SOCIO-ECONOMIC STATUS OF THE PATIENT AND DOCTOR-PATIENT COMMUNICATION: DOES IT MAKE A DIFFERENCE?

Part one: Systematic review

Master thesis presented to obtain the degree of
Master of Health Education and Health Promotion

By Nele De Laender

Promotor: Dr. Sara Willems
Supervisor: Drs. Evelyn Verlinde
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The social gradient in doctor-patient communication

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Abstract

Objective: In recent years, the importance of social differences in the physician-patient relationship has frequently been the subject of research. A 2005 review synthesised the evidence on this topic. Considering the increasing importance of social inequalities in health care, an actualization of this review seemed appropriate.

Methods: A systematic search of literature published between 1965 and 2011 on the social gradient in doctor-patient communication. In this review social class was determined by patient’s income, education or occupation.

Results: Twenty original research papers and meta-analyses were included. Social differences in doctor-patient communication were described according to the following classification: verbal behaviour including instrumental and affective behaviour, non-verbal behaviour and patient-centred behaviour.

Conclusion: This review indicates that the literature on the social gradient in doctor-patient communication that was published in the last decade, addresses new issues and themes. Firstly, most of the found studies emphasize the importance of the reciprocity of communication. Secondly, there seems to be a growing interest in patient’s perception of doctor-patient communication.

Practice implications: By increasing the doctors’ awareness of the communicative differences and by empowering patients to express concerns and preferences, a more effective communication could be established.

Key-words: communication, physician-patient relations, social class
1. Introduction

In 1977 a commission under the lead of Sir Francis Black, reported the famous Black report, illustrating the existence of a social gradient in health in the UK. The publication of this report was the start of a new wave of research on social inequity [1]. Since then many studies have confirmed the gradient in health between social classes [2-4]. Health differences between social groups due to underlying social mechanisms such as differential access to care, social exclusion or poverty are a matter of major concern in today's public health research but in spite of marked health improvements of the overall population and efforts to overcome health inequalities, higher morbidity and mortality rates for the socio-economically disadvantaged are still found [5-8]. The causes for these inequalities in health are multiple and complex. Dahlgren and Whitehead identified the following five mechanisms: different levels of power and resources, different levels of exposure to health hazards, same level of exposure leading to differential impacts, life-course effects and different social and economic effects of being sick [2, 9-16]. A prerequisite for equity in health is equity in health care, defined as equal care for equal needs. As Dahlgren and Whitehead quoted: “Equity in health care includes fair arrangements that allow equal geographic, economic and cultural access to available services for all in equal need of care” [17].

An essential component of the delivery of health care is the relationship between the patient and the health care provider [18]. Several studies on communication in health care have repeatedly shown the importance of the doctor’s communication skills [19]. By communicating with a patient, a physician gets to know the patient’s problem and creates a therapeutic relationship necessary for its management and, if possible, its solution [20]. The quality of the relationship between a doctor and a patient is a key factor in the effectiveness of care. Good doctor-patient communication is associated with a higher level of patient satisfaction and better compliance [19, 21]. Furthermore, optimizing doctor-patient communication can lead to better patient health and outcomes [22, 23].

Available evidence suggests that low-income populations and people without health insurance report lower communication satisfaction and a reduced access to care [24].
In recent years the importance of social inequalities in the physician-patient relationship has frequently been the subject of research [19, 21, 24]. A previous review showed that doctor-patient communication indeed changes according to the social class of the patient [25].

Considering the increasing importance of social inequalities in health care, an actualization of the review seemed appropriate.

If differences in the physicians’ communicative behaviour depend on the socio-economic status of the patient, this could be a new focus in tackling socio-economic inequalities in health.

We aimed to carry out a systematic literature review to explore the following questions:

- Is the doctor-patient communication related to the socio-economic status of the patient?
- If so, which aspects of the consultation are affected?
- Are there any changes in doctor-patient communication over time?

