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Factors influencing intercultural doctor–patient communication: A realist review

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ABSTRACT

Objective: Due to migration, doctors see patients from different ethnic backgrounds. This causes challenges for the communication. To develop training programs for doctors in intercultural communication (ICC), it is important to know which barriers and facilitators determine the quality of ICC. This study aimed to provide an overview of the literature and to explore how ICC works.

Methods: A systematic search was performed to find literature published before October 2012. The search terms used were cultural, communication, healthcare worker. A realist synthesis allowed us to use an explanatory focus to understand the interplay of communication.

Results: In total, 145 articles met the inclusion criteria. We found ICC challenges due to language, cultural and social differences, and doctors' assumptions. The mechanisms were described as factors influencing the process of ICC and divided into objectives, core skills and specific skills. The results were synthesized in a framework for the development of training.

Conclusion: The quality of ICC is influenced by the context and by the mechanisms. These mechanisms translate into practical points for training, which seem to have similarities with patient-centered communication.

Practice implications: Training for improving ICC can be developed as an extension of the existing training for patient-centered communication.

Abbreviations

- Dr, doctor (plural—drs);
- Pt, patient (plural—pts);
- GP, general practitioner;
- AA, African American;
- SA, South-Asian;
- DM, decision making;
- US, United States;
- UK, United Kingdom

1. Introduction

Due to increasing worldwide migration since the 1960, healthcare in the modern Western world is confronted with the consequences of a multi-ethnic society [1]. One of the main areas where these consequences are apparent is in the interaction between doctors and patients. As research on communication in healthcare has shown, there is ample evidence that communication affects numerous outcomes, such as patient satisfaction and adherence, and, consequently, health outcomes [2] and [3]. One of the challenging areas of healthcare communication is communication with culturally diverse patients [4]. Intercultural doctor–patient contacts are potential sources of misunderstanding and low quality communication, which may reduce the quality of care [5].

Causes for misunderstanding and difficulties in intercultural communication (ICC) are sought in differences in perspectives, values and beliefs about illness between doctors and patients with different ethnic backgrounds [6], [7], [8] and [9]. Illness is culturally determined in the sense that how we perceive, experience and cope with disease is based upon our explanations of illness [7]. Hence, difficulties in intercultural doctor–patient communication could be explained by differences in culture rather than by a supposed inferiority of specific cultures [8]. Another possible influence on the quality of patient communication is that many doctors feel incompetent to communicate and relate to patients from different ethnic backgrounds due to a lack of adequate skills, language barriers or knowledge of communication with these patients [10] and [11]. For example, doctors behave less effectively when interacting with ethnic minority patients compared to ethnic majority patients [5] and [12]. Also, ethnic minority patients themselves are less verbally expressive and seem to be less assertive during the medical encounter than ethnic majority patients [12].

In recent years, medical education has paid more attention to ICC, or to cultural competence on a broader scale (see Table 1 for terminology). Although the necessity of training in ICC has been increasingly recognized [13], many countries with a multi-ethnic patient population have not structurally implemented training in this area in their medical curricula [14] and [15], even though there is a flourishing debate about appropriate training of health professionals to respond to ethnic diversity [16] and [17]. Next to the difficulties of implementing ICC in medical curricula, assessment of ICC remains challenging [18], and there is a risk that ICC and cultural competence training reinforce stereotyping [19]. The challenge, therefore, is to achieve a balance between theory and practice. Developing an appreciation of theoretical concepts of ICC is desirable for ‘generic learning’. However, such learning would fail without emphasizing its relevance to practice [16].

[TABLE 1]

The field of ICC in healthcare has been studied extensively. For example, Schouten et al. performed a systematic review in this field to gain more insight into the effects of ethnic background on the medical communication process [12]. Although their research was substantial, it was limited by including observational studies only. The authors concluded that there are differences in the communication with ethnic minority patients compared to ethnic majority patients, and they advised to focus further research on explanatory factors to advance knowledge about the origins of and solutions for problems in ICC [12].

Several studies recommended an exploratory review to reveal what factors influence the outcome of ICC [20], but as far as we know, such a review is still lacking. A systematic description of the influencing factors in ICC may inform the development and implementation of training and education for doctors, which could provide opportunities to facilitate communication of better quality [1] and [21]. Also, such research could give insight into the link between patient-centered communication and ICC, which was mentioned in several papers [13] and [17].

The present paper provides an overview of the literature on the perceptions and experiences of doctors and patients related to communication in an intercultural setting. Although ICC can include many contexts, we focused on the largest and perhaps most challenging group of intercultural encounters, i.e. those between doctors of the ethnic majority and their patients of the ethnic minority (see Table 1 for the used definition of ICC). Our research was guided by the following questions: Which factors influence the communication process between doctors and patients of different ethnic backgrounds? How do these factors influence the communication?

To apply the intended exploratory focus, we performed a realist synthesis, which could help us to gain insight into the complexity of communication between doctors and patients [22]. We tried to formulate a framework for medical education, which could be used for the development of ICC training for doctors. Our main focus was not on the misunderstandings, but on the broader concept of intercultural communication.

2. METHODS

We conducted a systematic review of the literature using the realist synthesis method guided by the RAMESES guideline, a realist review guideline [22]. A realist review is a strategy for synthesizing research that has an explanatory rather than a judgmental focus. It can include qualitative as well as quantitative studies, which enables us to focus on the content, i.e. meaningful and useful results, of the articles. The adjective realist refers to the philosophy of science called Realism, which is situated between positivism, i.e. the conviction that there is a real world and that we can apprehend this world directly through observation, and constructivism, i.e. the conviction that reality is a social construction and that we cannot know what the true nature of reality is [29] and [30].

A realist synthesis emphasizes how causal mechanisms are shaped and constrained by social context. The extracted data are described and explored using the model of context (C), mechanism (M) and outcome (O). For example, to evaluate the ICC process (O), a realist synthesis would examine its underlying mechanisms (e.g. the way a doctor behaves in a

conversation), and its contiguous contexts (e.g. a language barrier between the doctor and the patient) [22] and [30].

2.1. Data sources and searches

Literature searches were performed by an experienced information specialist, who searched MEDLINE, EMBASE, PsycInfo, Cinahl, Cochrane and Education Resources Information Center (ERIC) for relevant papers using Reference Manager 12. All studies published before October 2012 were included. No language restrictions were applied, and papers were translated if necessary. However, articles without English abstract were excluded, as were letters, reviews, comments, case reports, books, and editorials.

Databases were searched using keywords for both free text (tiab) and Medical Subject Heading (MeSH) terms. A combination of the following keywords and synonyms were used: *communication AND cultural AND ethnic AND healthcare worker*. The broad search terms were used to ensure that all studies which met the inclusion criteria were captured in initial searches. The search strategy for the main electronic search (MEDLINE) is presented in Appendix A. It was revised as necessary for the other databases. (Full searches for these databases are available upon request.)

2.2. Data selection

First, duplicates were identified and removed by the first author. Next, the titles of the articles were screened for inclusion by the first author (EP) and a group of seven second readers. Each second reader received written instructions that explained the research question, the inclusion and exclusion criteria and how to include articles based on the title. Any disagreement about inclusion of an articles based on the title was discussed and resolved through consensus between the first author and the second reader.

Second, two authors (EP and SD) assessed the inclusion by abstract. Articles without abstract were excluded. EP and SD discussed doubtful in- or exclusion. The focus was on empirical studies involving doctors of the ethnic majority and patients of the ethnic minority (Table 2).

[TABLE 2]

Finally, the full texts of the remaining articles were screened for in- or exclusion by a medical doctor (EP) and an intercultural communication specialist (CA). In case of disagreement between the two researchers, the first author (EP) discussed the papers with the authors FS or SD until consensus was reached. The definitive and complete reading of all the full papers was done by EP.

2.3. Data analysis and synthesis

The review team agreed on what type of data to extract from the included articles, and one reviewer (EP) extracted the data and identified the CMO configurations in each study. The following information was culled: participant characteristics, methods used (i.e. qualitative vs. quantitative), country of research, study design, main results, frame of reference and level of contribution.

We assessed the level of contribution based on relevance and rigor of the articles. This was not to judge the methodological quality of the articles, but to give insight into their degree of importance for answering our specific research question. The rigor was indicated by assessing whether 'the method used to generate that particular piece of data was credible and trustworthy' (high or low). The relevance was indicated by assessing whether 'the article contributed to answering our research question' (high or low). The two assessments were combined in one score for the level of contribution: high (high/high), medium (high/low or low/high) or low (low/low). For example, if the paper included clearly described and trustworthy methods, the level of contribution in terms of rigor was assessed as high. If a paper about ICC described only a small section of ICC between the doctor and the patient and answered the research question only partly, the level of contribution in terms of relevance was assessed as low.

Data synthesis was undertaken by the first author (EP), and synthesis results were regularly shared and discussed within the research team to ensure validity and consistency. The research team discussed all the extracted data to find overarching categories in the context–mechanism–outcome model. Specifically, we attempted to identify factors which could facilitate or hinder the communication and then sought to explain these and to formulate a relevant framework.

3. Results

3.1. Characteristics

For this realist review we considered 51,179 articles, 145 of which met the final inclusion criteria. The included articles were written in English, French, German, Italian and Norwegian. All but 5 articles [31], [32], [33], [34] and [35] were from western countries. The 5 remaining articles were from Israel [31] and South Africa [32], [33], [34] and [35]. The selection process and subsequent categorization are summarized in Fig. 1. Appendix B presents the characteristics of the included articles and the level of contribution.

[FIGURE 1]

After discussion within the research team, we identified the emerging factors influencing ICC and categorized them in terms of contexts, mechanisms and outcomes of ICC. The context factors are the four major communication challenges of ICC: language differences, differences in perception of illness and disease, different perceptions of the social component of health communication, and doctors' and patients' prejudices and assumptions.

Following these challenges, we described the mechanisms by objectives, specific skills and core skills. Core skills can be regarded as the main skills of communication doctors should use in their consultation, for example listening. Specific communication skills are the skills a doctor needs in specific situations or contexts, for example in issues with gender, cultural and social diversity or end-of-life care [4]. The outcome is described as a barrier or facilitator for the communication (Fig. 2). These descriptions included the outcome in the perception of the doctor or the patient, for example feelings of frustration or satisfaction. The overall results are shown in Table 3. In the following paragraphs we describe the challenges and their mechanisms with examples.

