of GULiVer-I study), a different setting (patients recruited from primary care versus lay-people) and a standardized

questionnaire (PCV questionnaire, obtained by transforming the list of GULiVer-I tips into questionnaire items). Hence, we are confident that the applied sequential mixed-method approach confirmed the qualitative findings described by Bensing and colleagues [10], and increased the 'credibility' of the mirrored doctor-patient behaviours by quantifying the allocation of tasks to doctor or patient.

## Strengths

The study designs are characterized by some strong elements which support the quality and strength of our findings.
- From the beginning, the research project was conceived as an international multicentre study on the grounds that more findings on lay people's and patients' perspectives were needed to cover a wider international context and to increase the validity of findings by cross-country comparisons.
- Information sources were potential patients (citizens) and patients.
- Focus groups were used because they offered the opportunity to explore citizens' perspectives while limiting interference by researchers. By choosing this approach, we comply with recommendations to involve patients in quality assessments of clinical communication. Thanks to the detailed study protocol, the intensive collaboration of researchers in each of the four participating countries in defining the strict standardization of procedures, the focus group methodology in this context became feasible and unique: qualitative as well as quantitative data could be reported about what people in different countries think about the quality of communication, based on their assessment of the same set of videotaped consultations;
- Data were collected individually using rating scales, and collectively, through focus group discussions. A quantitative approach to the qualitative focus group data was then used. All discussions were transcribed and analysed using an inductive content analysis which reduced the qualitative data to a small number of variables that could be analysed using a statistical approach.
- Putting the spotlight on patients or potential patients as assessors of the quality of communication raised the issue of patient variability, largely overlooked in the literature, but taken into consideration here by including clinical and sociodemographic characteristics of the participants, as well as nationality, as possible predictors of their

expressed preferences. Moreover, the focus groups were composed of male-only and female-only panels, in order to assess whether or not the communicative ability of male and female doctors was rated differently by males and females.

- Among the specific doctor behaviours displayed in the video clips, in this study particular attention was paid to those behaviours which have to do with one core function of the medical consultation which is vital for patient-centred care: responding to emotions. Until now little has been discovered about which responses are appreciated or disliked by those who might receive them. Participants individually rated on Likert scales their preferences for different doctors' responses to patients' emotion. The responses were expert-defined using the VR-CoDES Coding system and made it possible to test the quality respectively attributed to them by the focus group participants.

- The combination of qualitative and quantitative data in a mixed method exploited the advantages of both and mitigated their limitations. From GULiVer-I to GULiVer-II a mixed method sequential approach was adopted, following Barnes' recommendations [77]: To guarantee the general applicability of previous findings (here focus group generated tips), they need to be checked in a different setting (here primary care patients) using different instruments (here the Patient Consultation Values Questionnaire) and on a larger sample (here 6049 primary care patients from 31 European countries).

- Lastly, a multilevel approach was used for the first time to assess the joint effect of different variables at a micro (patient) and macro (country) level, a technique by which to integrate the hierarchical structure of this complex data base and to manage huge amounts of information.

## Limitations

There are several limitations in this research, relating to some of the tools used and also to strategic choices in the protocols. In particular the videos, used as stimuli in the GULiVer-I phase, present some restrictions, which were:

- the consultation videos cannot be considered representative of real general practice consultations. First, the 'Doctors' were students and conducted the interviews in an OSCE examination setting, designed to test the quality of their interviewing skills during their 4th year

summative finals. Second, the 'patients' were actors, and as such were not representative of real primary care patients;

- the OSCE station presented scenarios which referred to gynaecological problems. This could have hindered male focus groups from expressing their opinions. OSCE scenarios and video clips on typical male health problems were not available.

A second set of limitations relate to the participants:

- only Western European countries were involved in the study, which means that results cannot automatically be generalized to other cultures;
- the GULiVer-I study involved lay-people giving quality assessments. They were not personally involved as patients and therefore not emotionally engaged, even though they had experienced at least one medical consultation in the previous year.
- a number of potential confounders linked to patients' views on doctor-patient communication were not collected, such as levels of health literacy or continuity of care with the same general practitioner, which have been shown to be associated with increased patient satisfaction and trust in the doctor.

## Clinical implications

Patients' engagement in their own healthcare has been described as the blockbuster drug of the century [60,78,79]. The best strategy to reduce dropouts and increase the effectiveness of interventions and consultations is to involve patients in their development and assessment. That is why partnership with health service users is seen as essential for the improvement of evidence-based care. All the material collected in the present thesis is patient-generated (through focus groups, questionnaires or rating scales) and therefore represents a clear expression of users' preferences regarding doctor-patient communication. This dataset might be the basis for the elaboration of recommendations for patient-centred interviewing from the patient's point of view, of rating scales assessing doctors' communicative style or teaching programs for medical students or practitioners based on patients' preferences and expectations.

Patient-based instruments are increasingly recognized as a necessary complement to traditional evidence based measures assessing the efficacy of healthcare interventions or healthcare, since they provide a wider perspective that also includes patients' experiences and concerns [80]. This

is particularly relevant if we consider the increased importance of chronic conditions where the objectives are to help patients to accept and to cope with the daily challenges imposed by the illness on their quality of life [81].

The material collected could also be implemented in training programs or seminars dedicated to patients themselves in order to encourage their empowerment and enhance their health literacy. An example of such an intervention is shown in chapter 6. The Dutch Federation of Patients and Consumers translated the focus group generated tips [10] into cartoons and created a poster listing doctors' and patients' duties for making the consultation more effective. The poster has been distributed by the Dutch Federation of Patients and Consumer Organizations (NPCF) (www.mijnzorgveilig.nl).

The theme of doctors' and patients' responsibilities in the clinical encounter represents a meaningful clinical aspect that deserves particular attention when talking about patient empowerment and engagement. According to our results, patients tend to expect their doctor to take the main responsibility for the encounter, and consider themselves as partners who provide an experiential knowledge of their illness. In particular, the elements identified by patients as part of their duties in the consultation are honesty, adherence to treatment and to the appointments scheduled. On the other hand, in the eyes of patients, regardless of their gender or country of origin, doctors are supposed to be able to listen to them attentively; to take them seriously; to treat them as a person and guarantee enough time for the encounter. These behaviours are typically seen as essential elements for a good relationship with the patient, and fit perfectly within the first function of the six-function model of the medical consultation [6], which is establishing a relationship. They are identified as core elements in all the existing guidelines or models of communication in healthcare, such as the Three Function Model [82], the SEGUE Framework for teaching and assessing communication skills [83], the Calgary-Cambridge Model [84] or the Kalamazoo consensus statement [85]. A strong, therapeutic, effective relationship is seen in these models as a *sine qua non* condition of doctors' professionalism and is described as an approach to care which emphasizes respect for the patient's active participation and promotes his/her involvement in care and in shared decision making.

The main clinical implication is that *Relationship-centred care* represents the touchstone on which clinical practice should rely. Doctors' ability to create an authentic partnership by showing patients that they really care

for them and their well-being promotes patients' trust and increases their willingness to assertively follow the proposed treatment program. More specifically, the use of listening skills which give space to patients and expressions of empathy appear to make people forgive other communicative shortcomings of the health provider. That is probably due to a "halo effect" generated by the impact of a generally positive atmosphere created by the doctor on patients' evaluation of specific doctor interventions.

Even if expressions of empathy are widely appreciated, the definition of the appropriateness of specific interventions to handle patients' cues and concerns requires a more careful approach. Our respondents seemed to perceive emotional stimuli differently, and gave heterogeneous opinions on how doctors should handle them. Participants' background characteristics affected their evaluations in this area more than in others, suggesting that gender, age, culture and education might modulate subjective preferences. This implies that when dealing with emotions, doctors should make much more effort to tailor their intervention to the patient who is sitting in front of them.

## Suggestions for further research

The GULiVer datasets are dense of information not yet explored and, as synthesized in Figure 1, offer interesting possibilities for investigating new research questions, while the findings so far are a good starting point for designing new research. Future research about the patient perspective on the quality of doctor-patient communication should proceed in various directions.

As can be seen in chapter 2, there is an interesting set of quantitative data on participants' clinical characteristics and attitudes that has not yet been addressed, and which could contribute to better explaining both lay-people's preferences regarding doctors' global communication approach, measured on a 10-point Likert scale, and the comments on specific doctor behaviours which were collected from focus group discussions. In order to point out which specific expectations specific patient subgroups have on how they want doctors to communicate, an investigation of the global assessments of the videos used as stimuli in the GULiVer-I study should be analysed, taking into account the participant characteristics mentioned above. This deserves our attention for two reasons. The first is connected to the high level of video standardization which made it possible to jointly

analyse a set of more than a thousand evaluations. The second relates to the participants' characteristics: those which describe health conditions, such as the presence of chronic disease, physical functioning (COOP/WONCA chart) [86,87]; the presence of emotional distress (GHQ-12; [88,89]), and attitudes toward doctors, such as Trust in the Medical Profession (TMP questionnaire [90]) or communication preferences oriented to cure and care (Quote-com), as explored by an expert-driven questionnaire based on patient-centred communication theory [91–93].

Some further qualitative analyses of the GULiVer I focus group database might be proposed. The participants, after rating doctors' responses to emotions (task 4; see also chapter 5) discussed their choices extensively. A qualitative analysis of their *pros* and *cons* regarding the observed doctors' handling of emotion would allow us to better understand in depth why, for example, non-explicit responses were less appreciated than explicit responses, as defined by the VR-CoDES , and by whom.

Age has been shown to be related to patient satisfaction with communication [94]. Since the GULiVer-I sample was balanced for age, performing a qualitative in depth analysis of the focus group comments on doctors' communicative approach and their handling of emotions might show the differential effect of age on preferences and priorities.