This study is based on an earlier review on this topic by the same authors [25] and aims to actualize the evidence.
2. Methods

Search strategy

In step one, a systematic search in MEDLINE, PsycINFO and Web Of Science was conducted to identify publications on doctor-patient communication and social class of the patient. The following search strings were used:

- MeSH: communication AND (physician-patient relations OR provider-patient relations OR physician-family relations) AND (social class OR socio-economic factors)
- Text-words: (doctor-patient communication OR physician-patient communication OR provider-patient communication) AND (social class OR socio-economic status).

The search was limited to publication from 1/1/2002 on. No specific search software was used. To make the comparison of results possible, articles were included when they mentioned the interaction between the socioeconomic status (SES) of the patient or one of its indicators (educational level, income or occupation) as well as determinants of doctor-patient communication. Articles that were not original research articles, opinion articles and reviews were excluded. This resulted in a list of 87 articles of which the references were checked for other relevant articles. This did not identify additional publications.

Study selection

Of the 87 studies under review, 32 were excluded based on title and abstract review since they were after all not related to doctor-patient communication and social class. The abstracts of the remaining 55 publications were screened for explicit references to social class related concepts (education, income or occupation) and doctor-patient communication. Thirty-eight articles determining SES by other variables than education, income or occupation (e.g. race, gender, health literacy) and articles focussing on disease-specific communication were excluded. The remaining 17 publications appeared to be related to doctor-patient communication and social class of the
patient. In the last step of the selection process, an independent full text analysis on those 17 publications was performed by two researchers to confirm the relationship between social class and doctor-patient communication in the publications. Publications labelled as “doubtful relevance concerning social class and doctor-patient communication” by one of the two reviewers, were discussed until consensus was reached. Nine publications were rejected in this phase. Eventually, eight publications were labelled as relevant to assess doctor-patient communication and social class of the patient. Adding the 12 publications from the former review [25] dating from 1965 up to 2002, the current review contains 20 publications (table 1).
<table>
<thead>
<tr>
<th>First author</th>
<th>Setting</th>
<th>Method</th>
<th>Nb of patients</th>
<th>Variable SES</th>
<th>Variable communication doctor</th>
<th>Variable communication patient</th>
<th>Conclusion of the study</th>
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<tbody>
<tr>
<td>Hall</td>
<td>professional health care providers</td>
<td>meta-analysis</td>
<td>157 (mean)</td>
<td>social class indices, education or income</td>
<td>information giving, question asking, task and interpersonal competence, partnership building and socio-emotional behaviour</td>
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<td>Higher social class: more overall communication and more information.</td>
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<td>Street</td>
<td>primary care</td>
<td>audiovisual analysis</td>
<td>41</td>
<td>education</td>
<td>information giving (diagnostic, treatment, procedural)</td>
<td>communicative style: affective expressiveness</td>
<td>Higher educated patients: more diagnostic and health information.</td>
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<td>Street</td>
<td>multipurpose clinic, pediatric consultations</td>
<td>audiotapes</td>
<td>115</td>
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<td>partnership building</td>
<td>parent's question asking and opinion giving</td>
<td>Higher education: more expressive, higher level of opinionated and asking more questions.</td>
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<td>Martin</td>
<td>primary care</td>
<td>questionnaires</td>
<td>1972</td>
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<td>listening, explaining, advice giving, examination</td>
<td>listening, explaining, advice giving, examination</td>
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<td>Fiscella</td>
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<td>Taira</td>
<td>Employees</td>
<td>questionnaires</td>
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<td>Pendleton</td>
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<td>videotaped consultations</td>
<td>79 social class</td>
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<td>Street</td>
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<td>Kaplan</td>
<td>solo &amp; multispecialty practices</td>
<td>questionnaires</td>
<td>8316 education</td>
<td>PDM (Participatory Decision-Making) style: involve them in treatment decisions, give them a sense of control over medical care and ask them to take some responsibility for care</td>
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<td>McKinstry</td>
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<td>structured interview, video vignettes</td>
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<td>Roter</td>
<td>primary care</td>
<td>audiotape RIAS; questionnaires</td>
<td>537 income</td>
<td>narrowly biomedical, expanded biomedical, biopsychosocial, psychosocial, consumerist pattern</td>
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Higher social class: more examination, listening and explaining.