[FIGURE 2][TABLE 3]

3.2. LANGUAGE DIFFERENCES

The influence of language on the communication was mentioned frequently. Language differences literally caused miscommunication [33], [34], [36], [37], [38], [39], [40], [41], [42], [43], [44], [45], [46], [47], [48], [49], [50], [51], [52], [53], [54], [55], [56], [57], [58], [59], [60], [61], [62], [63], [64], [65] and [66]. Language differences were seen as important barriers of ICC, because of their relation with misunderstandings, frustration and situations in which it is not possible for the doctor to achieve shared decision-making.

For doctors, the objectives during a consultation were found to focus on understanding the patient and on knowledge of languages. This did not mean that the doctor should be able to speak all the languages of their patients; communication was facilitated when a doctor knew a few words of the language of the patient, because this helped to build a relationship with the patient [67], [68], [69] and [70].

During an intercultural conversation, the doctor needed specific skills to facilitate the communication. These skills mainly involved various ways of providing explanations and the ability to use extra attributes, such as pictures or an interpreter, in case of language differences.

Besides these specific skills, the included articles mentioned many communication skills that are useful in any doctor–patient conversation. These core skills were, for example, listening [47], [71], [72], [73], [74], [75], [76], [77], [78], [79], [80], [81], [82] and [83] and explaining, or avoiding medical jargon. Also, both patients and doctors felt more satisfied when the doctor checked the patient's understanding [58], [72], [84], [85], [86], [87], [88] and [89]. For example, paraphrasing and repeating the patient's exact words encouraged the patient to elaborate on their concerns [90].

Together, the communication objectives, the core skills and the specific skills would help to facilitate successful communication between doctors and patients. This is confirmed by the large number of articles which reported that patients found it more important for the doctor to have good language skills than to have the same ethnicity as the patient [36], [52], [55], [65], [66], [82], [91], [92], [93], [94], [95] and [96].

3.3. DIFFERENCES IN CULTURAL PERCEPTION OF ILLNESS AND DISEASE

As described in many articles, language is not the only challenge in ICC. Even between patients and doctors who spoke the same language, misunderstandings were common if their ethnic background differed, because these doctors and patients had different cultural paradigms. Consequently, their perceptions of illness and health were influenced by different religions, norms and values [35], [45], [48], [95], [97], [98], [99], [100], [101], [102], [103], [104] and [105]. Patients who had a hierarchical worldview, for instance, were not used to reflecting on their own thoughts about illness, which made it difficult for them to answer some questions commonly asked by doctors [38] and [106]. Some patients used religious arguments to explain their condition. For example, they replaced the cause of a disease with another etiology which was more in line with their religious beliefs [100].

The objectives that need to be reached to deal with these challenges were identified as knowledge and awareness of cultural differences, management of the patient's expectations of the health care system, mutual understanding [40], [48], [75], [78], [81], [85], [91], [107], [108] and [109], and patient-centered care.

Cultural awareness entails specific skills such as recognizing and knowing one's own and other people's cultural identities and beliefs. ICC was influenced both by the doctor's level of self-awareness and by his or her level of awareness of the patient's culture. Two studies reported that ICC was hindered by the lack of cultural awareness of both patient and doctor, which prevented them from understanding each other's deeply entrenched attitudes [47] and [52]. In four studies, ICC was facilitated when the doctor was aware of his own culture [31], [43], [110] and [111].

For doctors, another main objective in ICC was to manage patients' expectations of the health care system. For example, it was often reported that patients with different ethnic backgrounds did not know how to enter the healthcare system, how to make an appointment with the doctor or which doctor they should visit. In this context, the patients' insufficient organizational and medical knowledge caused them, for example, to visit the wrong doctor, which led to unsatisfactory communication outcomes [35], [40], [45], [48], [67], [81], [102], [104], [112], [113], [114] and [115]. It also contributed to feelings of frustration among doctors [48], [68], [70], [116] and [117], indicating that it would be a valuable specific skill for doctors in ICC to be able to recognize misunderstandings caused by cultural differences and, at the same time, to recognize a patient's expectations of the health care system.

Some articles mentioned that patient-centered communication could be the solution to barriers in ICC [96], [114], [118], [119] and [120]. Many doctors learned to practice patient-centered communication in terms of shared decision-making [64], [121], [122], [123], [124] and [125] and activating patients [34], [91], [109], [126], [127], [128] and [129]. Some studies found that shared decision-making also facilitated communicationin ICC, but other articles showed that patients of ethnic minorities, especially the non-western minorities, viewed the doctor as a person with a high social status and regarded it as disrespectful to contradict the doctor (paternalism) [43], [72], [79], [88], [90], [97], [122], [123], [124], [127], [130], [131], [132], [133], [134], [135], [136], [137], [138], [139] and [140]. In these cases, patient-centered communication might be a effective approach for ICC.

To deal with cultural differences in the perception of illness and disease, doctors were found to need several core skills, such as an open attitude [141] and [142], empathic communication [79], [93], [108], [122], [128], [143], [144], [145], [146], [147], [148] and [149], showing trust [42], [47], [78], [79], [142], [150] and [151] and being respectfull to the patient [54], [73], [76], [78], [79], [80], [83], [84], [87], [105], [114] and [152]. Also, time management [54], [76], [79], [80], [81], [82], [83], [87], [89], [105], [107], [108] and [152], providing explanations [34], [73], [76], [80], [85], [100], [102], [107], [108], [119], [149] and [152] and giving appropriate information [63], [69], [84], [87], [110], [114], [121], [127], [131], [132], [147], [153], [154] and [155] were mentioned as core skills for a doctor to facilitate ICC communication.

3.4. Social component of communication

Another contextual (influencing) factor was the social component of ICC. Many ethnic minority patients considered it very important that the doctor showed interest in the wellbeing of the family or talked with the family when present [31], [40], [134] and [156] and tried to build trust in the relation with the patient [54]. This was an important contextual issue, but often the doctors did not recognize it, as they were used to directing their communication at the individual patient rather than at the family (specific skill) [38], [51] and [157]. For patients, their illnesses were connected to their community context and family; relations, culture and values were inseparable [39], [57], [64], [89], [156], [158], [159], [160] and [161]. Here miscommunication (outcome) occurred because doctors and patients had different perceptions of the role of the family. Therefore, knowledge about expectations and habits of the patient and his family [35], [81], [94], [102], [114], [162], [163] and [164] were described as specific skills. The core skills to reach the objectives were defined as building a relationship with and handling the emotions of the patients and their families. When the doctor knew the situation and context of the patient, he adapted his behavior to expectations of the patient, which improved the communication outcome [39], [40], [43], [57] and [113].

3.5. Prejudices and assumptions

The last identified challenges for the communication were the prejudices and assumptions of doctors about ethnic minority patients. This contextural factor had similar objectives as the context factor ‘differences in cultural perception’; i.e. knowledge and awareness of the cultural differences. For these objectives, the specific skills recognized in the included articles were demonstrating trustworthiness and the doctor's awareness of his or her own assumptions, sometimes caused by previous experiences [94]. Dealing with previous experiences of patients was seen as a core skill of the doctor. These experiences of patients were mostly negative and therefore recognizing them was important to facilitate the communication [32], [42], [76], [151], [165] and [166]. For example, some doctors generalized their thoughts about patients of one ethnicity under the same heading [141]. As a reaction to this mechanism, some patients felt discriminated and treated unequally [102], [118], [132], [167], [168] and [169]. ICC was influenced both by the doctor's lack of awareness and by the patient's feelings.

4. Discussion and conclusion

4.1. Discussion

The aim of this review was to summarize the current knowledge on the factors that influence ICC and to explore the mechanisms through which these factors influence ICC. The use of a realist synthesis provided the opportunity to include a broad range of papers and to explore the context, mechanisms and outcomes in each of the included articles. From a total of 145 included articles, we derived four communication challenges (contextual factors) and several objectives and communication skills (mechanisms) whose absence or presence constituted barriers or facilitators, respectively, for ICC (outcomes). The communication skills could be divided into core communication skills, which doctors should use in any interaction with patients, and specific communication skills for intercultural doctor–patient communication. Reflecting on our research question, we arranged the influencing factors in a framework (Fig.

2) that clarifies which skills should be trained to enable doctors to deal with each of the challenges of ICC.

One of the new insights of this realist review is that the findings of the ICC literature can be translated into an educational framework in response to 4 contextual challenges. Another new insight is that the framework distinguishes between core communication skills that are largely covered by training programs for patient-centered communication, and ICC-specific communication skills that can be developed as an extension of the existing training programs. Doctors who want to facilitate successful intercultural communication with patients should be aware of the contextual challenges and should acquire and use the core and specific communication skills to reach the communication objectives and overcome the contextual challenges. We do not mean to imply that doctors will need to develop proficiencies in each of the skills equally. For example, doctors who know nothing about the patient's culture (specific skills) might still provide excellent care by employing the appropriate core skills, which may well lead to a positive communication outcome. Also, the cultural content of some encounters may be more challenging than the content of others. Rather than one discrete skill, an integrated set of specific communication skills emerged as the key to successful ICC.

We have provided insights into the core communication skills and the specific communication skills that are important for ICC which can be translated into practical points for training. Since effective ICC seemed to have many similarities with patient-centered communication, the core communication skills are similar to the patient-centered communication skills as provided in the six function model of medical communication by de Haes and Bensing [170]. This finding is in line with findings of Teal et al. in their article about culturally competent communication [9]. However, while patient-centered communication emphasizes improving the quality of individual communication [170], ICC stresses equitable distribution of quality communication among diverse ethnic groups, highlighting a different focus. Since patient-centeredness is increasingly regarded as crucial for the delivery of high quality care by doctors [171], the recognition of the similarities between patient-centeredness and ICC is important.

Our findings in this review support earlier research in the area of ICC. The review of Schouten et al.

[12] showed five key predictors of challenges in ICC, two of which are comparable with our results: cultural differences in explanatory models of health and illness and linguistic barriers. Schouten et al., however, did not provide mechanisms for counteracting these challenges [12]. Furthermore, our results have similarities with the model of culturally competent communication (CCC) of Teal et al.

[9], who found four critical elements of CCC, i.e. repertoire, awareness, adaptability and knowledge, and gave a very clear summary of the main CCC skills [9]. In contrast to the study of Teal et al., however, we also found that language was a potential influencing factor of ICC. What our study added to the study of Teal et al. is the systematic search and the fact that we identified specific and core communication skills, which can be translated into communication training.