Regarding the quantitative GULiVer-II study of chapter 6, it would be interesting to extend the exploration of the shared responsibility for a successful medical consultation to the whole QUALICOPC sample described in chapter 7. In this study, we matched some patient and doctor items of the PCV questionnaire, related to similar behaviours; for example, the item match named 'patient understanding" links the two PCVq items 'how important is to you that the doctor asks me if I have any questions?' and 'how important is to you that I am prepared to ask questions and take notes?'. The main aim of this new investigation is twofold: confirming on a wider sample what was shown in a sub-sample, circumscribed to four European countries and investigating whether there are differential effects of socio-demographic and clinical characteristics on the attribution of doctor and patient roles.

Still another investigation could better examine the influence of the socio-economic context on the importance assigned to doctor and patient responsibilities for an effective consultation, as measured in chapter 7. There, a substantial variability not attributable to patient characteristics was found for each of the single responsibilities, with intra-class correlation coefficients of around 10 percent. The covariates used, describing country

features, seemed insufficient to explain this variability. A secondary analysis could explore whether other environmental characteristics measured at different levels of aggregation, such as neighbourhood, local region or country, are able to identify the above-mentioned relationship between socio-economic context and patient preferences [95–97].

A new research proposal, starting from the GULiVer findings, could use the focus group technique to let participants discuss specific micro skills which have been claimed to be essential for patient-centred interviewing. Their evaluation of video fragments of real life or experimentally manipulated examples of doctor-patient interactions where humour, empathic responses or other specific patient-centred skills are used, will define the extent to which patients confirm the validity of expert-defined patient-centred skills.

Subsequently future research would need to quantify the differences in opinions of patients having different characteristics and to clarify the reasons for such different opinions.

The GULiVer findings suggest that doctors be flexible and tailor their communicative approach to the individual patient. Some issues deserve specific research to understand patients' different preferences; for instance the doctors' role concerning 'additional information', in the form of leaflets or Internet sites, or the use of e-mail communications as a component of the 'continuity of care'. Since the current orientation is to emphasize patient empowerment, also through self-care management and the enhancement of health literacy [98–100], a critical issue for doctors becomes how to manage communication with the patient about health information acquired from the internet. Patients should be encouraged to talk about online health information seeking [101] in order to increase their awareness of good e-health information. Moreover, the recent literature on the use of e-mail communication in health care is still scarce, although it can be considered a useful tool for improving doctor–patient communication [102]. There are some arguments in favour of this new tool: it increases the efficiency of health care delivery and is patient-centred [103], it reduces administrative costs and missed appointments, it is a continuation of the office visit and improves the patient-doctor relationship [104,105]. Some doctors think that e-mail communication will increase their workload due to patient requests, and some patients are hesitant, suspecting that their messages may be read by people other than their doctor, and worry about safeguarding their privacy and confidentiality

[106]. It is a fact that patients and physicians have different perspectives on its use and importance [107], and future research should be dedicated to the factors which explain such discrepancies.

Figure 1: Past and future GULiVer studies
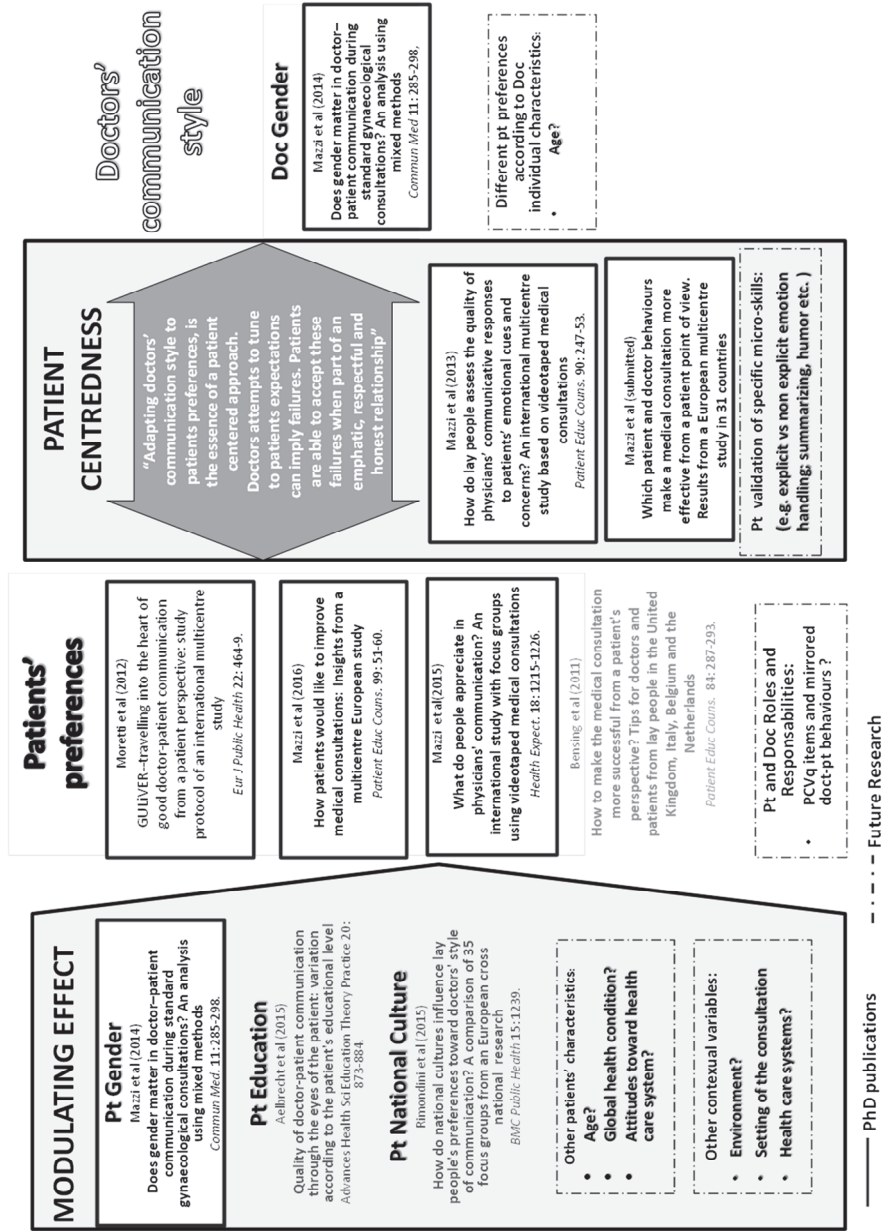
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# Samenvatting

**(summary in Dutch)**

Dit proefschrift richt zich op de vraag wat Europese burgers en gebruikers van eerstelijnszorg belangrijk vinden in de communicatie tussen artsen en patiënten.

Het betrekken van het gezichtspunt van burgers en patiënten in de evaluatie van de kwaliteit van de communicatie van artsen is van fundamenteel belang aangezien patiënten vaak problemen ervaren met de kwaliteit van de arts-patiënt communicatie en bovendien regelmatig andere doelen en prioriteiten hebben dan hun artsen. Weten wat de voorkeuren, verwachtingen en behoeften van patiënten zijn vergroot daarmee de kans dat het medisch consult succesvol is in de ogen van de patiënt.

Hett onderzoeksprogramma dat in dit proefschrift wordt beschreven begint met een multicentre focusgroep studie onder de naam GULiVer (GULiVer = Gent, Utrecht, Liverpool, Verona - de 4 deelnemende universiteitssteden-). Deze studie vond plaats onder uit de algemene bevolking geselecteerde burgers uit België, Nederland, Engeland en Italië, die volgens een gestandaardiseerd protocol dezelfde set video's van arts-patiënt gesprekken observeerden, individueel voorzagen van een kwaliteitsscore en vervolgens in focusgroepen bespraken wat hen goed en slecht beviel aan de communicatie van de dokters in de opgenomen consulten.

Om op een evenwichtige manier de kwalitatieve en kwantitatieve data, afkomstig van focusgroep discussies, vragenlijsten en beoordelingsschalen te integreren werd gebruik gemaakt van een 'mixed method' design teneinde recht te doen aan de complexiteit van het communicatieproces tussen dokters en patiënten. Hoofdstuk 2 geeft een gedetailleerde beschrijving van het (complexe) onderzoeksdesign. Alle commentaren in de groepsdiscussies werden schriftelijk vastgelegd en in het Engels vertaald om in een gezamenlijke inspanning van de vier deelnemende centra door middel van een inductieve inhoudsanalyse tot een codeerschema te komen waarmee de kwalitatieve gegevens gereduceerd konden worden tot een beperkt aantal variabelen die konden worden gebruikt in statistische analyses. Dit codeerschema is in de bijlage opgenomen.

De eerste van de drie op deze focusgroepen gebaseerde empirische studies (hoofdstuk 3) liet zien dat er in de focusgroepen het meest gepraat werd over taak- en probleem-gerelateerde uitingen van de artsen, meestal in positieve zin, gevolgd door affectief/emotionele uitingen die verreweg het meest gewaardeerd werden, althans zolang ze op professioneel niveau werden geuit en niet te persoonlijk van aard waren. Herhalingen en

routinematige terugkoppelingen (ok, goed) kregen negatief commentaar; ze werden als banaal of overbodig beschouwd en als gebrek aan belangstelling. Aantekeningen maken of dossiers lezen en het ontbreken van oogcontact werden ook van negatief commentaar voorzien. Uitingen als het vragen van toestemming of het maken van verontschuldigingen werden opgevat als onzekerheid en gebrek aan zelfvertrouwen van de dokter. Ander doktersgedrag, zoals lachen, het gebruik van humor, maar ook het delen van beslissingen met de patiënt of het betrekken bij de besluitvorming werden gemengd onthaald. Sommige deelnemers waardeerden dat, maar anderen moesten daar weinig van hebben, hetgeen nog eens het belang onderstreept dat in de spreekkamer niet wordt uitgegaan van ongetoetste veronderstellingen, maar zorg op maat wordt geleverd.