Patients perceive no difference

Lower education more physical examination and nutritional counseling, less time on questions, assessing health knowledge, negotiation and counseling, chatting and screening tests.

Same satisfaction as higher educated.

High income: more diet and exercise discussion.

Lower income: more smoking discussion

Physicians talking with higher educated patients used more body orientated talk then they did with lower educated.

Lower educated patients: less mutual decision making, less sense of control and given less responsibility.

Lower educated patients: lower preference for shared decision making.

Lower SES patients prefer narrowly biomedical pattern.
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<td>information giving; patient centredness</td>
<td><em>Higher education: more interactive information giving by physician and greater perceived self-efficacy.</em></td>
<td><em>Low SES: better general and diabetes-specific communication than high SES</em></td>
<td><em>Patients with high literacy skills are more critical on their physician.</em></td>
<td><em>Low income perceive some areas of tension in communication with their health care provider.</em></td>
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<td>Murray</td>
<td>American Households</td>
<td>3209</td>
<td>Education, income</td>
<td>High SES patients prefer consumerism and paternalism; Lowe SES patients prefer shared decision making.</td>
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<td>Devoe (24)</td>
<td>Primary Care</td>
<td>16,700</td>
<td>Educational attainment; listen carefully; explain things; show respect; spend enough time with the patient</td>
<td>Poor patients: receiving less explanations in a way they understand.</td>
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3. Results

The selected studies resulted in a great variation in communication variables that had been tested. To cluster these variables, several communication assessment approaches were considered [26]. Communicative behaviour can be categorised in terms of verbal and non-verbal behaviour. Verbal behaviour can be defined as ‘the spoken communication’. The verbal elements of communication can be divided into instrumental or task-focused verbal behaviour (e.g. question asking, information giving, etc.) and affective or socio-emotional behaviour (counselling, positive and negative talk, etc.) reflecting the distinction between cure and care [27, 28].

However, some of the determinants of communication do not fit into the above categories but are related to the concept patient-centeredness. Patient-centeredness is about seeing the patient as a person with a unique personal history and individual needs [29].

In this review the communication variables in the selected articles are classified to the following categories: verbal behaviour including instrumental and affective behaviour; non verbal behaviour and patient-centred behaviour.

3.1 Verbal/non-verbal behaviour

3.1.1 Verbal behaviour: instrumental behaviour

Instrumental behaviour is considered as all interactions that serve the "cure" part of the consultation. It can be defined as technically based skills that are used in problem solving e.g. giving directions, giving information, asking clarification, asking questions, counselling, etc.[26, 30]. Eleven studies explored the interaction between the instrumental behaviour of the physician and/or the patients, and the SES of the patient.

A meta-analysis conducted by Hall et al. explored the correlation between physicians’ communicative behaviour and the patient’s outcome variables. Social class was measured by income, education or other non-specified social class indices. The study revealed a positive relationship between patient's social class and information giving. Patients of a higher social class
received not only more overall communication but also more information [31]. Not only patients’ social class but also his/her communication style influences the doctor-patient communication. In a study by Street et al., social class was measured by educational level. Physicians’ information giving was positively influenced by the patient’s communicative style such as question-asking, affective expressiveness and opinion-giving. More affective expressiveness and being assertive on the patient’s side- which is strongly related to his/her educational level- leads to more information giving on the doctor’s side. More educated patients receive more diagnostic and health information than their lower educated counterparts. However this study did not find a relation between the frequency of the patients’ question asking and his/her educational background [32].

The fact that adaptations in the physicians’ responses may, besides a function of patients’ personal or social characteristics per se, also are the result of the patients’ communicative actions, was confirmed by a second study by Street et al. In this study they compared the degree to which parents’ personal and interactive characteristics accounted for variation in doctor-parent interactions during paediatric consultations. Social class was measured as educational level. More educated parents are not only more expressive and assertive but they also ask more questions. All three of these communication aspects lead to more information and direction giving by the physician. Additionally, this study shows that the parent’s personal characteristics have less influence on the physicians’ responses than their own communication behaviour [33].