The anthropological research of Arasaratam et al.

[172] described several theories of ICC. One of these theories, the system theory approach [173], distinguishes between cultural competence and ICC competence. This approach explained that being competent in a particular cultural context does not necessarily imply ICC competence and that in an intercultural context the adaptability of a person is displayed in the ability to be flexible in unfamiliar cultural situations [173]. We think that this approach emphasizes the importance of our research on ICC and of the development of training in this specific area.

As described earlier, ICC has gained attention during the last years, but it has not yet structurally been implemented into all medical curricula of multi-ethnic societies. This situation does not comply with our multi-ethnic societies' demand for doctors with cultural diversity competences [13], [14] and [15]. Strategies to encourage reflective practice in the context of ICC skills training may be more successful than overt attempts to change attitudes [174]. A skill-based approach may therefore be less threatening than a theory-based approach and can be reinforced by assessment of competencies and behavior.

The realist perspective of this review provided the opportunity to examine a wide range of papers in the complex field of ICC and to look at this complex area. This helped to gain insight into the process of ICC. The results did not focus on healthcare outcomes, but on factors which influenced the communication process, in order to identify barriers and facilitators of effective communication in the context of ethnic differences between the doctor and the patient. A strength of this study was the broad research question and search, which enabled us to include many papers about ICC in healthcare. Also, the results were strengthened by the inclusion of studies on both the doctors' and the patients' perspectives, because both parties influence the communication and therefore both voices need to be heard. However, as the search was so broad, it was not possible to include the references of the included articles as well, although we expect that most of them were already included as primary results of our broad search. Another limitation was that the healthcare workers we focused on in this review were doctors; while there are many more healthcare workers who need to deal with the difficulties of ICC in practice, our special focus is due to our interest in developing training programs for doctors. This particular interest also explains why we limited our search to studies that did not include the use of interpreters, since this could influence the interaction and can give bias for answering our research question.

As in all systematic reviews, selection and publication bias is a possible limitation of the present study. However, we aimed to prevent this by extending our search beyond articles written in English and by placing no restrictions on the year of publication. Another limitation could be that we did not test our theory by means of secondary searches. Also, we were not able to distinguish between the different ethnicities within the included articles. As a consequence, we did not describe the interethnic differences. Nor did we investigate the effects of non-verbal communication per se, which also influences the outcome of intercultural doctor–patient communication.

This research identified a number of influencing factors that shape the ICC process between doctors and patients. Future research might focus on how these factors could be used and managed at a practical level. First, this would involve checking our findings by examining real-life consultations. Second, the mechanisms we identified could be used for the development of

communication training and assessment for doctors. As Kai et al. already stated in 2001, uncertainty about the assessment of cultural diversity still needs attention [16].

4.2. Conclusion

We identified communication challenges, objectives and skills that result in barriers or facilitators for intercultural doctor–patient communication. To overcome the challenges, training for doctors should focus on the core communication skills and the specific communication skills that can produce positive outcomes for ICC. The core communication skills required for ICC were similar to the skills for patient-centered communication, but ICC was more susceptible to imbalances in the communication process when cultural differences in the perception of illness and disease were ignored. The insights into the specific skills required to meet ICC challenges in health care provide important information for the development of communication training for doctors.

4.3. Implications for practice

Training programs for improving intercultural doctor–patient communication can be developed as an extension of the existing training programs for patient-centered communication. The description of objectives and specific and core communication skills can be used to translate of ICC theory into clinical practice.

The main educational objectives per contextual challenge are as follows:

- Language differences: knowledge of languages and recognizing misunderstanding.
- Difference in perception of illness and disease: patient centered communication, awareness of cultural differences, doctors' awareness of their own culture and expectation management.
- Social component of communication: knowledge about the role of the patient's family.
- Prejudices and assumptions: awareness of one's own assumptions.

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Ethical approval

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Conflict of interest statement

The authors report no conflict of interest, no financial competing interests and no non-financial competing interests. The authors alone are responsible for the content and writing of the paper.

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APPENDIX A EN B

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TABLES

of the used terminology.

gy*	Explanation
	Culture is a socially transmitted pattern of shared meanings by which people communicate, perpetuate and develop their knowledge and attitudes about life. An individual's cultural identity may be based on heritage as well as individual circumstances and personal choice and is a dynamic entity [23]
ural diversity	The diversity of people with different ethnic cultural and linguistic backgrounds [24]
kground	The fact or state of belonging to a social group that has a common national or cultural tradition: 'the interrelationship between gender, ethnicity, and class' [25]
mpetence	Knowledge, attitudes and skills required to provide good quality care to ethnically diverse patient populations [26]
al communication	Communication between doctors and patients with different ethnic backgrounds; a part of cultural competence [26,27]
ural communication	Comparison of communication across cultures [27]
al communication competence	The degree to which we actively monitor how we communicate with people from other ethnic cultures [28]
competent communication	Communication repertoire, situational awareness, adaptability and knowledge about core cultural issues [9]
al sensitivity	The degree to which we are actively interested in other people's cultural backgrounds, their needs and perspectives [28]

e explains the terminology used in our research. We are aware that this is one of the many operationalization's for these terms.

Table 2
Inclusion criteria.

Inclusion criteria
Doctor–patient communication (one-to-one)
Cultural difference: the doctor of the dominant ethnicity, the patient of the minor ethnicity
Medical setting
English abstract available
Empirical papers, qualitative or quantitative, except: letters, reviews, comments, case reports, books and editorials
No use of interpreter
No use of training the doctors or the patients
No language restriction

Fig. 1. Flowchart of the included articles. E. Paternotte et al. / Patient Education and Counseling 98 (2015) 420–445 423

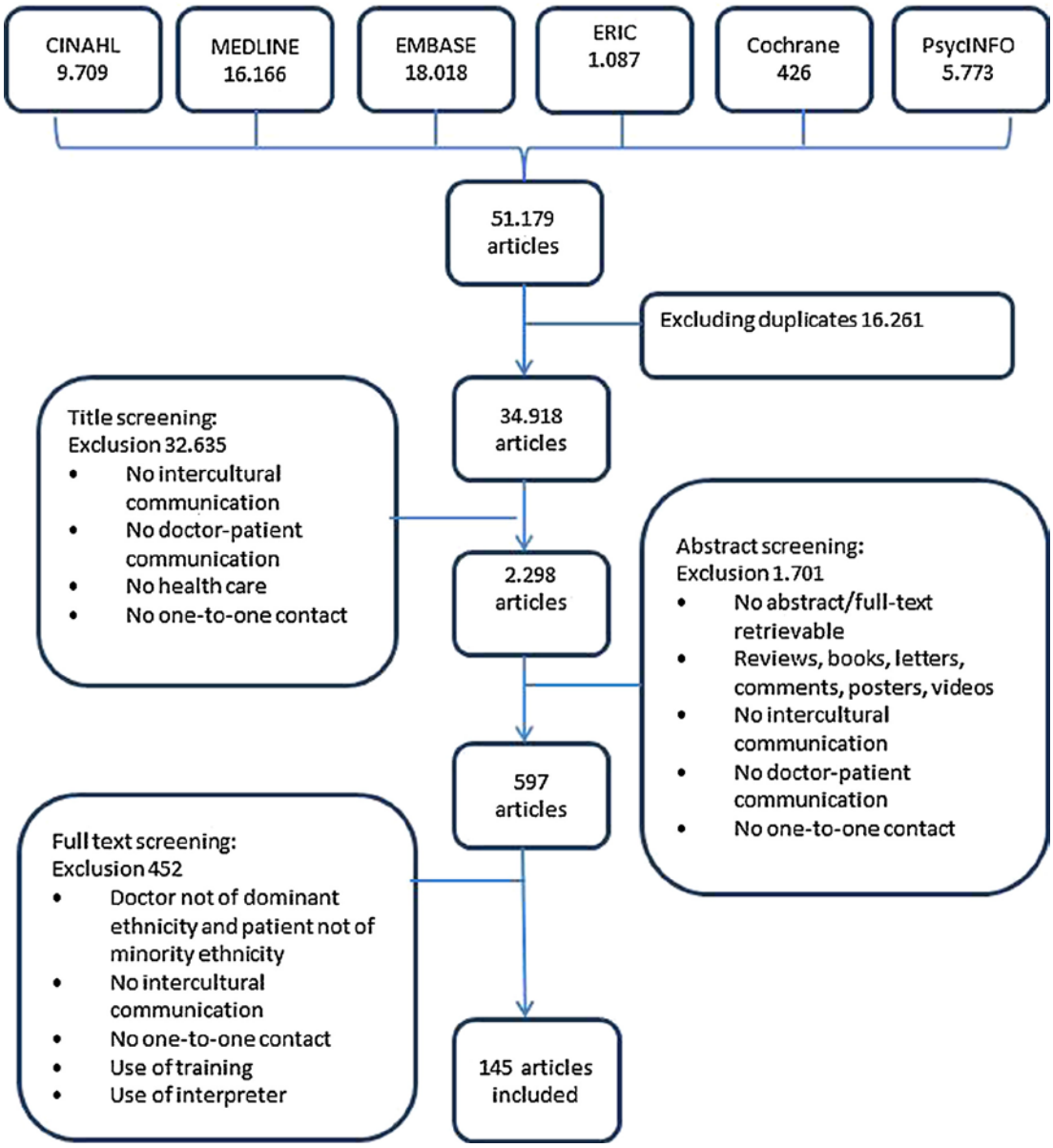

Fig. 2. Context–mechanism–outcome framework for Intercultural communication.

texts with the mechanisms of the communication process to facilitate the intercultural communication; summary of the results.

ural communication contexts → Mechanisms of the process of intercultural communication → Communication outcomes				
ation	Objectives	Specific skills	Core skills	Communication outcome
es	-Knowledge of languages -Understanding the patient	-Being able to speak a few words in the patient's language -Recognizing misunderstandings caused by language differences -Using attributes for explanation (pictures, interpreter) -Paying attention to pronunciation -Using various ways of providing explanations	-Giving information in pieces -Checking if the patient understood -Active listening -Sharing decision making -Avoiding unnecessary medical jargon -Adapting the explanation to the patient -Paraphrasing and repeating the patient's exact words	Barrier or facilitator for effective communication about substantive health care issues
in n of d disease	-Knowledge of cultural differences -Awareness of cultural differences (different paradigms) -Expectation management regarding the health care system -Mutual understanding -Respect -Patient-centered communication (shared decision making)	-Recognizing misunderstandings caused by cultural differences -Recognizing the patient's expectations of the health system -Awareness of one's own culture	-Respecting the patient's habits, norms and values -Becoming familiar with the situation and context of the patient -Understanding the patient (empathic communication) -Informing the patient about the medical procedures/system -Having an open attitude -Explaining -Time management -Active listening -Demonstrating trustworthiness -Handling emotions	
ponent unication	-Knowledge of position of relatives -Awareness of the role of relatives for the patient	-Knowing the relatives of the patient -Showing interest in the relatives	-Relation building with family and patient -Handling emotions	
and ons	-Knowledge of cultural differences -Awareness of cultural differences	-Awareness of one's assumptions regarding cultural differences -Dealing with a patient's negative previous experiences	-Learning from previous experiences -Open attitude -Handling emotions -Showing respect -Demonstrating trustworthiness	