De tweede studie (hoofdstuk 4) onderzocht of communicatie van mannelijke en vrouwelijke artsen verschillend werd gewaardeerd in de uit mannen respectievelijk vrouwen samengestelde focusgroepen uit GULiVer studie. Over het algemeen waren er weinig verschillen tussen de mannelijke en vrouwelijke deelnemers in de individuele beoordeling van de kwaliteit van de communicatie van respectievelijk mannelijke en vrouwelijke artsen. Er waren wel systematische kwaliteitsverschillen, maar die liepen niet langs de gender-lijn. Noch het geslacht van de artsen noch dat van de deelnemers aan de focusgroepen had enige invloed op de vraag hoe de kwaliteit van de communicatie van iedere arts werd gescoord door de groepsdeelnemers. Wel waren er enkele hoofdeffecten van het geslacht van groepsdeelnemers of artsen als gekeken werd naar frequentie van de discussieonderwerpen die in de focusgroepen aan de orde kwamen en de negatieve of positieve lading van het daarmee samenhangende commentaar. Vrouwelijke focusgroepsdeelnemers deden iets meer kritische uitspraken dan mannelijke deelnemers, met als enige uitzondering dat vrouwen vaker dan mannen positieve opmerkingen maakten als een arts uitnodigend was in plaats van directief.

Een significant man/vrouw verschil bij de artsen was dat vrouwelijke artsen meer negatieve commentaren kregen dan mannelijke artsen wanneer zij openlijk neutraal of onpersoonlijk waren, misschien omdat ze hiermee niet voldeden aan het algemene verwachtingspatroon rond vrouwelijke artsen. Voor alle andere soorten van communicatie werden geen significante verschillen gevonden binnen de vier 'sexe dyaden' (mannelijke artsen/mannelijke focusgroepdeelnemers; mannelijke artsen/vrouwelijke

deelnemers; vrouwelijke artsen/mannelijke deelnemers; vrouwelijke artsen/vrouwelijke deelnemers). Dit suggereert dat voor de meeste mensen gender niet zo'n rol speelt in de arts-patiënt communicatie. Dit gold in het bijzonder voor empathisch gedrag van artsen dat in zijn algemeenheid zowel door mannen als vrouwen heel positief werd beoordeeld, terwijl, omgekeerd, sommige andere gedragsvormen door mannen èn vrouwen sterk werden bekritiseerd en als inadequaat werden bestempeld (bijvoorbeeld het routinematig lijstjes met vragen afvinken, of het vermijden van oogcontact).

In de derde studie, beschreven in hoofdstuk 5, werd aan de focusgroepdeelnemers gevraagd om 16 videofragmenten te bekijken. Deze fragmenten waren geselecteerd uit de eerder vertoonde videoclips van arts/patiënt consulten, en hadden met elkaar gemeen dat de patiënt een negatieve emotie liet zien (angst, bezorgdheid, boosheid) waarop de arts al dan niet reageerde. De deelnemers werd gevraagd om de kwaliteit van de reactie van de arts te scoren. Het geven van 'ruimte' aan de patiënt en het expliciet tonen van empathie werden universeel door de deelnemers aan de focuusgroepen van belang gevonden als de meest adequate reactie op de door de patiënt geuite emoties. Empathische reacties kregen de hoogste kwaliteitsscores van alle deelnemers, onafhankelijk van hun achtergrondkenmerken en nationaliteit. Reacties als het veranderen van onderwerp, het negeren van de emotionele uiting van de patiënt, het geven van ongevraagde informatie of advies kregen allemaal een onvoldoende in de kwaliteitsbeoordeling. Het globale oordeel van de groepsdeelnemers over de algemene kwaliteit van de communicatie van de arts hing positief samen met de scores die werden toegekend aan de reacties van de arts op uitingen van negatieve emoties, hetgeen wijst op een 'halo'-effect. Zo resulteert bijvoorbeeld een afkappende reactie van de arts niet noodzakelijkerwijs in een lagere kwaliteitsscore als diens overall kwaliteitsscore hoog was. Individuele achtergrondkenmerken van de focusgroepdeelnemers en het land waaruit ze afkomstig waren beïnvloedden samen met het bovengenoemde 'halo-effect' het oordeel over de kwaliteit van de reacties van de artsen op de emotionele uitingen van de patiënt. Oudere, vrouwelijke en lager opgeleide focusgroepdeelnemers en deelnemers uit België en Italië gaven significant hogere kwaliteitsscores dan jongere, mannelijke en hoger opgeleide groepsdeelnemers en, onafhankelijk daarvan, deelnemers uit Nederland en Engeland.

Tot zover de resultaten van de eerste multicenter-studie (GULiVer-1). Ter validatie van de resultaten van deze studie werd een tweede multicenter studie (GULiVer-2) uitgevoerd in samenwerking met het door de Europese Commissie gefinancierde QUALICOPC-project (Quality and Costs of Primary Care in Europe: een grooschalig Europees vragenlijstonderzoek, gehouden onder 7270 eerstelijnspatiënten uit 31 Europese landen. Het QUALICOPC-project bevatte als een van de onderdelen een door de GULiVer -groep ontwikkelde vragenlijst: de PVCq (Patient Consultation Values questionnaire). Dit is een vragenlijst over waarden die door patiënten aan verschillende elementen van arts/patiënt consult worden gehecht. De vragenlijst had als doel om vast te stellen hoe patiënten dachten dat artsen zowel als patiënten een medisch consult effectiever zouden kunnen maken vanuit het perspectief van de Patiënt. Deze vragenlijst was gebaseerd op tips die de deelnemers aan de focusgroepen uit GULiVer-1 aan het eind van de focusgroepdag hadden geformuleerd doop basis van hun observaties en onderlinge gesprekken. De tips waren deels aan artsen, maar deels ook aan patiënten gericht en zijn in een afzonderlijke artikel gepubliceerd. Het omvangrijke gegevensbestand maakte het mogelijk om de geldigheid en de generaliseerbaarheid vast te stellen van de tips die in de focusgroepen aan artsen en patiënten waren gegeven. In eerste instantie in representatieve steekproeven uit de vier aan de GULiVer-1-studie deelnemende landen (België, Nederland, Engeland en Italië) en vervolgens in de totale onderzoeksgroep van de QUALICOPC-studie. De onderwerpen die in GULiVer-2 aan de orde waren betroffen de vraag of de in de vragenlijst geformuleerde tips nu algemeen werden onderschreven en gedeeld door alle patiënten of dat er verschillen gevonden zouden worden voor specifieke subgroepen van patiënten geordend naar socio-demografische kenmerken. Ook onderzocht werd de vraag of contextuele kenmerken, zoals culturele en omgevingskenmerken op land-niveau van belang zouden zijn voor het verklaren van internationale verschillen in patiënten voorkeuren. De resultaten van deze Europese vragenlijststudie zijn beschreven in hoofdstuk 6 en 7 van dit proefschrift.

De bevindingen van de eerste vragenlijststudie (hoofdstuk 6) bevestigen de geldigheid en generaliseerbaarheid van de kwalitatieve bevindingen van de door de focusgroepdeelnemers in 4 landen geopperde tips. Alle tips voor de dokter en de patiënt werden als (zeer) belangrijk beschouwd door het merendeel van de ondervraagde patiënten. De dokter moet aandachtig luisteren, de patiënt serieus nemen, de patiënt als mens benaderen,

voldoende tijd uittrekken voor een consult en heldere informatie geven over wat er gedaan moet worden als er iets mis gaat. Anderzijds dienen patiënten assertief te zijn, actief bij te dragen door zich aan de gemaakte afspraken te houden, open te zijn over hun ziekte- en gezondheidsgeschiedenis en over hun symptomen en, als dat van belang is, over psychosociale zaken. Ze dienen zich te houden aan het overeengekomen behandelplan, de dokter feedback te geven op het resultaat van de behandeling en hem of haar te informeren over zelfmedicatie en het gebruik van alternatieve geneeswijzen. Sommige tips riepen gemengde reacties op. Over twee gedragingen van artsen werd heel wisselend gedacht : " ik hoef aan een doktersassistente of verpleegkundige geen details te geven over mijn gezondheidsproblemen voordat ik mijn huisarts heb gezien" en : "de huisarts geeft me advies over betrouwbare bronnen van gezondheidsinformatie". Ook sommige gedragingen van patiënten werden wisselend beoordeeld, bijvoorbeeld: "het maken van aantekeningen voorafgaand aan en tijdens het consult" en "het meebrengen van een familielid".

De gegevens uit het grote vragenlijstonderzoek bevestigden twee belangrijke kwalitatieve bevindingen uit de GULiVer-1 studie van Bensing et al uit 2011: de dominante rol die aan de arts wordt toegekend en de verschillende toedeling van verantwoordelijkheden aan artsen en patiënten. Sommige verantwoordelijkheden werden gelijkelijk verdeeld: zowel dokter als patiënt dienen bereid te zijn tot samenwerking gebaseerd op wederkerigheid in de communicatie door het tonen van respect en van eerlijkheid, door het verstrekken van informatie, de wijze van aanpak van de behandeling en voldoende tijd. Aan de andere kant laten de gegevens zien dat voor sommige onderdelen van de verantwoordelijkheid een groter aandeel aan de dokter dan aan de patiënt wordt toegekend, bijvoorbeeld bij het initiatief ten aanzien van de onderwerpen die tijdens het consult op tafel komen (de 'agenda' ) en het checken of de patiënt de vragen en afspraken werkelijk begrepen heeft.