Besides patient’s communication style, doctors’ and patients’ perceptions are an important aspect of the consultation and for the outcome of the consultation. In an observational study, Martin et al. looked at how both physicians and patients perceive what happens during the consultation. Social class was measured by occupation. From the patients point of view most emphasis of the consultation is put on prescribing, reassuring and referring. Whereas physicians report that emphasis is put on active listening, supporting and giving advice. Furthermore, physicians perceived they explained and listened more to patients from higher social classes and also examined them more than patients from lower social classes, but gave the latter more "other help" which was not specified. They also said to examine more and to give less advice to patients from lower social classes. However, patients did not report having experienced any of these
differences [34]. The study of DeVoe et al. where social class was determined by family income and educational level, shows different results. This study suggests that patients’ perceptions of communication in healthcare settings vary widely by demographics and other individual patient characteristics. The poorest patients were less likely to report that providers always explained things so that they understood. Surprisingly, different levels of education were not independently associated with any of the investigated communication measures [35]. These results are in line with the results from the study of Fiscella et al., exploring whether educational level affected the visits of family physicians. Patients with a low educational level had a slightly larger proportion of the consultation time spent on physical examination and nutritional counselling. Less time was spent on patients' questions, assessing their health knowledge, negotiating and counselling, chatting, and less screening tests were provided to them. One could say that less educated people are approached in a more directive way during the consultation. Less educated patients also saw their expectations less met during the consultation, although they were as satisfied as the more educated patients [36].

When looking at the outcome of the consultation, Maly et al. studied the impact of physician-patient communication on women’s receipt of, or planning for, breast reconstructive surgery. Social class was determined by educational level and was included as a potentially confounding factor. Women who had graduated from high school were more likely to report planning of breast reconstructive surgery. This is positively associated with interactive information-giving by the physician and greater patient perceived self-efficacy. These two communication factors weakened the negative influence of education barriers. Empowering aspects of patient-physician communication and self-efficacy may overcome the negative effects of a lower education on receipt or planned breast reconstructive surgery [37].

In line with the different consultation style, Taira et al. investigated whether the patients’ income level had an influence on the physicians’ discussion of health risk behaviours. Concerning patients at risk, physicians tended to discuss diet and exercise more with high income patients and smoking more with low income patients [38]. Discussing health risk behaviour is very important in consultation, especially for chronic conditions like diabetes. In a cross-sectional survey by Piette et al., general communication processes and diabetes-specific communication was examined. Socio-
economic status was measured by means of educational achievement. Patients with lower education levels reported better general and better diabetes-specific communication than their less-vulnerable counterparts. This could be due to the fact that these patients have lower expectations of their patient-provider relationship or greater discomfort with criticizing them. Another introduced explanation could be that health care providers spend more time counseling patients which they perceive as in need for extra attention or explanation [39].

Pendleton et al. considered four types of information giving. SES was measured by social class. There was a significant difference in voluntary explanations given to patients from different social classes, independent of the different types of problems; higher SES patients receive significantly more explanations even when the explanation was not explicitly requested by the patient [40]. Also the study from Siminoff et al. where social class was measured by income and educational level showed that more biomedical talk was provided to higher income patients compared to medium and low income patients and to patients with higher educational achievement.

In general, physicians provided little psychosocial counseling and education, however, they provided more to their high and medium income patients as compared to low-income patients. Patients that had more than a high school education and patients that reported a medium or high income asked more questions and showed more proactive behavior such as volunteering information to the physician unasked. Physicians on their side asked less educated patients and low income patients more questions about their disease and medical history. [41].