APPENDIX A. EXAMPLE OF SEARCH STRING

Search string MEDLINE	
#1	Language*[tiab] OR communicati*[tiab] OR Communication[Mesh] OR "Professional–Patient Relations"[Mesh] OR contacting client*[tiab] OR medical consult*[tiab]
#2	"Internship and Residency"[Mesh] OR physician*[tiab] OR nurse*[tiab] OR doctor*[tiab] OR professional*[tiab] OR gp[tiab] OR gps[tiab] OR practitioner*[tiab] OR provider*[tiab] OR resident*[tiab] OR intern[tiab] OR interns*[tiab] OR postgraduate*[tiab] OR post graduate*[tiab] OR house officer*[tiab] OR house staff[tiab] OR registrar*[tiab] OR specialist training*[tiab] OR trainee*[tiab] OR clinician*[tiab] OR attending*[tiab] OR consultant*[tiab] OR medical specialist*[tiab]
#3	Patient[tiab] OR patients[tiab] OR client*[tiab] OR health consumer*[tiab]

Search string MEDLINE	
#4	Relation*[tiab] OR interaction*[tiab] OR interview*[tiab] OR communicati*[tiab]
#5	((#2) AND #3) AND #4
#6	(#1) OR #5
#7	"Delivery of Health Care"[Mesh] OR "Physicians, Primary Care"[Mesh] OR "Primary Care Nursing"[Mesh] OR "Primary Health Care"[Mesh] OR "Hospitals"[Mesh] OR healthcare[tiab] OR health care[tiab] OR primary care[tiab] OR hospital[tiab] OR hospitals[tiab] OR general practice*[tiab] OR family practice*[tiab] OR secondary care[tiab] OR medical practice*[tiab] OR medicin*[tiab]
#8	Cultur*[tiab] OR Crosscultural* OR Cross cultural* OR Intercultural*[tiab] OR Multicultural*[tiab] OR Transcultural*[tiab] OR Interracial*[tiab] OR Ethnic*[tiab] OR Diversit*[tiab] OR Migrant*[tiab] OR Immigrant*[tiab] OR Minorit*[tiab] OR Race[tiab] OR Racial*[tiab] OR Emigrants and Immigrants[Mesh] OR Emigration and Immigration[Mesh] OR Cultural Diversity[Mesh] OR Ethnic Groups[Mesh] OR Minority Groups[Mesh]
#9	((#6) AND #7) AND #8
#10	"Review" [Publication Type] OR "Ephemera" [Publication Type] OR "Comment" [Publication Type] OR "Case Reports" [Publication Type] OR "Editorial" [Publication Type]
#11	(#9) NOT #10
#12	#11 AND hasabstract

APPENDIX B. TABLE WITH ARTICLE CHARACTERISTICS OF THE INCLUDED ARTICLES, DESCRIBED BY CONTEXT (PARTICIPANTS, ETHNICITY, SETTING), MECHANISM AND OUTCOME (RESULTS)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
Sheets et al., 2012	English	Qualitative, interview	14 Mothers	None	Spanish speaking Latina's	Down syndrome, US	The mothers desired the news in a more positive, balanced light and with more complete explanations(less medical jargon, less scientific description, slower pace). Participants used religious beliefs to explain the reason for the condition	Patient	High (+/+)
August et al., 2011	English	Mixed, interview	2960 Adults	None	Latino, vs Asian Pacific	Mental health, US	There were no significant differences between language-discordance and English language-concordant older adults in predicting discussion on mental health concerns	Patient	Medium (−/+)
Watt et al., 2011	English	Qualitative, grounded theory, interview	50 Parents	None	Chinese and south Asian	Oncology, Canada	Parents were highly satisfied with the care, but not comfort with that providers communicated sensitive health issues directly to the child. Part of communication is understanding of the dr	Patient	Low (−/−)
Amereserekere et al., 2011	English	Qualitative, interview	23 Patients	None	Somali women	US	Experiences and cultural beliefs of pts influenced thoughts of pts about health care. Misperception causes fear. Pts want a clear explanation of the procedure. Pts had little personal knowledge and limited discussion with drs	Patient	Medium (−/+)
Villagran et al.,	English	Quantitative,	217 Patients	Burgoon 1996 + Ha	Mexican	US	Culture plays a fundamental role in healthcare interactions. Mexican immigrant pts desired linguistic accommodation from drs. Cultural identity	Patient	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
2012		structural equation modeling (survey)		rwoow and Giles 2005			played an important role in expectations of the medical visit. Complex relation between out-group perception (immigrant status) and adherence		
Song et al., 2011	English	Qualitative, interview, grounded theory	28 Patients	None	African American	Oncology, US	Four domains: pts want open communication of cancer info, experience lack of shared decision making, empathy and understanding, respect. Not knowing what questions to ask and not understanding contributed to limited discussion. Facilitator: dr who attentively listened, provide encouragement, demonstrating non-verbal behaviors of caring. Barriers: dr uses inappropriate language, no time, pt experience discrimination	Patient	High (+/+)
Simonds et al., 2011	English	Quantitative, interview, critical incidence	35 Patients, 16 providers (presumably dr)	Roter and Hall 1987, Betancourt 2003	American Native (minor)-non-Native	Gynaecologie, US	Trust is central in dr–pt communication, influenced by context, expectations, history and time. Barrier: expecting pts to discuss important things right away(dr), lack of continuity of care (dr + pt), waiting time (dr + pt), visit context(reason and situation), stories (pt) Facilitator: visit context (reason and situation), extra time (dr), receiving advice and educational information (pt), concern of dr (pt)	Patient + doctor	High (+/+)
Maesschalck et al., 2012	English	Quantitative, Interview	191 video's, 77 doctors	None	Mixed	Primary care, Belgium	Language problems or pure biomedical consultations resulted into less emotional cues. Pts' language proficiency had a more important impact on the number of cues expressed by the pt than	Observer	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
		+ video					cultural difference. Barriers: language and acculturation		
Gurnah et al., 2011	English	Qualitative, interview, focus group, questionnaire	39 women	None	Somali Bantu	Reproductive health, US	Barriers to healthcare and good communication are miscommunication (language), mistranslation and lack of self-advocacy, lack of cultural fluency (understanding the deeply entrenched attitudes, behavior)	Patient	Medium(−/+)
Kale et al., 2011	English	Quantitative, observation	56 Consultations/ patients, 26 doctors	None	Immigrants vs Norwegian patients	Norway	Immigrant pts without language problems expressed more worries than with language problems and Norwegian pts. No differences in emotional cues between immigrant pt and Norwegian. Barriers: language proficiency of pt	Observer	High(+/+)
Quinn et al., 2011	English	Qualitative, questionnaire	91 Patients, 72 oncologist	None	Spanish speaking	Oncology, US	Pts felt knowing less and it is important to be able to communicate in their preferred language with their dr. Drs want to be more informed of communication difficulties	Patient + doctor	Low(−/−)
Hausmann et al., 2011	English	Quantitative, audiotapes	353 Patients, 63 orthopedic surgeons	None	African American vs White	Orthopedics, US	Perceptions of past racism in healthcare may negatively impact the affective tone of pt–dr communication. Barriers: experience of discrimination → less positive nonverbal affect, less dr warmth, less ease of communication	Patient + observer	Medium(−/+)
Degni et	English	Qualitativ	10 Doctors	None	Somalia	gynecolo	Cultural differences cause communication problems.	Doctor	Medium