Tussen de vier landen werden geen verschillen gevonden bij vier van de vijf tips die het meest van belangen werden geacht: 1) luisteren, 2) de patiënt als mens tegemoet treden, 3) weten wanneer de patiënt naar een specialist moet worden verwezen en 4) het geven van heldere richtlijnen voor het geval dat er zaken verkeerd gaan. Echter, de patiënten uit België verschilden van de rest in het hechten van weinig belang aan de verantwoordelijkheid van de patiënt voor het voorbereiden van het consult,

de aanwezigheid van een familielid bij het consult en de mogelijke verstoring van het consult door het beantwoorden van de telefoon door de dokter. Patiënten uit Italië hechtten evenmin weinig belang aan hun eigen voorbereiding op het consult en aan de aanwezigheid van familieleden. Ook vonden zij het minder belangrijk dat dokters aanvullende gezondheidsinformatie verstrekten door middel van folders of het wijzen op relevante websites. Deze bevindingen suggereren voorzichtigheid bij het interpreteren van onderzoeksresultaten over patiënten preferenties zonder rekening te houden met de context van het land. Dit pleit voor meer internationaal vergelijkend onderzoek naar de invloed van cultuurverschillen en systeemverschillen op opvattingen en voorkeuren van patiënten.

In hoofdstuk 7 worden de analyses uitgebreid naar alle 31 Europese landen van de QUALICOPC-studie. Het onderzoek laat zien dat de kernfuncties van het arts/patiënt consult namelijk: als mens behandeld worden, bij het gesprek betrokken worde, heldere informatie krijgen, duidelijk vaststellen of er een verwijzing moet plaatsvinden en continuïteit van zorg in alle landen en door alle patiënten worden gedeeld als 'universele' waarden. Patiënten willen graag erkend worden als 'partner' en als 'persoon' in hun relatie met de arts. Aan deze twee aspecten van de rol van de dokter werd samen met 'continuïteit van zorg' een groot belang toegekend. Aansluitend op de vorige studie legden de deelnemers in zijn algemeenheid een grotere verantwoordelijkheid voor een effectief consult bij de arts en minder bij hun eigen actieve inbreng. Nadere analyses van de verdeling van de voorkeuren van patiënten over subgroepen lieten zien dat het ontvangen van aanvullende informatie van artsen via folders en aanbevolen websites, alsmede het actief participeren als patiënt in het consult opvallend veel minder consensus genereerden. Vermoedelijk zijn deze aspecten gevoeliger voor heterogene verwachtingen en behoeften van patiënten.

Enkele verschillen moeten worden benoemd. Vrouwelijke patiënten hadden de neiging systematisch hogere scores te geven dan mannelijke, hoewel de verschillen tussen mannen en vrouwen klein waren. Patiënten met een chronische ziekte waardeerden 'zorgvuldige planning' en 'behandeld worden als een partner en als persoon' hoger dan niet-chronisch zieke patiënten. Ouderen waardeerden 'actieve participatie in het consult' en 'als persoon behandeld worden door de arts' hoger dan jongeren. Jongeren hadden, vergeleken met ouderen, meer waardering voor artsen die aanwijzingen gaven over waar meer informatie te vinden

was, zoals brochures of betrouwbare websites maar hechtten minder waarde aan het belang van zich goed op het consult voor te bereiden door aantekeningen te maken van symptomen en van de vragen die ze hadden willen stellen.

De structuur van de gezondheidszorgstelsels had slechts een marginale invloed op het belang dat werd gehecht aan de rollen en verantwoordelijkheden van artsen en patiënten. Wat culturele aspecten betreft zijn de cultuurdimensies van Hofstede (1980) gebruikt. Ondervraagden uit landen met een minder strikte, collectivistische cultuur, zoals Ierland of IJsland hechtten meer belang aan rollen en verantwoordelijkheden van artsen en patiënten dan ondervraagden uit individualistische en restrictievere culturen als Letland en Italië.

Concluderend kunnen we opmerken dat veel van de bevindingen sporen met de aanbevelingen van communicatierichtlijnen en handleidingen en zijn als zodanig zeker niet nieuw voor clinici en communicatietrainers, maar veel onderdelen van patiëntgerichte communicatie zoals een actief luisterende houding, het behandelen van de patiënt als persoon, het partnerschap van arts en patiënt, en met name empathie, worden nu geschraagd door sterke evidentie vanuit het gezichtspunt van de patiënt. Deze communicatie uitingen blijken universeel gewaardeerd te worden in vele Europese landen. De GULiVer -studies bevestigden ook dat achtergrondkenmerken van burgers en patiënten van invloed zijn op hun oordeel over de kwaliteit van de arts/patiënt communicatie.

Dit werd in het bijzonder waargenomen met betrekking tot sommige verbale en nonverbale uitingen die heel verschillend beoordeeld werden door de deelnemers aan de focusgroepen, zoals bijvoorbeeld het gebruik van humor, maar ook het delen van de besluitvorming met de patiënt. In het kort kaan worden geconcludeerd dat een warme, empathische en persoonlijke houding door nagenoeg iedereen wordt gewaardeerd, maar dat dit zeker niet betekent dat het in de arts-patiënt communicatie gaat om 'one size fits all'. Tal van uitingen van de arts riepen verschillende reacties op met betrekking tot de ervaren kwaliteit. Deze bevindingen maken nog eens duidelijk wat de gevoeligste communicatieaspecten zijn waaraan clinici aandacht dienen te schenken in hun benadering. Communicatie dient ten alle tijde persoonlijk te zijn en toegesneden op de specifieke behoeften en voorkeuren van de patiënt. Empathie kan daarbij helpen en wordt door iedereen gewaardeerd.

*Samenvatting*

Tenslotte: Patiënten maakten glashelder dat beide partijen, artsen en patiënten, bij moeten dragen aan het slagen van het medisch consult ofschoon ze óók willen dat de arts de leiding over de interactie blijft houden. Zij realiseerden zich goed dat ze niet alleen rechten hebben, maar ook plichten. Deze volwassen kijk op 'patient empowerment' resulteert in een beter uitgebalanceerde arts-patiënt relatie en vormt een sterk pleidooi voor het betrekken van burgers en patiënten bij het ontwikkelen van criteria voor goede zorg.

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# Appendix

## The GULiVer questionnaire

## Background characteristics

Date: _ _ - _ _ - _ _ _ _

**1. What is your date of birth?**

_ _ - _ _ - _ _ _ _

**2. What is your gender?**

❑ Male

❑ Female

**3. What is the highest education you graduated?**
(mark one answer)

❑ None

❑ Primary school

❑ Secondary school

❑ Higher education

**5. What is your current marital status?**

❑ Married

❑ Living together

❑ Divorced

❑ Widow(er)

❑ Single

**6. In what country were you born?**

❑ United Kingdom / Italy / The Netherlands / Belgium

❑ Other country, namely ……………………………………………………………

**7. In what country was your father born?**

❑ United Kingdom / Italy / The Netherlands / Belgium

❑ Other country, namely ……………………………………………………………

**8. In what country was your mother born?**

❑ United Kingdom / Italy / The Netherlands / Belgium

❑ Other country, namely ……………………………………………………………

*Appendix*

**9. Which description applies currently the most to you?**
   *(mark one answer)*
   I am:
   ❑ Going to school / college
   ❑ Employed
   ❑ Unemployed/job-seeker (registered at the job centre)
   ❑ Incapacitated for work
   ❑ Housewife/-man
   ❑ Retired

**10.  Membership of any patient or health care organisation**
   ❑ Yes
      If yes, which one? …………………………………………………………………
   ❑ No

**11. COOP-WONCA charts: A number of questions about your health will follow. All questions refer to <u>the past two weeks</u>. For each question you can indicate the answer that fits best to you by marking a number at each question.**

**A. Physical fitness**
   What was during the past 2 weeks the hardest physical activity you could do for at least 2 minutes?

| | | |
|---|---|---|
| Very heavy, (for example) run, at fast pace | | **1** |
| Heavy, (for example) jog, at slow pace | | **2** |
| Moderate, (for example) walk, at fast pace | | **3** |
| Light, (for example) walk, at medium pace | | **4** |
| Very light, (for example) walk, at a slow pace or not able to walk | | **5** |

**B. Feelings**

How much have you been bothered by emotional problems such as feeling anxious, depressed, irritable or downhearted and sad, during the past 2 weeks?

| | | |
|---|---|---|
| Not at all | ☺ | 1 |
| Slightly | | 2 |
| Moderately | | 3 |
| Quite a bit | | 4 |
| Extremely | | 5 |

**C. Daily activities**

How much difficulty have you had during the past 2 weeks, doing your usual activities or tasks, both inside and outside the house, because of your physical and emotional health?

| | | |
|---|---|---|
| No difficulty at all | | 1 |
| A little bit of difficulty | | 2 |
| Some difficulty | | 3 |
| Much difficulty | | 4 |
| Very much difficulty | | 5 |

**D. Social activities**

Has your physical and emotional health limited your social activities with family, friends, neighbors or groups during the past two weeks?

| | | |
|---|---|---|
| Not at all | | 1 |
| Slightly | | 2 |
| Moderately | | 3 |
| Quite a bit | | 4 |
| Extremely | | 5 |

**E. Overall health**

How would you rate your health in general over the past two weeks?

| | | |
|---|---|---|
| Excellent | | 1 |
| Very good | | 2 |
| Good | | 3 |
| Fair | | 4 |
| Poor | | 5 |

**F. Pain**

In general, how much pain did you have in the past two weeks?

| | | |
|---|---|---|
| No pain | | 1 |
| Very mild pain | | 2 |
| Mild pain | | 3 |
| Quite severe pain | | 4 |
| Severe pain | | 5 |

**G. Tiredness**

In general, how tired were you in the past two weeks?

| | | |
|---|---|---|
| Not at all tired | | 1 |
| Slightly tired | | 2 |
| Quite tired | | 3 |
| Very tired | | 4 |
| Extremely tired | | 5 |