3.1.2 Verbal behaviour: affective behaviour

The affective behaviour in doctor-patient communication is part of the emotional domain [19] and consists of all forms of social behaviour and social talk. Possible affective expressions are: showing concern, reassurance, reflection, signs of agreement or disagreement and paraphrasing [27, 28]. Only three studies investigated the effects and outcomes of affective behaviour.

The meta-analysis by Hall et al. (supra) explores the socio-emotional behaviours such as social talk and positive and negative talk. Although a link between the aspects of affective behaviour and the patients’ satisfaction and compliance can be identified, none of these determinants were found
to be related to any determinant of the patients’ social class [31]. On the other hand, the studies of Street et al. (supra) concluded that doctors provided more comments of reassurance, support and empathy to the parents of children with cancer which were more affectively expressive (more specifically who expressed more negative affect). As patients with a higher educational level are more affectively expressive than their counterparts, it can be assumed that physicians show more affective behaviour towards these patients [32, 33].

In the observational study from Siminoff et al. (supra), the emotional expressions by physicians varied by patient’s demographic variables, with more educated patients receiving more emotional utterances from their physician [41].

3.1.3 Non-verbal behaviour

Non-verbal behaviour is to date one of the least investigated topics of doctor-patient communication, especially when looking at its interaction with determinants of social class. The effect of non-verbal behaviour is only mentioned in two of the selected articles [40, 42]. Non-verbal behaviour can be operationalised in different ways such as eye contact, tone of voice, laughter, facial expression, physical distance, nodding, etc [26].

The meta-analysis by Hall et al. (supra) could not find any research that was done on the association between the physicians’ non-verbal behaviour and the patients’ social class [31].

The same year of the Hall review, Street and Buller examined the non-verbal behaviour in doctor-patient interactions and the relationship with patient’s age, sex and social class measured as educational level. No differences were found in the level of non-verbal communication towards patients with different educational level. However, when talking to higher educated patients the physicians reciprocated their body orientations more than they did with lower educated patients. Finally, this article refers to specific difficulties in coding non-verbal behaviour, which is much more complex than categorising the verbal interactions [43].
3.2 Patient-centeredness

Patient-centeredness can be classified into several aspects such as supportive talk, being attentive to patients’ psychosocial as well as physical needs, enabling the disclosure of patients’ concerns, conveying a sense of partnership and actively facilitating patient involvement in the decision-making [44]. In 10 of the 20 selected articles, patient centeredness in relationship with the Social class of the patient is described.

First of all there is the relationship between patients’ social class and the decision making style of the doctor, described in three studies. In a study by Kaplan et al. social class was measured as educational achievement. Patients with a high school education or less were less involved in treatment decisions, less given a sense of control over treatment decisions and less asked to take responsibility for care than patients with post-graduate college education [45]. Also McKinstry observed the patients’ preference for shared decision making. Social class was determined by education. Patients’ preference for shared decision style or directive approach was associated with their social class, age, the scenario and their perception of the consultation style of their own physician being shared or directive. A lower social class predicted a lower preference for shared decision making style [46]. Murray et al. attempted to determine the congruence between patients’ preferred style of clinical decision-making and the style they usually experienced. Social class includes household income and educational achievement. People of high SES were more likely to prefer shared decision-making, and people of low SES were more likely to prefer consumerism and paternalism. Wealthier patients also were more likely to experience their preferred style of shared decision making. The results also point out that SES was strongly associated with reporting having enough information. Respondents who had not completed high school were less likely than those with an advanced degree to report having enough information to make the right decision [47].

Roter et al. Studied the preferred communication style of the patient. They described five communication patterns and their relationship with several patient characteristics, among social class measured as income. Patients approached in the narrowly biomedical pattern were more likely to be poorer than patients approached in other patterns [48]. Jensen et al. surveyed whether literacy,
Numeracy and optimism are related to satisfaction with health care providers’ communication skills. Participants’ social class was measured as educational level and admitted as a predictor variable. Almost half of the low-income patients were displeased with the amount of time health providers spent with them during interactions. As displayed in earlier studies, communication dissatisfaction appears to be more common in low-income adults than in higher income adults [49].