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
al., 2012		e, focus groups, interviews			patients	gy, Finland	Cultural traditions and beliefs were unfamiliar to drs. Drs are not able to communicate directly to several Somali women. Drs have no time to socialize. Barrier: inactive role of the dr		(−/+)
Horn et al., 2011	English	Qualitative, survey	425 Parents	None	African American	Pediatrics, US	Most pts perceived that the dr used moderate/high partnership-building communication. Concordance of dr–pt does not play a significant role in pt perception of partnership in the relation with the dr	Patient	Low (−/−)
Bullock, 2011	English	Qualitative, interview + focus group	202 adults	Johnson, Kuchibhatla and Tulsky 2008	Black vs White	End-of-life care, US	Black pts expressed feeling of mistrust and lack of positive relationship with a 'regular' dr. Black pt wants the family to be part of the decision. Black pts have more negative experiences. Black pts talk more about their belief in miracles	Patient	Medium (−/+)
Butow et al., 2011	English	Quantitative, audiotapes + questionnaire	141 audiotapes, 10 oncologist, 15 immigrants	None	Immigrants vs Anglo–Australian	Oncology, Australia	Drs spoke less to immigrants, spent less time to cancer related issues, summarizing and informing, but more time to other medical issues and advising. Drs tented to delay responses to or ignore more immigrant than Anglo–Australian cues	Observer	Medium (−/+)
Gulati et al., 2012	English	Qualitative, interviews, grounded theory	50 Patients	None	South Asian	Pediatric oncology, Canada	Communication challenges influenced parents' role in caring for their child and made it difficult to learn complex medical terminology. The ability to communicate effectively (non) verbally played an important role in immigrants health care experiences. Social aspects are important in communication	Patient	High(+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
Mitchison et al., 2012	English	Qualitative, interview	73 Patients	None	Mixed	Oncology, Australia	Pts preferred prognostic info to be delivered in a caring and personalized manner from an authoritative dr. Some family members wanted to speak to the dr first to direct the info to the pt. Most pts want open communication about their prognosis in a positive way	Patient	High(+/+)
Wilkins et al., 2011	English	Quantitative, survey	111,139 Parents	None	Mixed	Pediatrics, US	Experiences with dr communication were the strongest predictor rating a dr and healthcare poorly. Bad communication caused negative experiences. Facilitator: dr with respect, time, listening and explaining skills	Patient	Medium (−/+)
Scholl et al., 2011	English	Qualitative, questionnaire	50 Patients, 8 doctors	Communication Theory of Identity 1988 (Collier& Thomas)	Mixed	US	There is interplay between culture communication and language. For some pts ethnicity of the dr didn't matter. Pts and drs communicate their ethnic identity in similar (language is the primary source of difficulty) and different ways. Barriers are: accent, rate of speech, perceived rudeness, frustration, lack of understanding by other party	Doctor + patient	High (+/+)
Suurmond et al., 2011	English	Qualitative, interview	22 Patients	None	Mixed	The Netherlands	Pts experience negative events exchange of information, different expectations, feeling mistreated (discrimination). Illness perspective of pts and disease perspective of drs are different	Patient	High (+/+)
Hausmann et al., 2011	English	Quantitative, audiotapes	402 Patients	None	African American vs white	Orthopedic, US	Visit with AA pt contained less discussion of biomedical topics and more rapport building statements. No differences in length, discussion	Observer	High(+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
		, survey, medical record analyses					psychosocial issues, pt activation, dr verbal dominance		
Singh-Carlson et al., 2010	English	Qualitative, interview	11 Women	None	South-Asian	Oncology, Canada	Influences of experiences of respect are language, cultural values and beliefs, societal, individual and institutional factors. Pts want to be seen as an individual. Greeting is important. Ill pts preferred to talk in their own language. The way drs talk opens or closes the door. Most pts were positive about the communication style of drs	Patient	Medium (−/+)
Weinick et al., 2011	English	Quantitative, written + video vignette, questionnaire	567 Patients	None	White, African American, Latino	Disparity care, US	Different ethnic groups have generally similar expectations regarding drs' behaviors, with the exception of extent to which they treat all pts fairly regardless of race. Behavior of drs is interpreted on different ways. Pts thought that some to all drs have positive behaviors towards them. AA, Latino pts think that they are treated unfairly in comparison with white pts	Patient	Medium (−/+)
González et al., 2010	English	Quantitative, interview	2921 Patients	None	Latino	US	In pt–dr discordance Latino pts rated their health care lower. Language concordance → less confusion and frustration	Patient	Low (−/−)
Sheppard et al., 2011	English	Qualitative, interview	49 women	None	Black	Oncology, US	The pt–dr relationship was the most notable factor that influenced treatment decisions. Most pts were satisfied with the relationship, but their narratives	Patient	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
							were not. Communication with the dr was described as good. Not all pts want to be completely informed. (collectivism)		
Mack et al., 2010	English	Quantitative, interview, medical report analyses	323 Patients	Viswanath et al. 2007	Black vs White	Oncology, US	Black pts have less end-of-life discussions and tend to receive more often life-prolonging measures, probably because of different communication or healthcare access	Patient	Medium (−/+)
Moreno et al., 2010	English	Quantitative, interview	1590 Patients	None	Spanish speaking Latino's	US	Needing an interpreter and not having one was associated with experiences of lower satisfaction and quality of dr–pt communication (listening, explaining, respect, time)	Patient	Low (−/−)
Sims, 2010	English	Mixed, interview	50 women	None	Black	US	Disparities in care are influenced by non-clinical points (i.e. culture). Unfamiliarity with ethnical different thoughts caused miscommunication and misinterpretation	Patient	Low (−/−)
Manfredi et al., 2010	English	Quantitative, survey (interview)	492 Patients	Precede-Proceed Model (Greene& Kreuter 1999)	African American vs white	Oncology, US	AA pts reported more interpersonal communication barriers and have more unmet information needs. AA pts reported poorer dr–pt communication. AA pts asked the same amount of questions as White pts do	Patient	Medium (+/−)
Peek et	English	Qualitativ	51 Patients	Shared	African	Diabetes,	Influenced shared DM by pt-related factors (all	Patient	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
al., 2010		e, interview + focus group		decision model (Charles, Gafni&Whelan 1997)	American	US	negative): knowledge, attitudes, beliefs, behaviors Dr-related factors: cultural discordance (discrimination). Pts believed that their self-efficacy and communication style accounted for success		
Jean-Pierre et al., 2010	English	Quantitative, questionnaire	973 Patients	None	White vs non-White	Oncology, US	Differences between white vs non-White pts in concerns of understanding diagnosis and treatment plan. Non-White pts wanted to have more info	Patient	Low (−/−)
Davies et al., 2010	English	Qualitative, interview (grounded theory)	36 Parents	none	Mexican vs Chinese vs American	Pediatrics, US	Pts who received basic information, explanations and attention to questions and emotions reported feeling more informed and less anxious and distressed. There was a language and a cultural barrier	Parent	Medium (−/+)
Carrion, 200	English	Qualitative, interview	10 Doctors	None	Hispanic	End-of-life care, US	Barriers are: language, uncertainty regarding role of family and limited knowledge of cultural factors and beliefs impacted communication related to end-of-life decisions. There are multiple solutions to overcome these barriers (for example: training for dr, more bilingual health staff)	Doctor	High (+/+)
Ruppen et al., 2010	English	Quantitative, document	285 Patients	None	Mixed	Pain treatment, Switzerla	The number of consultations was similar between the groups. The consultation length was shorter with immigrant pts	Observation	Bad (−/−)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
		analyses (medical records)				nd			
Butow et al., 2010	English	Qualitative, focus group, interview	73 Patients	None	Mixed	Oncology, Australia	Immigrant pts felt cultural isolated, some felt judged, but expertise of the dr was respected. Some pts suspected that they received inferior care. Pts were concerned that drs gave less information, because the drs did not take the time to overcome the communication barrier or used misplaced paternalism. Some pts found it too hard or demanding to request clarification and they acted as if they understood more than they did	Patient	High (+/+)
Wallace et al., 2009	English	Quantitative, interview	5197 Patients	None	Hispanic	Health services, US	There are very few differences in perceptions of dr communication across subgroups. Some reported that the dr always showed respect for what they had to say. Others indicated that the dr always spent enough time	Patient	High (+/+)
Jensen et al., 2010	English	Quantitative, survey + interview	131 Patients	None	White vs Non-White	US	White pts were more likely than non-White pts to feel that dr did not listen carefully	Patient	Low (−/−)
Alegría et al., 2009	English	Quantitative, survey	884 Patients	None	Latino	US	Us born Latino pts had greater pt activation scores than foreign born Latino pts. Pt activation was associated with self-reported quality of care and better dr–pt communication	Patient	Medium (+/−)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
Garcia et al., 2009	English	Qualitative, interview	4 Patients	None	Latino immigrants	Adolescents, US	Immigrant pts experienced access disparities because of language barriers. Language barriers contributed to feelings of dissatisfaction	Patient	Medium (−/+)
Wiking et al., 2009	English	Qualitative, questionnaire	52 Patients, 65 GP	None	Mixed	Health center, Sweden	Some pts experienced language difficulties (because of time, relation problems, explaining of the dr, expressing of the pt). Most pts experienced respect for their culture, personality, and their wishes. Most pts were satisfied with the consultation. Facilitator dr: understanding viewpoint of pt, willingness to listen, and experience of personal connection	Patient + doctor	Medium (−/+)
O'Brien et al., 2011	English	Quantitative, survey	1267 Patients	None	Hispanics	US	Bilingual pts experienced higher satisfaction with dr–pt communication, than monolingual pt. Language preference was not significant associated with pt satisfaction	Patient	Medium (+/−)
Cené et al., 2009	English	Quantitative, interview + audiotapes	226 Patients, 39 doctors	None	Mixed	Hypertension, US	Pt race is associated with the quality of pt–dr communication to a greater extent than blood pressure control. Black pt with uncontrolled blood pressure had the shortest visits. Uncontrolled Black pts had a less emotional positive tone and experienced worse communication	Observer	Medium (+/−)
Shadid et al., 2009	English	Qualitative, interview	30 Patients	None	Aboriginals	Oncology, Australia	Barriers for effective communication for pts are: history and racism, lack of understanding about culture and life circumstances, an alienating hospital environment which caused language barriers, inadequate information and explanation, differences in comm style, non verbal cues, body language, lack	Patient	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
							of respect for privacy. Facilitators for pts are: cultural sensitive dr, empathic personal contact, acknowledgment and respect for pt culture		
Sudore et al., 2009	English	Quantitative, questionnaire	771 Patients	None	Spanish speaking	US	Language barriers gave less interactive communication style. Limited health literacy impedes dr–pt communication, but its affect vary with language discordance and comm type (receptine, proactive, interactive)	Patient	Medium (+/−)
Ge et al., 2009	English	Qualitative, videotapes + interview	44 video's	Hofstede 2001	Mixed	Oncology, US	During consultation there was little attention for culture. Facilitators for pts are: trust, power distance, health beliefs, directness, dependency, authoritative voice knowledge, ability to listen, and expertise of the dr	Observer + doctor + patient	High (+/+)
Berkman et al., 2009	English	Quantitative, interview	26 Patients	None	Korean American	Oncology, US	Most pts wanted their dr to tell them the diagnosis. Some pts preferred disclosure about serious illness. Pts wanted to understand the dr and wanted the dr to determine what, how and when for each pt	Patient	Medium (−/+)
Wiking et al., 2009	English	Quantitative, questionnaire	52 Patients	None	Mixed	GP, Sweden	Most pts experienced respect for their personality, wishes and culture, and were satisfied. Barriers for pts were: language and cultural differences, drs that are unable to listen or to understand	Patient	High (+/+)
Eamranond et al., 2009	English	Quantitative, document	306 Patients, 55 doctors	None	Spanish speaking	Primary care, US	Language discordance dr–pt communication documented less about diet and physical activity	Observer	Low (−/−)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
		analyses							
Williams et al., 2008	English	Qualitative, focus groups	42 Patients	None	African American	Oncology, US	Effective communication and decision making are fundamental to overall quality of life. Drs were viewed as having the responsibility to establish and monitor effective communication. Drs needed to know the pts and family and tailor communication on this knowledge (appropriate language and amount and timing of information)	Patient	High (+/+)
Julliard et al., 2008	English	Qualitative, interview (grounded theory)	28 women	None	Latina	US	Dr–pt relationship is very important. Pts will not share information if the dr is has no compassion, trust, caring, human interest and respect. Pts experienced difficulty disclosing information because of language barrier. Barriers were time constraints and cultural differences. Pts expressed that being listened and heard by drs were important	Patient	High (+/+)
Korthuis et al., 2008	English	Quantitative, interviews	717 Patients	None	Mixed	US	The relationship between pt-centered communication and race is complex. Most pt rated dr communication favorably. Black pt reported more positive experiences than White pt. Pts reported that drs explain things, listen and respects	Patient	Medium (−/+)
Wallace et al., 2009	English	Quantitative, telephone interview	5197 Patients	None	English speaking or Spanish speaking	US	English pts reported positively about communication with the dr. Most English responders reported that the dr listened, explained, showed respect, spent enough time and ask to help the pt in making the decision	Patient	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
Hawley et al., 2008	English	Quantitative, questionnaire	877 women	None	Mixed	Oncology, US	Despite similar outcomes, pts reported very different experiences with treatment decision making. Latina pts have the highest decision dissatisfaction. Ethnic minority pts more often preferred interpersonal sources of information	Patient	Low (−/−)
Harmsen et al., 2008	English	Quantitative, interview	663 Patients, 38 doctors	None	Western vs non Western	GP's, The Netherlands	Cultural views and language proficiency are more important for the evaluation of care than ethnic origin. Non-Western pts perceived less quality of care and were less satisfied than Dutch-born pts. With bad Dutch language proficiency, pts were more negative about the communication process	Patient	High (+/+)