**12.     Do you suffer or have you been diagnosed from a chronic diseases?**

❑ yes
❑ no

**13. General Health Questionnaire (GHQ-12)**
**Please consider the last four weeks and answer the following questions by selecting and circling one of the four answer options.**

RECENTLY:

| | | | | |
|---|---|---|---|---|
| 1. Been able to concentrate on what you're doing | Better than usual | Same as usual | Less than usual | Much less than usual |
| 2. Lost much sleep over worry | Not at all | No more than usual | Rather more than usual | Much more than usual |
| 3. Felt you were playing a useful part in things | More so than usual | Same as usual | Less useful than usual | Much less useful |
| 4. Felt capable of making decisions about things | More so than usual | Same as usual | Less useful than usual | Much less useful |
| 5. Felt constantly under strain | Not at all | No more than usual | Rather more than usual | Much more than usual |
| 6. Felt you couldn't overcome your difficulties | Not at all | No more than usual | Rather more than usual | Much more than usual |
| 7. Been able to enjoy your normal day-to-day activities | More so than usual | Same as usual | Less useful than usual | Much less useful |
| 8. Been able to face up to your problems | More so than usual | Same as usual | Less useful than usual | Much less useful |
| 9. Been feeling unhappy and depressed | Not at all | No more than usual | Rather more than usual | Much more than usual |
| 10. Been losing confidence in yourself | Not at all | No more than usual | Rather more than usual | Much more than usual |
| 11. Been thinking of yourself as a worthless person. | Not at all | No more than usual | Rather more than usual | Much more than usual |
| 12. Been feeling reasonably happy, all things considered | More so than usual | About the same as usual | Less so than usual | Much less than usual |

**14. Indicate for each statement to which degree this is important in a consult with your general practitioner.**

I find it important that my general practitioner…

|  | Not important | Rather important | Important | Extremely important |
|---|:---:|:---:|:---:|:---:|
| a. examines me | ❏ | ❏ | ❏ | ❏ |
| b. determines what is wrong with me | ❏ | ❏ | ❏ | ❏ |
| c. explains what is the matter clearly | ❏ | ❏ | ❏ | ❏ |
| d. is kind | ❏ | ❏ | ❏ | ❏ |
| e. takes me seriously | ❏ | ❏ | ❏ | ❏ |
| f. listens well to what I have to say | ❏ | ❏ | ❏ | ❏ |
| g. is open to me | ❏ | ❏ | ❏ | ❏ |
| h. takes enough time for me | ❏ | ❏ | ❏ | ❏ |
| i. advices me on what I can do about my problems | ❏ | ❏ | ❏ | ❏ |
| j. sympathizes with me | ❏ | ❏ | ❏ | ❏ |
| k. gives me enough attention | ❏ | ❏ | ❏ | ❏ |
| l. does something to tackle the problems | ❏ | ❏ | ❏ | ❏ |
| m. gives good information about the treatment | ❏ | ❏ | ❏ | ❏ |
| n. takes the final decision on which treatment or help I will receive | ❏ | ❏ | ❏ | ❏ |
| o. gives medication for my complaints | ❏ | ❏ | ❏ | ❏ |
| p. discusses different treatment options with me | ❏ | ❏ | ❏ | ❏ |
| q. refers me (e.g. to a specialist or physical therapist) | ❏ | ❏ | ❏ | ❏ |
| r. involves me in the decision which help or treatment I will receive | ❏ | ❏ | ❏ | ❏ |
| s. informs me about possible side effects | ❏ | ❏ | ❏ | ❏ |

I find it important that my general practitioner…

| | Not important | Rather important | Important | Extremely important |
|---|---|---|---|---|
| t. shows good judgment on possible additional non-medical causes (like problems at work/school/home or psychological problems) of my health problem | ❑ | ❑ | ❑ | ❑ |
| u. pays attention to possible emotional problems that are related to my health | ❑ | ❑ | ❑ | ❑ |
| v. is willing to talk about errors or issues that, in my opinion, did not went well | ❑ | ❑ | ❑ | ❑ |
| w. discusses with me about improving my health (e.g. by giving me advice about food and lifestyle) | ❑ | ❑ | ❑ | ❑ |

**15. Indicate among the following options how often you have consulted your GP <u>in the last half year?</u>**

❑ Never/once a year
❑ Less than 5 times a year
❑ Less than 10 times a year
❑ about once a month
❑ up to 3 times per month
❑ about once a week
❑ more than once a week

**15.a How often have you consulted medical specialists <u>in the last half year?</u>**

❑ never
❑ just once
❑ more than once

**15.b How often did you have to attend the Emergency Room <u>in the last half year</u>?**

❑ never
❑ once
❑ more than once

**15.c  How often have you been admitted  to the hospital <u>in the last half year</u>?**

&#10065; never

&#10065; once

&#10065; more than once

**16.  *Trust in Medical Profession scale* (TMP): this part of the questionnaire is about the trust you put in health care.**

| | Strongly agree | Agree | Neither agree or disagree | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| Doctors (in general) care about their patients' health just as much or more as their patients do. | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |
| Sometimes doctors care more about what is convenient for them than about their patients' medical needs | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |
| Doctors are extremely thorough and careful | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |
| You completely trust doctors' decisions about which medical treatments are best | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |
| Doctors are totally honest in telling their patients about *all* of the different treatment options available for their conditions | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |
| Doctors think only about what is best for their patients. | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |
| Sometimes doctors do not pay full attention to what patients are trying to tell them | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |
| Doctors always use their very best skill and effort on behalf of their patients | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |
| You have no worries about putting your life in the hands of the doctors | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |
| A doctor would never mislead you about anything | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |
| All in all, you trust doctors completely. | &#10065; | &#10065; | &#10065; | &#10065; | &#10065; |

## The GuLiVer coding system

## categories and subcategories definitions

| Nonverbal communication | | |
|---|---|---|
| All behaviour a GP expresses that is nonverbal | | |
| Nonverbal behaviour | Facial expression. The facial expressions a GP shows. Includes smiling (E.g. 'She looked too seriously'). | Eye contact The aspects that reflect on the way a GP has eye contact with the patient. (E.g. 'Looking more at paper, than at patient'). |
| | Touch Every comment about how the GP uses touch (E.g. 'He has touched the lady before leaving'). | Laughing. All the comments about the moments the GP laughs during a conversation. (E.g. 'Well liked, not really, it did not fit in, as it were, her laughing'). |
| | Reading and Writing. All the comments concerning the degree to which the GP is reading and writing and his manner in doing so (E.g. 'So asking questions and while she is talking, he starts writing'). | Others All the other nonverbal behaviour. E.g. all the ticks a GP has, like fiddling with hands or a pen, belong in this subcategory. (E.g. 'Fiddling with pencil'), or general body language. (E.g. a GP should sit like this, in a way "please tell") |

| Process-oriented expressions | | |
|---|---|---|
| Concerns all the comments about the way a doctor is handling the process of the conversation. These are specific elements of: a) the structure of the conversation (opening/closing, link between different part of the conversation, flexibility, time) b) the degree in which a GP involves his patients, and c) the structure of the doctor's speech (repetition, fillers, interruptions, jargons). See also rule 12 (the content has always the preference…) | | |
| Structuring | Every statement related to any aspect of guidance of the conversation, starting from the introduction to the ending of the conversation. | |
| | Changing of topics and signposting Comments about the way the GP changed topics 'out of the blue' or signposted to the patient what will happen next. (E.g. '*He had forgotten to ask something.* Than asked something out of the blue'). (E.g. "*he introduced his question very well. He frequently said things like, okay, so* | Opening or closing of the interview A specific remark about the beginning or end of the conversation. (E.g. '*No doctor shook hands'*). |

| | | |
|---|---|---|
| | *now I'm going to ask about this and then the question followed*") | |
| | <u>Time issues</u><br>Every comment regarding the duration (time) of the conversation (E.g. '*I also felt as if she run out things to say, she was filling time*' or '*They were hurried*'). | <u>Flexibility</u><br>Comments about the structure of the conversation. Doctor was flexible, adapted the interview structure to patient's needs or going through a checklist (E.g. '*Apparently they have to follow some kind of list*'). In order to distinguish between <u>flexibility</u>, <u>complete picture</u> and <u>collecting information</u> see rule 13 |
| **Summarizing** | Statements referring to the way in which a GP summarized the topics that were discussed in a conversation. We will only use "summarizing" when a participant is referring to a structured summary of long pieces of information (otherwise it will be coded as 'verifying'). (E.g. '*But he did say, let's sum up the story and I think that that was good*'). | |

| | | |
|---|---|---|
| **Patient-involving** | All aspects that are related to: the involvement of patients in the conversation. | |
| | <u>Sharing plans/ideas</u><br>Every statement concerned with exploring a patient's explanation of the complaint, or the patient's expectation regarding the follow-up steps the GP has to take. (E.g. '*Asking patient what she thinks should be done now*'). | <u>Asking permission</u><br>All the statements about the GPs asking of permission or apologises for asking questions or doing certain things (E.g. '*Asking permission to take notes. You don't go for a chat*'). |
| | <u>Verifying</u><br>Statements where the doctor asks the patient to confirm that they have understood what was said by the patient. (E.g. '*To be confirmed is ok, when he says "you said so and so, did I got it right?" or "is it this you intended to say?"*'. (See rule 15 to differentiate it from "summarizing") | |
| **Speaking peculiarities** | Statements about the aspects that interrupt normal fluent speech. | |
| | <u>Repetition.</u><br>Statements about the GP's repetition of the same questions, irritating repetitions (E.g. '*She repeats the questions*'). | <u>Fillers</u><br>Minimal comments that the GP uses e.g. uses 'ok' all the time (E.g. '*He says okay all the time*'). |
| | <u>Comprehensibility</u><br>Stopping mid-sentence, medical/technical jargon. (Eg. '*She did not complete her sentences*'). | |