Certain aspects of communication can vary widely among different doctors or among patients. Bao et al. aimed to determine the extent to which socio-economic differences (income and education) in cancer screening discussion between a patient and his or her primary care physician are due to inter-physician versus intra-physician variation. Patients with low SES were less likely than their high-SES counterparts to have discussed cancer screening with their physicians. Differences by income are mainly ‘between-physicians’. While the ‘within-physician’ differences by income were minimal. The education gradient in cancer screening discussion mainly existed in ‘within physicians’. Except for mammogram the rate of discussion more than doubled among college graduates compared with those with a less than high school education. This may indicate that education plays an important role in determining what happens during clinical encounters [50].

Not only the communication style of the physician, but also patient participation in an essential topic in patient-centeredness. Street et al. examined the extent to which patient participation in medical interactions is influenced by the patient’s personal characteristics (among social class measured by education), the physician’s communication style and the clinical setting. Patients with at least some college education tended to be more active communicators than were less educated patients. Although the more educated persons asked more questions and are more assertive than less educated patients, they do not more often express concerns. The degree to which patients actively participate in medical encounters is a function of multiple patient, physician and contextual factors. It seems that patients are more active participants when interacting with physicians who more frequently engaged in partnership-building and supportive talk [51].

A final aspect described in three studies is building a relationship between patient and physician. The study of Siminoff (supra) et al. shows educational level as significant independent factor on relationship building. It seems that both patients and their physicians spent more time
trying to establish an interpersonal relationship with each other. Nevertheless, patients did more effort in relationship building than did their physicians. These results confirm previous evidence that providers communicate differently with patients by education and income [52]. In the study of Maly et al. (supra) on patients with breast cancer both the physician information-giving and patient empowerment in interacting with physicians were found to be significant determinants of breast reconstructive surgery, controlling for possible confounders. These two communication factors diminished the negative influence of education barriers and acculturation [37]. The study of Stewart, where educational level was a measure for social class, showed that physicians were more likely to appeal to the intellect of a patient with a university degree by justifying the drug prescription while on the other hand they offer more emotional support and solidarity to patients with a lower educational level [53]. As presented above, the amount of information given to patients is related to patients’ characteristics and to the patients’ communicative style. Hereby, the patients’ communicative style is not only influenced by his/her educational level but also by the level of partnership building of the physician [32, 33]. In the observational study mentioned above by Street et al. it appeared that higher educated patients received more partnership building utterances [32].
4. Discussion and conclusion

4.1 Discussion

This review is an update of the 2005 review "socio-economic status of the patient and doctor-patient communication: does it make a difference?". The aim of the current review is to give the state of the art on the social gradient in doctor-patient communication. In this review we found that patients from lower social classes (measured by income, education or occupation) receive less socio-emotional talk, a more directive and a less participatory consulting style characterised by for example less involvement in treatment decisions; a higher percentage of biomedical talk and physicians’ question asking; lower patient control over communication; less diagnostic and treatment information and more physical examination. Doctors give more information, more explanations, more (emotional) support and adapt a shared decision making style with higher SES participants.

This review also indicates that the literature on the social gradient in doctor-patient communication that was published since the previous review, addresses new issues and themes. Firstly, most of the found studies emphasize the importance of the reciprocity of communication: the doctor might communicate differently according to the social status of the patient, and patients may adapt a different communication style according their social class. Patients with a high SES tend to ask more questions, ask for explanations, are more expressive and have a higher level of being opinionated than their lower SES counterparts [32, 33, 41, 54].

Secondly, there seems to be a growing interest in patient’s perception of doctor-patient communication. While in the past, patient’s perception was not taking into account or no differences in perception were found, more recent studies show that low SES patients have the feeling doctors fail to explain things in a way they can understand and spend less time with them [21, 24, 40].