Street et al., 2008	English	Quantitative, cross sectional	214 Patients, 29 doctors	None	Mixed	Outpatient clinic, US	Race concordance is primarily predictor of perceived ethnic similarity, but several factors affect perceived personal similarity, including drs' use of pt-centered communication	Patient	Low (−/−)
Babitsch et al., 2008	English	Quantitative, questionnaire, documents	2429 Doctors	None	Turkish vs German	Emergency department, Germany	Good communication is crucial for satisfaction dr - pt, dr satisfaction is significant lower with ethnic different pts. Language barriers have negative impact on dr–pt relationship and satisfactory of the dr	Doctor	medium (−/+)
Levinson et al., 2008	English	Quantitative, audiotapes + questionnaire	886 Patients, 89 doctors	None	African American vs White	Surgery, US	White pts rated the communication and satisfaction higher than Black pts. The content of informed DM conversations does not differ by race	Patient + observer	medium (+/−)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
Schouten et al., 2009	English	Qualitative, videotapes + survey	103 Patients, 29 doctors	Roberts et al. 2002	Mixed	GP's, The Netherlands	GP's interacted less stimulatingly with minority pts. Consults with ethnic minority pts were with less stimulating utterances, less 'joint problem solving' and less schema-driven. Drs involved ethnic minor pts less in the DM process and checked less often whether they understand	Observer	High (+/+)
Kushnir et al., 2008	English	Quantitative, questionnaire	193 Patients	None	Jewish, Bedouin	Pediatric, Israel	Interpersonal competence and skills of drs were important. Global trust in the dr was predicted by interest and collaboration communication styles, but ethnicity was not a significant predictor. The only cultural difference was that Jewish pts reported significantly higher scores than Bedouin pts on collaboration (having common language and similar values)	Parents	High (+/+)
Ghods et al., 2008	English	Quantitative, audiotapes + questionnaire	108 Patients, 54 doctor	None	African American vs White	Depression care, US	There were no differences is biomedical or psychosocial statements. AA pts reported less rapport building exchange. No different in duration of the visit. Dr and pt positive affect were lower in visits of minority pts. AA pts provided cues about their emotional status	Observer + doctor	High (+/+)
Ngo-Metzger et al., 2007	English	Quantitative, survey	2746 Patients	None	Asian American	Community health center, US	Language barriers were associated with less health education, worse interpersonal care and lower pt satisfaction	Patient	High (+/+)
Nguyen	English	Qualitativ	20 Patients	None	Vietnames	Oncology	Pts were unsatisfied with the dr–pt communication,	Patient	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
et al., 2008		e, interview (grounded theory)			e	, US	because discussions were not always taking place; drs didn't talk about cancer and language difficulties. Pts accepted a paternalistic dr–pt relationship		
Wearn et al., 2007	English	Qualitative, mixed, interview	80 Doctors	None	Mixed	GP's, New Zealand	Non-English consultations were associated with higher misunderstanding and interpretation difficulties, because of language difficulties. Information sharing was impeded with language difficulties, which gave worries about compliance, diagnosis and understanding of the pt. The effect of different cultural norms was seen as additional to issues produced by language alone	Doctor	High (+/+)
Wallace et al., 2007	English	Quantitative, telephone interview	19.6 million households	None	Hispanic White vs non-Hispanic White	Civilian research, US	Hispanic pts reported that their dr listened, explained, showed respect, spent enough time, but reported that the dr gave them control overtreatment options	Patient	High (+/+)
Smith et al., 2007	English	Quantitative, survey	803 Patients	None	African-American vs White	End-of-life care, US	Quality of dr–pt relation (respect, listening, DM) was worse for AA pts, except trust	Patient	Medium (+/−)
Probst et al., 2007	English	Quantitative, survey	1766 Patients	None	Mixed	Depression, US	White pts and Hispanic pts were more likely to communicate about symptoms of depression with the dr than AA	Patient	Low (−/−)
Schouten	English	Quantitati	103 Patients,	Street et	Mixed	GP, the	Non Western ethnic minority pts displayed less	Observer + p	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
et al., 2007		ve, videotapes + questionnaire + interview	29 doctors	al. 2002		Netherlands	participatory behavior during consultations and less self-diagnose than Dutch pt. Dutch pts asked more (in) direct questions. Drs instrumental and affective behavior was lower in ethnic minority pts	atient + doctor	
Meeuwesen et al., 2007	English	Quantitative, videotapes	103 Patients	None	Mixed	GP, the Netherlands	Drs set the agenda. Majority of the consults was traditional or cooperative, especially with minority pts. A conflicting pattern will lead to poor mutual understanding	Observer	High (+/+)
Kokanovic et al., 2007	English	Qualitative, interview	30 Patients	None	Mixed	Diabetes, Australia	Dr used normalizing or catastrophizing strategies. Some pts reported that they received only general information (normalizing), while others reported that the information was difficult to comprehend (catastrophizing). The relationship was hierarchical	Patient	High (+/+)
Rosenberg et al., 2007	English	Qualitative, interview	23 Doctors	None	mixed	GP, Canada	Most drs focused on the individual pt. Pt-centered model of care worked effectively in different cultures, but drs had no framework to elicit information about pt' culture. Main strategies of dr were: pt adaption, dr adaption and negotiation	Doctor	medium (−/+)
Schlemmer et al. J 2006	English	Qualitative, focus groups and interview	5 Patients, 6 doctors	None	Xhosa speaking	South Africa	Drs had negative attitudes towards Xhosa speaking pts, because of their previous experiences. Dr experienced that pts didn't understand the diagnosis and medication use. Pts reported that respect implies not querying anything the dr says. Language barriers negatively influenced the attitudes of drs and pts	Doctor + patient	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
Levin et al., 2006	English	Qualitative, questionnaire	53 Patients	None	Xhosa speaking	Pediatrics, South Africa	Language and cultural barriers were cited as barriers. Pts experienced difficulties in understanding the dr (terminology), making themselves understood and asking questions. Pts blame on their own linguistic limitation	Parents	High (+/+)
Mutchler et al., 2007	English	Qualitative, focus groups	36 Patients	None	Latino	US	Language was a barrier in dealing with medications. Language issues were being linked to perceptions of discrimination. Pts were actively involved in their health care communication obstacles prevent understanding and participation in DM. Trust is related to language and a key component for pt DM	Patient	High (+/+)
Ali et al., 2006	English	Qualitative, interview	25 Patients	None	South Asian vs White	GP, Great Britain	Pts wanted a dr-centered approach. South-Asian pts had less social conversation. Drs were good listeners. Time management was important for drs to have. 'Foreign ambience syndrome', where pts were seen to complain about trivial matters in which communication between drs and pts is adversely effected by the linguistic incompetence of pt	Patient	High (+/+)
Meeuwesen et al., 2006	English	Quantitative, video observation	144 video's/patients, 31 doctors	None	Mixed	GP, The Netherlands	Consultation with minority pts were shorter, greater power distance, drs ask for clarification, gave advice and paraphrased more. Pts of ethnic majority talked more and were more often disagreed with the dr. Dr instrumental communication was similar, but less affective communication in minority group	Observer	High (+/+)
Gordon et al.,	English	Mixed, audiotapes	137 Patients	None	Mixed	Oncology, US	Minority pts received less information from dr and were less active in the consultation	Observer	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
2006		analyses							
Towle et al., 2006	English	Qualitative, interview + focus group	22 Patients, 2 doctors	Kelly&Brown 2002	Aboriginals	Canada	Barriers in communication were time and history. A facilitator was trust. Pts wanted to be treated as individuals and want time to be heard. Drs needed to understand the history of the pt to build a personal relationship. With negative experiences, pts saw healthcare negative	Patient + doctor	High (+/+)
Siminoff et al., 2006	English	Quantitative, audiotapes	405 Patients, 58 doctors	None	White vs non-white	Oncology, US	Both pts and drs spent time to establish an interpersonal relationship. White pts had more utterances, asked more questions, more involvement in the DM process and gave more biomedical information	Observer	High (+/+)
Abbe et al., 2006	English	Mixed, questionnaire	17 Patients	None	Spanish speaking	Oncology, US	Pts felt scared and worried that they wouldn't understand what the dr had to say. Pt preferred simple language	Patient	Low (−/−)
Gonzalez-Espada et al., 2006	English	Qualitative, interview	13 Patients, 17 doctors	None	Hispanic	Pediatrics, US	Pts felt frustration, uncomfortable and helplessness with a language barrier to understand the dr. Drs reported importance of awareness of cultures and limited ability to understand and speak the same language, which brought concerns about the diagnosis	Patient + doctor	High (+/+)
Gordon et al., 2006	English	Quantitative, questionnaire	103 Patients	None	Black vs White	Oncology, US	Pts reported that drs communicated less supportive, less partnering, less informative with Black pts, which gave lower trust.	Patient	Moderate (−/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
Goldstein et al., 2005	English	Quantitative, interview + questionnaire	214 Patients, 92 doctors	None	Mixed	End-of-life care, US	Discussions about prognosis occurred more often in non-white pts	Patient + doctor	Low (−/−)
Shrank et al., 2005	English	Qualitative, focus groups	70 Patients	None	African American vs White	End-of-life care, US	White pts desired more information about medical options; AA pts requested spiritually focused information. White pts expressed more concern with quality of life while AA pts tended to protection of life at all costs (quantity more important than quality). Pts wanted an autonomous decision with the family	Patient	High (+/+)
Rosenberg et al., 2006	English	Qualitative, video vignette	24 video's/patients, 12 doctors	Identity and Co-cultural Theory	Mixed	Family medicine, Canada	Pts often made errors in word use and were conscious of differencing accents that may make it more difficult to be understood. Pts failed to understand the dr, but didn't ask for clarification. Drs reported that pts have limited ability to describe symptoms; pts used expressions that were difficult for the dr to decode. Language was a barrier. The interaction was seen as interpersonal rather than intercultural. Dr didn't know the effect of culture on communication	Patient + Doctor	High (+/+)
Moss et al., 2005	English	Qualitative, video observatio	232 video's/patients, 19 doctors	None	Mixed	GP, UK	Misunderstanding arises owing to a range of linguistic and cultural factors. Including stress and intonation patterns, vocabulary, narrative of pts and the different agendas of drs and pts. The indirectness	Observer	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
		n					of the pt is a face saving strategy		
Roberts et al., 2005	English	Qualitative, video observation	232 video's	None	Mixed	GP, UK	Misunderstanding because of: pronunciation, word stress, intonation, speech delivery, grammar, vocabulary, lack of contextual information, style of presentation. Communication style is a more important factor than culturally specific health beliefs	Observer	High (+/+)
Cheng et al., 2004	English	Quantitative, questionnaire	1040 Patients	None	Aboriginal vs non-Aboriginal	Anesthesiology, Australia	Communication difficulty in minority pts was pervasive and often unrecognized. Language was a barrier. Minority pts understood less	Patient	High (+/+)
Sleath et al., 2004	English	Quantitative, interview	141 Patients, 80 doctors	None	Hispanic vs non-Hispanic	Depression care, US	Hispanic ethnicity of pts and language were not significant related to dr–pt communication about how to overcome depression	Patient	Medium (−/+)
Katz et al., 2004	English	Mixed, focus group + survey	45 Patients for focus groups, 397 patients for survey	None	African American	Oncology, US	Pt–dr communication was a discussion theme. 75% of pts were considered having good communication. Those were more likely to be screened for cancer	Patient	Medium (+/−)
Johnson et al., 2004	English	Quantitative, audiotapes + survey	458 Patients, 61 doctors	None	African American vs White	US	Drs were more verbally dominant, less pt-centered and use a less positive affective tone with AA pts	Observer	High (+/+)
Mosen et	English	Quantitati	570 Patients	None	Spanish	Pediatrics	Spanish speaking pts reported worse experiences	Patient	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
al., 2004		ve, survey			speaking	, US	with dr communication, because of bad explanation and less time		
Weitzman et al., 2004	English	Qualitative, focus groups	25 Patients	None	Latino	US	Barriers in communication are lack of trustworthiness, experiences with healthcare and language. Language skills of the dr are more important than ethnicity. Pts stated that assertiveness was not an option. The combination of language barrier and being not assertive is difficult	Patient	High (+/+)
Fernandez et al., 2004	English	Quantitative, questionnaire	116 Patients, 48 doctors	None	Spanish speaking	Primary care, US	Pts were more likely to report better interpersonal processes of care when their dr had a higher self-rated language ability and cultural competence	Patient + doctor	High(+/+)
Johnson et al., 2004	English	Quantitative, interview	6299 Patients	None	Mixed	US	Hispanic and Asian pts were less likely than White and AA pts to say that the dr listened well; they understood everything, shared DM, had enough time	Patient	Medium (+/−)
Barkin et al., 2003	English	Quantitative, questionnaire, pre-test	15 Patients, 5 doctors	None	Latino	Pediatrics, US	Baseline trust and communication were high	Patient	Low (−/−)
Cooper et al., 2003	English	Quantitative, audiotapes + questio	252 Patients, 31 doctors	None	African American	US	Race discordant visits were shorter and had a less pt positive effect. There were no differences in DM and satisfaction AA pts were sensitive to interpersonal cues from the	Patient + observer	Medium (−/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
		nnaire					dr, because of historical and personal experiences with discrimination		
Harmsen et al., 2003	English	Quantitative, questionnaire + interviews	87 Patients, 87 doctors	Kleinman et al. 1978	Mixed	GP, the Netherlands	Communication of dr with minority pts was less effective, than with pt of ethnic majority. There was more misunderstanding, more non-compliance and less mutual understanding, especially in the minority group with mixed traditional and western cultures	Patient + doctor	High (+/+)
Saha et al., 2003	English	Quantitative, questionnaire	6299 Patients	None	Mixed	US	Ratings of dr behavior, cultural sensitivity and dr–pt interactions were lower among Hispanic and Asian pts, than Black and White pts. Non-White pts were less satisfied with healthcare	Patients	Medium (−/+)
Piette et al., 2003	English	Quantitative, questionnaire	752 Patients	None	Mixed	Diabetes, US	AA and Hispanic pts reported better general communication. AA pts and other minorities reported better specific communication than White and Hispanic pts	Patient	Medium (+/−)