| Task-oriented or problem-focused expressions | | |
|---|---|---|
| **Attitude of the doctor** | This category focuses on the overall attitude a GP expressed regarding the instrumental tasks during the conversation e.g. 'businesslike' | |
| | Self-confident.<br>Every comment concerned with the degree to which a GP shows being confident, relaxed in his role and not being nervous. (E.g. *'I thought she was very nervous'*). | Complete picture.<br>This subcategory is concerned with the degree to which doctors tried to create a complete picture of the situation e.g. covered all the relevant points. (E.g. *'Eventually in the end of the interview I felt she had done quite a concise interview'*). In order to distinguish between flexibility, complete picture and collecting information see rule 13 |
| | Businesslike /Straight to the point.<br>Every comment about the degree in which a GP is businesslike and straight the point, does not dwell and always ask pertinent questions (E.g. '*But my first impression was that she was very straight to the point'*). | Competency<br>Every comment referring to the general knowledge, the experience or the professionalism of the doctor. (E.g. '*she knows little'; 'She didn't know how to do it (the interview)'; 'he gave the impression of being appropriate in terms of being professional'*) |
| | Clarity of interview.<br>The degree to which a GP was clear to the patient, globally (overall interview style) and specifically (asked clear questions) (E.g. 'And, yes, she was just the most clear in everything'). | Other/general<br>Those statements which are not specified by a particular element of communication. (E.g. 'The communication could have been a little better'). |
| **Collecting information** | All the statements which refer to the **content** of questions/information asked/collected by the Gps. Where in the same questions information are given both on the content (psychosocial, medical…) of the questions and on the way the question has been asked (clarity…) the preference will be given to the content. See also rule 12. In order to distinguish between flexibility, complete picture and collecting information see rule 13. | |
| | Medical<br>Statements referring to medical questions e.g. asked relevant/irrelevant medical questions (E.g. '*She asked for the medical history most extensively'*). | Psycho-social<br>Statements referring to the questions the GP asked concerning social or psychological matters (E.g. '*Well, what struck me was that no GP asked her whether she had had sex with her current partner recently').* |
| | Biopsychosocial<br>-Combination of physiological, psychological, and social questions. (E.g. '*She would suggest or specify the difficulties the patient could have at work, without considering the pathology this woman presented'*).<br>-whenever the content is not specified the statement will be arbitrarily classified as biopsysoc | |

| Giving information | All the statements concerning the giving of information. This is divided into the same categories as 'asking questions'. | |
|---|---|---|
| | Medical<br>Statements referring to medical information the GP gave. (E.g. *the main thing for me is that he tells me straight away what causes the discharge*) | Biopsychosocial<br>-Combination of physiological, psychological, and social information.<br>-whenever the content is not specified the statement will be arbitrarily classified as "biopsysoc". |
| | Social<br>Statements referring to the information the GP gave concerning social matters. she was put off too quickly, that she was not ready yet to tell her partner. It can have consequences when they have sex | Psychological<br>Statements referring to the information the GP gave concerning psychological matters. (E.g. *Doctors can orientate the patient and tell him: "probably the origin of the problem could be in part psychological"*) |
| Providing Solution | Statements GPs possible solutions at the end of the interview for the problems discussed in the consultation (E.g 'He proposed solutions to resolve distress at work'). | |

| **Affective or emotional expressions** | | |
|---|---|---|
| **Attitude of the doctor** | This category is concerned with the overall attitude a GP expressed regarding affective/emotional components. This included statements related to empathy and an inviting attitude of the GP. | |
| | Showing interest in patient / commitment<br>The degree to which the GP shows to be interested in the patient and shows commitment to the patient (*E.g.1 ' doctors need to be committed in order to understand what's happening'; E.g. 2 'He was getting involved'*))<br>-Statements referred to being treated as a person (will be also starred) (E.g. *I would like the GP look at me on the whole*). | Pleasant attitude.<br>The degree to which a GP has a nice, friendly attitude and was sympathetic (E.g.1 'pleasant attitude, you feel like really talking to her'; E.g.2 she appear to me as being very nice, friendly) |
| | Inviting attitude*<br>The degree to which the GP expresses an open, inviting attitude. (E.g. *the situation with Gp 1 was very very very embarrassing*) | Reassurance / trust<br>Every comment concerned with the degree to which a GP reassures the patient and gives trust (E.g. *'He reassures the patient extensively'*) |
| | Facilitating*<br>All the specific statements concerning the way in which the GP gives room for the patient to guide the conversation. (E.g. *'I likes GP 1 asked the patient if she had something to* | Empathic.<br>The degree to which a GP had an empathic attitude towards the patient, showed to be emotionally close to his problems. We will only code for 'empathy' when a |

| | | |
|---|---|---|
| | *add'*)<br>*Inviting attitude different from facilitating*: the first one refer to a general attitude of the doctor while the second one refer to specific behaviours performed by the doctor in order to facilitate the patient. | participant is specifically referring to the doctor who is placing himself in the shoes of the patient (*E.g 'He could have been more empathic'*). |
| | Listening.<br>Concerns the degree to which a patient indicates that a GP is listening. (E.g. '*Too often the doctor is not listening to what you are saying'*). | Neutral / No personal remark<br>All the aspects reflecting on the way a GP is stepping out of his role and is no more neutral. Two different aspects are considered:<br>-being judgmental (E.g *I think that most GP have reacted wrong. Only the fourth, he said just "ok". Involved but completely neutral*)<br>-being "too informal": when he gives personal opinion/remarks (E.g. '*Gave personal opinion about 'friend does not have to know'*;) |

| General | | |
|---|---|---|
| **Socio demo of the doctor** | This category is concerned with all the statements about the socio demographic characteristics of the doctor. | |
| | Doctor's gender<br>All the comments about the gender of the GP (E.g. '*From a female doctor I would have expected a more delicate and sensible approach'*). | Doctor's age<br>All the comments about the age of the GP. |
| | Doctor's ethnicity<br>All the comments about the ethnicity of the GP. | |
| **Other** | All the statements than can be stated in none of the other categories. Statements referring to the concepts of "continuity of care" or "Objective examination" or "getting distracted" will be classified as others and starred. | |

## Coding system rules

**Verbal turn division rules:**

The focus group will be divided into verbal turns using an excel file. All the turns need to be classified. Even in a discussion, we code every remark.

1) Verbal turns often contain multiple information (concepts) regarding participants' preferences/opinion about doctors' performance. Verbal turns which include x significant comments referring to different categories/subcategories will be divided into x different statement and classified separately. Where in doubt add a row!

Example 1: *"She reassured the patient in the end and she explained what the doctor is going to do"*.
This phrase will be divided into two different statements:

| phrase | area | category | subcategory |
|---|---|---|---|
| *She reassured the patient in the end* | AFFECTIVE OR EMOTIONAL EXPRESSIONS | ATTITUDE OF THE DOCTOR | Reassurance/trust |
| *She explained what the doctor is going to do* | PROCESS ORIENTED | STRUCTURING | Changing of topics and signposting |

When there is only one row in a statement we will code this as 1. When there are more than two rows we will code them as 1.1, 1.2 etc

2) Where the participants give the explanation of his/her comment (on doctor's performance), the explanation needs to be reported and classified together with the comment (as an unique statement).
As these information are precious, these statements will be starred so that every explanation can be subsequently retrieved.

Example 2: *"I placed her last because at a certain point of the visit she has summarized everything she had written, it is as she had been inattentive"*

Example 3: *"Doctor x has asked the patient about three times: "is there something else you would like to say?" and because of this I placed her second, because it could mean: "perhaps I have not understood you at all that well and I continue*

*to ask because I am not sure about what I myself have gathered form the patient"*

| phrase | area | category | subcategory | Starring phrases |
|---|---|---|---|---|
| *"I placed her last because at a certain point of the visit she has summarized […], it is as she had been inattentive"* | PROCESS ORIENTED | SUMMARYSING | - | * |
| *"Doctor x has asked the patient about three times […] because it could mean: "perhaps I have not understood you at all that well and I continue to ask because I am not sure about what I myself have gathered form the patient"* | PROCESS ORIENTED | SPEACKING PECULIARITIES | repetition | * |

3) Specific rules referring to repetitive phrases/concept:

a) Where the <u>same participant</u> is saying in the <u>same verbal turn </u>phrases that express the same concept and can be coded using the same label, the phrases need to be coded just once. The more significant (rich in information) phrase will be chosen as the one to be classified.

*E.g. Doctor X was too anxious (A). He was listening (B) and he was very friendly (C). But he looked like he did not know what to do actually and made me feel anxious (A).*

The same verbal turn gives three different type of information: A, B, C. Information A will be coded just once.

- *Doctor X was too anxious* (task-oriented expression/attitude of the doctor/ SELF CONFIDENT)
- *He was listening*.(Affective expression/attitude of the doctor/ LISTENING).
- *and he was very friendly*(Affective expression/attitude of the doctor/ PLESANT ATTUITUDE).
- *But he looked like he did not know what to do actually and made me feel anxious* (Task oriented expression/attitude of the doctor/ SELF CONFIDENT)

The statements *"Doctor X was too anxious"* and *" But he looked like he did not know what to do actually and made me feel anxious"* gives the same information and are both coded as Task oriented expression/attitude of the doctor/ SELF CONFIDENT. The statement —*But he looked like he did not know what to do actually and made me feel anxious* is more informative and will be coded separately while the statement —*Doctor X was too anxious"* will be collapsed into the following statement and coded according to it. Finally the phrase will be coded as follow:

| phrase | area | category | subcategory | Starring phrases |
|---|---|---|---|---|
| *Doctor X was too anxious. He was listening* | TASK ORIENTED | ATTITUDE OF THE DOCTOR | listening | |
| *and he was very friendly* | AFFECTIVE ORIENTED | ATTITUDE OF THE DOCTOR | Pleasant attitude | |
| *But he looked like he did not know what to do actually and made me feel anxious.* | TASK ORIENTED | ATTITUDE OF THE DOCTOR | Self confident | |

Whereas the two different phrases refer to the same concept but give some important additional information that help to clarify the concept (and it is not possible to choose one of them as the most significant), the phrases will be still coded once and starred

b) Where the same participant is saying in different verbal turn phrases that express the same concept (which can be coded using the same label), the phrases will be coded again using a R to indicate that a phrase is stated once before. Same opinion about different doctors does not need the R.

c) Where different participants are saying phrases that express the same concept and can be coded using the same label, the phrases will be coded again.