4.2 Conclusion

These findings emphasise that doctor-patient communication is a complex interactional system. To depict this complexity, Street et al (2007) applied an ecological model that takes into account
the interplay of multiple physician, patient and contextual factors that collectively influence doctor-patient interactions (see Fig. 1) [55]. The influence of any variable (e.g. ethnicity) may vary depending on the presence of other factors (e.g., the patients’ level of education, income, doctors’ communication style) [52]. The ecological approach recognizes that within the context of any medical encounter, a number of processes affect the way physicians and patients communicate and perceive one another. There are four important sources of potential influence—the physician’s communication style, patients’ characteristics, physician-patient demographic concordance and the patients’ communication. First, how a physician communicates with a patient may depend on his or her style. Some physicians provide more information, ask more questions, are more supportive and use more partnership-building techniques than other physicians [32, 33, 48]. Second, variability in physicians’ communication and perceptions may be related to the patients’ demographic characteristics (education, income, occupation) [56]. Finally, the patients’ communication style can have a strong effect on physician behaviour and beliefs [18].

Patients from a lower social class and doctors often find themselves in a vicious circle. For example: patients’ communication and actions (e.g. less question asking, less opinion giving, less affective expressiveness, less preference for decision making) elicit a less involving behaviour from the doctor, with less partnership-building utterances, which discourages the patient to adopt a more active communication style. One can enter the circle at any point.
Doctors behave differently during consultations with patients from lower social classes. They are less informative with less educated and lower income patients, possibly because they inaccurately assume that these patients are not particularly interested in learning about their health or don’t understand this information [32, 57].

Finally, although not immediately related to the patients’ social class, we mention the large inter-individual variation in the physicians’ degree to which he/she provides information, issues directives, exhibits positive socio-emotional behaviour and engages in partnership-building. The variability among doctor-patient interactions in part reflects also these differences in the physicians’ “communicative routines” for conducting a consultation [33].

This review has also some limitations. An important limitation when writing this review, is the relatively limited number of studies on the link between the patients’ social class and the affective and non-verbal behaviour of the physician. Yet previous research has shown the importance of these aspects of communication by proving the influence on e.g. patients' satisfaction. The few studies that focused on non-verbal behaviour noted that it is very difficult to measure and code non-verbal behaviour [43]. This limited number of studies does not allow us to draw conclusions concerning non-verbal and affective behaviour. In our 2011 review we draw the same conclusion and little seems to have changed in the past decade. Further research on this topic is still needed. Next it is very difficult to compare the results of the existing studies, or even to make a summary due to the great diversity of measurements and frameworks organising these measurements in the different studies. The main variables used to measure the patients’ SES in the selected articles were the patients’ educational level, his/her income and his/her occupational status [3, 58]. Educational level is used as a measure because differences in education correspond with different access to information and with different levels of benefiting from new knowledge. Income is another possible parameter for social class as it creates differences in access to scarce material goods. The occupational status reflects both these aspects and adds benefits that can accrue from certain jobs, like prestige, privileges, social and technical skills and power. An alternative to determine SES is to use "proxy" measures e.g. the insurance status, house tenure, car ownership, socio-demographic
measures (race, etc.). Articles using proxy-variables as the only measure for SES were excluded. However, some of the selected articles used these variables in combination with educational level, income or occupational class.

In the selected articles many different communication classification systems were used to describe the communicative behaviour of the physician. The variables used in these classifications are not always comparable, making the creation of a clear overview difficult. We were able to categorise most of the used communicative variables following the axis verbal/non-verbal behaviour. The determinants of communication that did not fit into the categories of this axis, were related to patient centeredness.

In order to improve the comparability of future research, a uniform definition and classification of communication variables is indispensable.