Shapiro et al., 2003	English	Quantitative, questionnaire	107 Doctors	None	Mixed	Family and internal medicine, US	Drs tented to identify serious cross-cultural problems as those that focused on perceived pt shortcoming. Family medicine drs rated culturally competent communication as more relevant than internal medicine drs. Drs found themselves competent in intercultural communication	Doctor	High (+/+)
Lingard et al., 2002	English	Qualitative, focus groups	29 Doctors	None	Mixed	Pediatrics, Canada	Drs believed that lack of experiences and knowledge about other cultures caused their communication difficulties. Drs taught that prejudice was not an	Doctor	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
							issue. Drs had difficulties with using the right interview technique		
Sleath et al., 2003	English	Qualitative, audiotapes + document analyses	98 Patients, 25 doctors	None	Hispanic	Family and general medicine, US	Non-Hispanic pts were more likely to give information about their antidepressants than Hispanic pts	Observer	Low (−/−)
Bubano et al., 2003	English	Quantitative, questionnaire	62 Doctors	None	Spanish speaking	Pediatrics, US	Drs experienced limitations in their language. Some drs avoid communication with pts with limited English proficiency	Doctor	Medium (+/−)
Browner et al., 2003	English	Qualitative, interview	156 Patients	None	Mexican	Prenatal care, US	Miscommunication due to medical jargon, problems of translation, problems of trust	Patient	Medium (−/+)
Sleath et al., 2002	English	Quantitative, audiotapes +interview pt + questionnaire dr	383 Patients, 27 doctors	None	Hispanic vs non-Hispanic	Primary care, US	Drs asked Hispanic pts more open-ended questions. Pts' ethnicity and language did not influence any other aspect of dr–pt communication about depression or anxiety	Observer + patient + doctor	Medium (−/+)
Kelly et al., 2002	English	Qualitative,	10 Doctors	None	Original inhabitants	Family medicine,	During pt–dr communication, drs talked less, took more time and were comfortable with silence. Pts' illnesses are not distinct from their community	Doctor	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
		interview			Canada	Canada	context: relations, culture and values are inseparable. Drs behavior and understanding changed when dealing with ethnic different pts. Pts used an unfamiliar mode of verbal communication, for example story telling		
Van Wieringen et al., 2002	English	Mixed, video observation + interview + questionnaire	88 Parents, 8 doctors	Kleinman 1980	Mixed	Primary care, The Netherlands	Ethnic minority pts more often reported problems in their relationship with the dr, they had different beliefs about health and they were less satisfied with the communication. Good relationship is necessary for mutual understanding	Patient + doctor + observer	High (+/+)
Stevens et al., 2002	English	Mixed, interview	413 Parents	None	Mixed	Pediatrics, US	Ethnic minority pts experienced poorer pt–dr compared with White pts. Especially in restriction of freedom in choosing were to seek care	Patient	Low (−/−)
Collins et al., 2002	English	Qualitative, focus group	13 Patients	None	White vs black	Cardiology, US	Four domains of communication on pt's preferences and comfort. 1. Substance of information 2. Recommendations are inconsistent with expectations 3. dr argumentation for extra tests failed 4. importance of trusting their dr. Lack of substance and vagueness of information may be linked to feelings of mistrust towards dr	Patient	High (+/+)
Sleath et al., 2001	English	Quantitative, audiotapes + questio	250 Patients, 27 doctors	None	Hispanic vs non-Hispanic	General medicine, US	There were no ethnic differences in dr–pt communication about alternative therapies. Drs with less experience were more likely to ask pts more questions. Less pts preferred their visit to be in their	Observer + patient + doctor	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
		nnaire + interview					primary language		
Rivadeneyra et al., 2000	English	Quantitative, video observation	38 Patients, 19 doctors	None	English vs Spanish speaking	Primary care, US	Spanish speaking pts made fewer comments and were more ignored. Language rather than dissimilar ethnic backgrounds precipitated the differences in offers made by pts and facilitations provided by drs	Observer	Medium(−/+)
Sleath et al., 2000	English	Quantitative, audiotapes analyses	427 Patients, 27 doctors	None	Hispanic vs non-Hispanic	Family and general medicine, US	Drs were equally likely to express empathy to Hispanic and non-Hispanic pts. Drs were more likely to express positivism to non-Hispanic than to Hispanic pts	Observer	High (+/+)
Cooper-Patrick et al., 1999	English	Quantitative, telephone interview	1861 Patients, 64 doctors	None	Mixed	Primary care, US	Ethnic minority pts rated their visits with dr as less participatory than White pts	Patient	Medium (−/+)
Morales et al., 1999	English	Quantitative, questionnaire	7093 Patients	None	Mixed	US	Latino/Spanish pts were more dissatisfied with dr communication (listening, answers to the questions, explanations, support) than Latino/English pts	Patient	High (+/+)
David et al., 1998	English	Quantitative, questionnaire	261 Patients	None	Mixed	Primary care, US	Ethnic minority pts experienced less explanation about side effects of medication, were less satisfied with care than pts of ethnic majority. Both groups experienced that the dr understands them and feel that they have enough time to communicate with the	Patient	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
							dr. A language barrier impacts negatively on pt satisfaction		
Rodriguez et al., 1998	English	Qualitative, focus group	28 Patients	None	Latina and Asian	US	Pts identified elements to improve the dr-pt communication in the behavior of the dr: trust, compassion, and understanding. Pts wanted the dr to initiate discussion about abuse. Pts expressed their perspectives in culturally distinctive way	Patient	High (+/+)
Dyregrov et al., 1997	Norwegian	Qualitative, interviews	15 doctors, 10 patients	Socio-cultural theory	Mixed	GP, Norway	Drs found it frustrating communicating with immigrants, because of different thoughts and norms, language and expectations, experience about body and pain. Difficulties with discrepancy between verbal and non-verbal communication, this made it difficult to understand the immigrants symptom description and their understanding of illness	Patient + doctor	High (+/+)
Blöchliger et al., 1997	German	Mixed, questionnaire, focus group	314 Patients	None	Mixed	GP, Switzerland	Cultural and social factors complicated communication during a dr–pt interaction and caused that drs focused on a somatic diagnose. Most drs felt that communication problems were related to speaking a common language	Doctor	High (+/+)
Cave et al., 1995	English	Qualitative, focus group	13 Patients, 5 doctors	None	Mixed	Family medicine, US	Drs thought that understanding pt' culture better would achieve better diagnosis. Pts didn't understand why the dr asked questions about their culture. Pts found this intrusive. Barriers for the pt are: little time, no explanation, expect that the dr will know their culture; pts see Western medicine as	Patient + doctor	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
							superior. A facilitator for the pt is: trust in knowledge of the dr. Barriers for drs: time pressure, seeing pt not as an individual. Facilitators for the dr are: awareness of culture, understanding the isolation of minority pts, culturally sensitive approach		
Ari et al., 1995	English	Qualitative, interview	18 mothers	None	Japanese	GP's, UK	Language was a barrier in face-to-face communication. Pts found it difficult to understand colloquial expressions. Drs were unfamiliar with Japanese pt's expectations and experiences. Facilitator for the pt is when the dr writes down the keywords so they can use a dictionary at home	Patient	Medium (−/+)
Favrat et al., 1994	French	Quantitative, questionnaire	612 Patients, 20 doctors	None	Mixed	Outpatient clinic, Switzerland	Drs felt less satisfied with minority pts because of communication difficulties, but they felt that they have the same diagnostic accuracy as with other pts	Doctor	Medium (−/+)
Krauss-Mars et al., 1994	English	Quantitative, questionnaire	40 Parents	None	Mixed	Disabled care, South Africa	Language differences tend to have a negative effect on the communication. Black pts received less explanation, less possibilities to ask questions, drs didn't ask if the pt understood	Patient	Medium (−/+)
Wilson et al., 1994	English	Quantitative, questionnaire	813 Patients, 106 doctors	Kleinman 1977	Asian vs White	Psychiatry, UK	Asian and White pts registered the emotional experiences equally, but they were communicated and managed differently. Pts suggested differences in the way which members of each group understood the meaning of their distressed feelings	Patient +doctor	Low (−/−)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
							in the context of a dr visit		
Erzinger, 1991	English	Qualitative, interview + audiotapes analyses	26 Patients, 11 audiotapes, 20 doctors	None	Spanish speaking	US	Facilitators for the pt: describe concerns, clarify information conveyed by the dr, obtain an adequate explanation, develop a personal relationship. Facilitators for the dr: explore symptom, interpret follow-up data, adequately explain and advise, understand pt's personal situation. Success of the medical encounter is determined by how dr and pt each assist in completion of the others tasks. The dr style of paraphrasing and using the pt's exact words encourages the pt's elaboration of her concerns	Observer + patient + doctor	High (+/+)
Wright, 1983	English	Mixed¸ questionnaire	39 Doctors	None	Asian vs English	GP, UK	Drs felt that Asian pts consulted more often and took up more time than English pts. Drs complained about Asian pts complaining about trivial matters	Doctor	Medium (−/+)
Hooper et al., 1982	English	Quantitative, observation	150 interactions with 15 doctors	None	Mixed	Outpatient clinic, US	Dr's empathy behavior and time spending was higher with Anglo–American pts, than with Spanish–American pts. No differences in nonverbal attention, courtesy and information giving. Cultural differences without language differences influenced the behavior of the dr	Observer	Medium (−/+)
Shapiro et al., 1981	English	Quantitative, audiotapes analyses	61 Patients, 10 doctors	None	Hispanic vs non-Hispanic	US	Drs performed better on dimensions of rapport, explanation and ability to elicit pts feedback with the non-Hispanic English speaking pt. There were no differences in understanding the diagnosis	Observer	High (+/+)
Kline et	English	Quantitati	40 Patients,	None	Mixed	Psychiatr	Latino pts were less satisfied with the help provided	Patient + doct	High (+/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
al., 1980		ve, questionnaire	16 doctors			y, US	by the dr's specific advice. Drs thought that pts who were interviewed directly in English felt more appreciative, were more eager to return and felt better understood. This was also more satisfactory and comfortable to them	or	
Leng et al., 2012	English	Qualitative, focus group	28 Patients	None	Chinese	Oncology, US	Pts expressed dissatisfaction with the amount, reliability and comprehensibility of information. Pts didn't understand what their dr said. Language is a barrier in participating in the treatment process	Patient	Medium (−/+)
Cox et al., 2012	English	Quantitative, video observation	405 interactions with 32 doctors	None	Mixed	Pediatrics, US	Drs communicated differently. Asian pts: fewer relationship building utterances, Latino pts: less information, AA: less engaged in DM	Observer	Medium (−/+)
Diamond et al., 2012	English	Quantitative, questionnaire	68 Doctors	None	Spanish speaking	General medicine, US	With a language barrier drs used their own language skills or an interpreter	Doctor	Low (−/−)
Hoang et al., 2009	English	Qualitative, interviews	10 Patients	None	Asian migrants	Maternity care, Australia	Pts faced language and cultural barriers which affected the communication. They experience confusion and conflicting expectations. Family was very important for migrant pt. Drs and pts have different habits	Patient	Medium (−/+)
Simon et al., 2005	English	Quantitative, video	140 interactions	None	Caucasian vs	Paediatric oncology,	Caucasian pts were more successfully informed. No differences in duration of consultation. Latino pts were more openly emotional than White or AA pts	Observer	Low (−/−)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
		observation			minorities	US			
Brugge et al., 2009	English	Qualitative, focus group	85 adults	None	Mixed	Pediatrics, US	Pt didn't separate issues of understanding from their overall narratives of experiences with healthcare and illness. Language discordant communication was an issue for low educated Cantonese pts. Pts preferred a doctor of their own language	Patient	Medium (−/+)
Chudley et al., 2007	English	Quantitative, questionnaire	153 Doctors	None	Mixed	GP, UK	Barriers in communication are: not feeling confident with pts who speak a different language, not knowing the ideas of the pt, feeling uncomfortable with exploring sensitive topics. Facilitators: awareness of their body language, understanding pt's opinions, learning about pt's cultural perspective	Doctor	Medium (−/+)
Degan et al., 2003	Italian	Mixed, document analyses, questionnaire	8 Doctors	None	Mixed	Gynecology, Italy,	The difficulties reported by drs concerned "give clinical information", "collect medical history" and "assess the symptoms". Critical moments related to their own competence concerned "gather information and symptoms" and "give therapeutic information". Compared to the knowledge of a foreign language 20.8% said that they do not know any foreign language, while others claim to know European languages	Doctor	Medium (+/−)
Gerlach et al., 2008	German	Qualitative, focus group	30 Doctors	None	Mixed	GP, Germany	Verbal communication was a major problem. Drs tried to have a non-discriminating attitude. Drs have a profound effort for empathic understanding	Doctor	Medium (−/+)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
Gerlach et al., 2009	German	Qualitative, focus group	33 Patients, 30 doctors	None	Black	Family medicine, Germany	Barriers are: insufficient medical knowledge, differences in respect to importance of language and nonverbal communication, different illness models, different experiences with discrimination. Pts named the importance of medical competence of pts, insufficient empathy of drs, insufficient time management of the dr, insufficiency in valuing diversity	Patient + doctor	High (+/+)
Gerlach et al., 2012	German	Qualitative, focus group	39 Patients	None	Turkish	Germany	Most pts experienced unequal care and discrimination. Pts wanted to be seen as individuals, expressed that empathy of the dr was often missing, resulting in no trust	Patient	Medium (−/+)
Neal et al., 2006	English	Mixed, video observation	83 video's, 11 doctors	None	South-Asian	GP, UK	White pts had more affective consultations and played a more active role, as did the dr. Drs spent less time in information giving and more time in asking questions with SA pts. SA fluent English speaking pts had the shortest consultations, SA non-fluent English the longest	Observer	High (+/+)
Ward et al., 2005	English	Qualitative, focus group + interview	18 Patients, 33 doctors	None	Mixed	Home/community care, Australia	Pts experienced barriers in lack of information, cultural factors, and negative experiences. Cultural differences were a major barrier	Patient + doctor	Medium (−/+)
Zapka et al., 2006	English	Mixed, interview	90 Patients	Palmer, Donabedian & Povar	Caucasian vs African American	Oncology, US	Discussion about end-of-life topics was low. Dr–pt communication occurred infrequently	Patient	Low (−/−)