4) Phrases which cannot be classified using the coding system:

1. Will be signed as "NC PARTICIPANT" whether they refer to comment which are uninformative (e.g. because too general or nonsense)
2. Will be signed in the category "OTHER" if they are informative (contain an information which is important to consider).

Where a participant is saying in the verbal turn a phrase that express not significant concepts and could be coded as —NC participant  the phrase won't be coded separately: it will be coded together with the previous row.

*E.g. I felt the girl was talking to a piece of paper, to her notes and not actually to the patient. I appreciate they are going to be nervous with the camera watching.*

The phrase "I appreciate they are going to be nervous with the camera watching"  correspond to the label "NC participant". It will be coded together with the previous phrase as "non verbal communication".

5) All the statements expressing an agreement (e.g. *"I agree"*) need to be coded the same as the statement they agree to.

6) Whenever the same comments is referred to different doctors (e.g. *"Both doctors x and y were too anxious"*) code the statement just once referring to the main doctor the discussion is about. If the comments regarding different doctors can be coded as different categories, we will code them separately (e.g. *The last guy, there was a warmth there was a sort of put the patient at ease, where the girl didn't it was very matter of fact').*


**Coding rules:**

Each statement will be classified according to 4 different levels of analysis:
1. Content of the statement/Type of information (area, category, subcategory);
2. General versus specific value of the comment
3. Positive/negative value referred to the category/subcategory
4. Positive/negative value referred to doctor's behaviour


Additional information: Repetition (R) and starred phrases (*).

1) Content of the statement: different comments refer to different type of information which refer to different areas, categories and, where present, subcategories (see the coding system).
   Specifically the coding system elaborated, based on the analysis of the three focus groups, includes:

a) 5 main Area (non verbal communication, process oriented expression, task oriented or problem focused expressions, affective or emotional expressions; others)

b) 12 categories (Nonverbal behaviour; Structuring; Summarizing; Patient-involving; Speaking peculiarities; Attitude of the doctor (task oriented); Asking questions; Giving information; Providing Solution; Attitude of the doctor (affective expressions); Socio demographic characteristics of the doctor; others)

c) Some of the categories include subcategories.

2) <u>General versus specific</u>: it has to be determined whether the assessment/comment expressed by the participant refer to something:

a) general (G), i.e. referring to the whole consultation or overall communication style (general doctor's attitude). It does not refer to a specific —incident /moment within the consultation.

b) specific (S), i.e. referring to specific communication elements or to specific doctors' behaviour or to a specific moment of the consultation (something like —incidents within the consultations )

Example 1: *"I thought she was very nervous"* (G: general doctor's attitude, style)

Example 2: *"There was a good tempo in the conversation"* (G: refers to the whole conversation)

Example 3: "She did not complete her sentences" (S: specific doctor's behaviour)

Example 4: —He did not ask about sexual activity with her partner" (S: specific doctor's behaviour)

3) <u>Value (positive or negative) of the comment</u> expressed by the patient and referring to his/her agreement with the behaviour <u>indicated in the category or (where present) in the subcategory.</u> When the value cannot be inferred, a neutral value (=) will be given

Example 5: the two following statements have both a positive value because they both refer to the agreement of the participant that a doctor has to be committed

| phrase | area | category | subcategory | +/-(cat) |
|---|---|---|---|---|
| the doctor has to be thoughtful | AFFECTIVE OR EMOTIONAL EXPRESSIONS | ATTITUDE OF THE DOCTOR | Showing interest in patient / commitment | + |
| she does treat it too light | AFFECTIVE OR EMOTIONAL EXPRESSIONS | ATTITUDE OF THE DOCTOR | Showing interest in patient / commitment | + |

Example 6: the first statement has a negative value because the patient did not like the behaviour —summarizing ; the second has a positive value because the participant liked (agreed) the behaviour —summarizing .

| phrase | area | category | subcategory | +/- (cat) |
|---|---|---|---|---|
| I placed her last because at a certain point of the visit she has summarized everything she had written, it is as she had been inattentive | PROCESS ORIENTED EXPRESSIONS | SUMMARIZING | -- | - |
| he did say let's sum up the story and I think that was good | PROCESS ORIENTED EXPRESSIONS | SUMMARIZING | -- | + |

Example 7: In the first statement it is not possible to infer the agreement of the participant with the behaviour —Reassurance / trust . The participant may like being comforted and reassured but dislike the way this doctor is performing the behaviour. A neutral value will be given. In the second statement the participant would like to be reassured but is saying that the doctor's behaviour did not achieve this goal. It will have a positive value in regard to the content of the category.

| phrase | area | category | subcategory | +/- (cat) |
|---|---|---|---|---|
| they said all the time "don't worry" or "don't be ashamed" | AFFECTIVE OR EMOTIONAL EXPRESSIONS | ATTITUDE OF THE DOCTOR | REASSURANCE / TRUST | = |
| I would not be reassured by knowing that other people have the same. It does not help | AFFECTIVE OR EMOTIONAL EXPRESSIONS | ATTITUDE OF THE DOCTOR | REASSURANCE / TRUST | + |

Which kind of information do we obtain?
We can verify the agreement/disagreement of the participants toward a certain behaviours just counting up the plus and the minus within each category/subcategory.

4) <u>Value (positive or negative) of the comment</u> expressed by patient as <u>referring to his/her judgment toward doctor's behaviour</u>. In other words, is the participant expressing a criticism (negative value) or an

"agreement" (positive value) towards this specific student doctor? Where the participant is just expressing a general opinion (without referring to any specific doctor of the video it will be assigned a neutral value (=)).

Example 8: the first statement expresses a general opinion and a = will be assigned. The second statements refer to a criticism referred to one of the doctor in the video and will be assigned a "minus".

| phrase | area | category | subcategory | +/- (cat) | +/- (doc) |
|---|---|---|---|---|---|
| the doctor has to be thoughtful | AFFECTIVE / EMOTIONAL EXPRESSIONS | ATTITUDE OF THE DOCTOR | Showing interest in patient / commitment | + | = |
| she does treat it too light | AFFECTIVE / EMOTIONAL EXPRESSIONS | ATTITUDE OF THE DOCTOR | Showing interest in patient / commitment | + | - |

Example 9: the first statement has a negative value because the patient did not like that the doctor made a summary; the second has a positive value because the participant liked (agreed) the doctor made the summary.

| phrase | area | category | Sub-category | +/- (cat) | +/- (doc) |
|---|---|---|---|---|---|
| I placed her last because at a certain point of the visit she has summarized everything she had written, it is as she had been inattentive | PROCESS ORIENTED EXPRESSIONS | SUMMARIZING | -- | - | - |
| he did say let's sum up the story and I think that was good | PROCESS ORIENTED EXPRESSIONS | SUMMARIZING | -- | + | + |

Example 10: both the statements will have a negative value because the participant is expressing a criticism regarding one of the doctor in the video.

| phrase | area | category | subcategory | +/- (cat) | +/- (doc) |
|---|---|---|---|---|---|
| they said all the time "don't worry" or "don't be ashamed" | AFFECTIVE / EMOTIONAL EXPRESSIONS | ATTITUDE OF THE DOCTOR | REASSURANCE / TRUST | = | - |
| I would not be reassured by knowing that other people have the same. It does not help | AFFECTIVE / EMOTIONAL EXPRESSIONS | ATTITUDE OF THE DOCTOR | REASSURANCE / TRUST | + | - |

Which kind of information do we obtain?

1) We can have a global view on all the criticisms and/or positive comment expressed by the participants.

2) The statements where the participants express a positive value towards the category (e.g. Being reassured) but a negative value towards doctor's behaviour are informing that participants like the behaviour but the doctor was in some way lacking in performing it (either because he/she did not perform the behaviour at all or because he/she did in a —wrong  way). See example 6.

Additional information:

1) <u>Starred phrases</u>: some of the participants give precious additional information regarding the explanation of their comments. These information are important when a qualitative analysis has to be performed. These statements will be starred in order to retrieve the information.

Example 11: The following statement contains an interesting explanation of the negative opinion expressed by the participants. The statement will be starred.

| phrase | area | category | Sub-category | +/- (cat) | +/- (doc) | Starred phrases |
|---|---|---|---|---|---|---|
| I placed her last because at a certain point of the visit she has summarized everything she had written, it is as she had been inattentive | PROCESS ORIENTED EXPRESSIONS | SUMMARIZING | -- | - | - | * |

2) Repetition (R)

Sometimes participants will repeat their opinions about the same doctor or a general opinion about doctors. If this happens in a new verbal expression, we will code the statement again, but we will mark it with a R. This way, we know that the phrase has already been said by the same participants a time before. The R won't be used when the same opinion is given about different doctors.

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The excel file for the focus group analysis

| ID focus | ID participant | turn number | Text | Area | CAT/subcategory | General/ Specific | CAT Pos/Neg | DOC Pos/Neg | * | R | IDdoctor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 17 | 9,0 | The more precise in this questions, the more he succeeds in finding out what he wants to know. The doctor must consider that the patient who comes to see him, does not feel well and needs something. Therefore the better he understands the patient the more he is able to help him. | NC/citizen | | | | | | | |
| 3 | 19 | 10,1 | I put 4097 first, and the girl doctor second because they were very professional. | Task-oriented/problem-focused expressions | TASK-ORIENTED ATTITUDE OF THE DOCTOR/Competency | general | positive | positive | | | 4097 |
| 3 | 19 | 10,2 | They were the only two who asked which medicines the patient was taking for pain relief, who explained that they took notes to refer to the senior doctor, that they were delegated to conduct this preliminary visit and to make a summary for the senior docor. Their questions were very focused, for this reason I prefer these two doctors | Task-oriented/problem-focused expressions | COLLECTING INFORMATION/Medical | specific | positive | positive | * | | 4097 |
| 3 | 19 | 10,3 | All put the patient at ease | Affective or emotional expressions | AFFECTIVE ATTITUDE OF THE DOCTOR/Pleasant attitude | general | positive | positive | | | |
| 3 | 19 | 10,4 | but these two were more professional in asking  " what medicine are you taking", on the basis of this the doctor can say " no, this medicine no, lets choose an alternative" while the others start from zero. | Task-oriented/problem-focused expressions | PROVIDING SOLUTION/ | specific | positive | positive | * | | 4097 |
| 3 | 17 | 11,1 | I did not intend to say that the female doctor acted as secretary and only took notes. | Non verbal communication | NON VERBAL BEHAVIOR/Reading and writing | general | negative | negative | | | |
| 3 | 17 | 11,2 | but on the whole she seemed to be less in control of the situation. The other doctor while taking notes handled also the problem of the patient. She instead was there writing without entering into the problem. | Task-oriented/problem-focused expressions | TASK-ORIENTED ATTITUDE OF THE DOCTOR/Businesslike /Straight to the point | general | positive | negative | | | |
| 3 | 0 | 12,0 | the impression he made was different | NC/facilitator | | | | | | | |
| 3 | 21 | 13,1 | My first choice was 4077, although  the 4122 in his first approach to the patient is able to obtain information of better quality | Task-oriented/problem-focused expressions | TASK-ORIENTED ATTITUDE OF THE DOCTOR/Complete picture | general | positive | positive | | | 4122 |
| 3 | 21 | 13,2 | The 4077 appears a bit narcistic, he seems to me a person who talks a lot and gathers only the information he wants; | Task-oriented/problem-focused | TASK-ORIENTED ATTITUDE OF THE DOCTOR/C | general | positive | negative | | | 4077 |

### The GULiVer publications

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# A standardized approach to qualitative content analysis of focus group discussions from different countries

ABSTRACT

**Objective:** To describe the methodological procedures of a multi-centre focus group research for obtaining content categories also suitable for categorical statistical analyses.

**Methods**: Inductive content analyses were performed on a subsample of 27 focus groups conducted in three different countries, the Netherlands (Utrecht), the UK (Liverpool) and Italy (Verona). The analyses of the subsample of focus group discussions were performed in five steps: (1) independent development of content categories in each of the participating centres, (2) obtaining consensus categories, (3) creation of a manual with coding rules and defining criteria for categories and subcategories, (4) assessment of inter-rater reliability to identify unreliable categories to be revised, and (5) repetition of inter-rater reliability assessment.

**Results:** The resulting coding system considers five areas: non verbal communication, process oriented expression, task oriented or problem focused expressions, affective or emotional expressions, and physician's personal characteristics. It contains 12 categories of acceptable inter-rater reliability and 41 subcategories.

**Conclusion:** The coding procedures show how focus group data, obtained in an international multicentre study can be analysed in a systematic way combining scientific rigour with the richness of data obtainable from qualitative methodologies.

**Practice implication:** The applied procedures may be helpful for multi-centre focus group research on other topics.

Bensing J.M., Deveugele M., Moretti F., Fletcher I., van Vliet L., Van Bogaert M., Rimondini M.

How to make the medical consultation more successful from a patient's perspective? Tips for doctors and patients from lay people in the United Kingdom, Italy, Belgium and the Netherlands.

ABSTRACT

**Objective:** The aim of this study is to generate empirically based 'tips' from lay people on how medical consultations could become more successful from a patient perspective.

**Methods:** 258 Lay people in the United Kingdom, Italy, Belgium and the Netherlands, distributed over 32 focus groups, were invited to formulate 'tips' for doctors as well as patients after rating the quality of communication from videotaped consultations and discussing their arguments in focus groups.

**Results:** Tips were remarkably similar across the four countries. Most tips reflect the professional literature, such as the importance of nonverbal communication, personal attention and empathy, but also addressed issues as how to deal with new technologies and new accessibility arrangements (triage). The tips were targeted to the consultation itself, its preparation and the aftercare. Tips for doctors were mirrored in tips for patients.

**Conclusion:** Lay people seem to be competent in participating in quality-of-care debates. They are well aware of patients' own responsibilities. Besides, they have clear opinions about novel technology and healthcare arrangements (triage).

**Practice implications:** Listening to patients, showing empathy and personal attention seem to have a universal value. Doctors should be trained to practice these behaviors, healthcare managers in involving patients in practice reorganisations.

Rimondini M., Mazzi M.A., Deveugele M., Bensing J.M.

How do national cultures influence lay people's preferences toward doctors' style of communication? A comparison of 35 focus groups from an European cross national research.

**Background:** The evidence that inspires and fosters communication skills, teaching programmes and clinical recommendations are often based on national studies which assume, implicitly, that patients' preferences towards doctors' communication style are not significantly affected by their cultural background. The cross-cultural validity of national results has been recognized as a potential limitation on how generally applicable they are in a wider context. Using 35 country-specific focus group discussions from four European countries, the aim of the present study is to test whether or not national cultures influence lay people's preferences towards doctors' style of communication.

**Methods:** Lay people preferences on doctor's communication style have been collected in Belgium, the Netherlands, the United Kingdom and Italy. Each centre organized between eight and nine focus groups, where participants (n = 259) were asked to comment on a video of a simulated medical interview. The discussions were audiotaped, transcribed and coded using a common framework (Guliver Coding System) that allowed for the identification of different themes.

**Results:** The frequency distribution of the topics discussed highlights lay people's generally positive views towards most part of doctors interventions. The regression model applied to the Guliver categories highlighted slight national differences and the existence of a cross-cultural appreciation, in particular, of five types of intervention: Doctors attitudes (both Task-Oriented and Affective/Emotional), Summarizing, Structuring and Providing solution.

**Conclusion:** Lay panels valued doctors' communication style in a similar manner in the countries selected. This highlights the existence of a common background, which in the process of internalization of heath care, might foster the implementation of cross-national teaching programmes and clinical guidelines.

Aelbrecht K., Rimondini M., Bensing J., Moretti F., Willems S.,Mazzi M., Fletcher I., Deveugele M.

# Quality of doctor-patient communication through the eyes of the patient: variation according to the patient's educational level.

ABSTRACT

Good doctor-patient communication may lead to better compliance, higher patient satisfaction, and finally, better health. Although the social variance in how physicians and patients communicate is clearly demonstrated, little is known about what patients with different educational attainments actually prefer in doctor-patient communication. In this study we describe patients' perspective in doctor-patient communication according to their educational level, and to what extent these perspectives lean towards the expert opinion on doctor-patient communication. In a multi-center study (Belgium, The Netherlands, UK and Italy), focus group discussions were organised using videotaped medical consultations. A mixed methods approach was used to analyse the data. Firstly, a difference in perspective in communication style was found between the lower educated participants versus the middle and higher educated participants. Secondly, lower educated participants referred positively most to aspects related to the affective/emotional area of the medical consultation, followed by the task-oriented/problem-focused area. Middle and higher educated participants positively referred most to the task-oriented/problem-focused area. The competency of the physician was an important category of communication for all participants, independent of social background. The results indicate that the preferences of lower educated participants lean more towards the expert opinion in doctor-patient communication than the middle and higher educated participants. Patients' educational level seems to influence their perspective on communication style and should be taken into account by physicians. Further quantitative research is needed to confirm these results.

**About author**

Maria Angela Mazzi was born on January 4th, 1965 in Verona, Italy. She holds a M.Sc. degree in Statistical and Demographic Sciences at the University of Padua, Italy.

She worked from 1993 until 2001 as statistical consultant for various Italian organizations being involved in health and social support projects (i.e., Agenzia Ricerca e Servizi of Padua, Società Synergia of Milan, Department of Statistical Sciences of the University of Padua, Statistical Office of Province Administration of Rovigo, Cancer Register of Padua, SerT 1 ULSS 20-Verona, Health Services of ULSS 21-Legnago; Department of Medicine and Public Health of the University of Verona). Since April 2001, she has been working at the University of Verona in different roles: from April until October 2001 as administrative chief of the Secretary's Office of the Department of Clinical and Experimental Medicine, then as statistician at the Department of Public Health and Community Medicine (until July 2015) and currently at the Department of Neurosciences, Biomedicine and Movement Sciences.

Her main research interests cover the following areas:

✓ Doctor-patient communication in medicine and psychiatry: validation of instruments to evaluate the quality of psychiatric interviews; evaluation of the effectiveness of communication skills trainings in medicine; analysis of communication strategies to inform patients and shared decision making models; assessments of patients informative needs and preferences through focus groups methodology; analysis of doctor-patient interaction by sequential statistical techniques);

✓ Evaluation of mental health services and costs: identification of measures of socio-economic inequalities and investigation of the association between social inequalities and service utilization in mental health structures; application of spatial statistical techniques on planning and geographical location of mental health public services;

✓ Experimental studies to evaluate psycho-social interventions: Randomized Controlled Trial (RCT) on the effects of a psycho-education intervention to change lifestyle (e.g., diet and physical exercise) in psychiatric population; RCT on the effect of a prompt-sheet on patient participation during the oncological visit; RCT on the effects of pre-surgery psychological interventions on oncological patients.

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