Author year	Language	Design & Method	Participants	Theory	Ethnicity patient	Setting, country	Results	Frame of reference	Level of contribution[1,2,*]
				1991					
Herselman et al., 1996	English	Qualitative, interview	19 Patients	None	Xhosa speaking	South Africa	Dr felt the inability to speak the pt' language, which could help them with better insights into the perceptions of the pt. Pts lack adequate and appropriate vocabulary. Pts tell the dr what they believe the dr want to know. A barrier in the communication is shortage of time. Success of the process depends on the communication. Barriers are: dr's lack of knowledge and understanding of the pt, Defensiveness and unintelligible techniques that pt use to provide information, unshared meanings between drs and pts. There is an absence of fixed patterning in the dr's communication strategies	Patient	High (+/ +)
Seijo et al., 1991	English	Quantitative, observation + interview	51 Patients, 51 doctors	None	Hispanic	Internal medicine, US	Language discordance between drs and pts can have effect on interaction and its outcome by leading to decreased pt information recall of the encounter and decreased pt question asking behavior	Observer	Medium (−/+)

* Quality assessment on content ((1) rigor and (2) relevance), +is completely, − is partly.
[1] Rigor is whether the method used to generate that particular piece of data is credible and trustworthy.
[2] Relevance is whether the article contributes to answer our research question.