4.3 Practice implications

This review of the literature has further revealed the complex relationship of doctor-patient communication. Physicians behave differently with patients from different SES and patients communicate differently with their doctor depending on their SES. These differences add to the already existing boundaries to health care utilisation by patients from lower SES. The finding that the physician’s communicative behaviour is related to the communicative style of the patient and to his/her personal or social characteristics may have important implications for the daily practice of the physician. Physicians need to become aware of the existing differences in giving information to and involving patients from lower social classes in the consultation, as well as of the underlying causes [59]. It is important that physicians pay attention to the attitudes that they have toward patients, and have to remain aware of how their feelings might impact their behaviour and thus be perceived by patients [60]. They should consider the possibility that conscious or unconscious stereotyping may influence their behaviours, including their interpersonal style [61]. Physicians have to encourage patients to discuss their concerns and to ask questions, and they should listen actively.
Communication skills and attitudes training can be an important tool to improve these defaults: the effects of such training have been proven and can persist over time [62].

Patients have a certain power to control communication during the consultation and to influence the physicians’ communicative behaviour. However, patients from lower social classes seem to exercise this control less than patients from higher educated groups. It seems not only patient’s personal characteristics but more importantly their communication behaviour has an influence on the doctor-patient communication. Therefore it is important to empower the patients on self-efficacy and learn how to express their concerns and preferences [32, 33, 37, 57].

It has been shown that interventions to increase the participation of patients with low education obtain a good response and lead to measurable and clinically important improvements in health outcomes [63]. By understanding processes that facilitate or hinder patient involvement, physicians should be better able to adapt their own communication and office practices to help patients more effectively participate in medical encounters [51].

Future research should further investigate low-SES patients’ perceptions of their health care providers’ communication skills. Special attention should be paid to the relationship between patient skills, patient activism and communication satisfaction [49].

Acknowledgements

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SOCIO-ECONOMIC STATUS OF THE PATIENT AND DOCTOR-PATIENT COMMUNICATION: DOES IT MAKE A DIFFERENCE?

Part two: Complementary Report

Master thesis presented to obtain the degree of
Master of Health Education and Health Promotion

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1 Foreword

This thesis would not have been possible without the help and dedicated assistance from certain people. First and foremost, my gratitude goes to my promotor Dr. Willems and supervisor Drs. Verlinde for their advice, adjustments and assistance in shaping the article and report. They were always willing to answer my questions and giving additional information when needed. Next, a word of thanks to Robbe who took the time to read this work carefully. Since it was written in a language that is not my mother tongue, supplementary assistance was more than welcome. I would also like to thank my parents, Eline and Wouter for their unlimited patience and support.
2 Introduction

In literature, the importance of good doctor-patient communication is repeatedly cited, as is being illustrated and further elaborated in the following chapter. More specifically, the following report discusses the influence of the patient’s socioeconomic status (SES) on this doctor-patient communication.

Bensing (2010) claims that a good doctor-patient communication is important for the quality of care that providers deliver to their patients. Good communication is associated with a higher level of patient satisfaction, with as consequence that patients are more likely to follow their doctor’s recommendations (Jensen, King, Guntzviller & Davis, 2010). It may reinforce patients’ confidence in their ability to manage their disease and this in turn leads to a better health outcome (Kaplan, Greenfield & Ware, 1989). Earlier studies revealed that effective communication between patients and physicians is associated with improvements in pain management, blood pressure, blood glucose, recovery time, emotional health and functional status (Stewart, 1995; Stewart et al., 1999; Stewart et al., 2000 in Devoe, Wallace & Fryer, 2009). It is nevertheless noticeable that the answer to the question what exactly good doctor-patient communication is, nearly exclusively is determined by professionals such as communication experts, psychologists, educators, etc. This while in communication there are always two sides involved, namely the doctor and his or her patient. People often assume that professionals always take into account the needs of the patients. This is because the patients themselves are rarely asked what they define as ‘good doctor-patient communication’. However, research shows that doctors are not always aware what their patients need or expect from them (Bensing, 2010). It seems that adequate communication between general practitioners and patients is often difficult to achieve, especially with patients who have a lower SES (Schouten, Meeuwsen & Harmsen, 2008). Examining disparities in care due to SES is difficult because income and education data are not always collected (Krieger, Chen & Ebel, 1997; Krieger, Williams & Moss, 1997 in Malat, van Ryn & Purcell, 2005). However, the available evidence suggests that low-income populations and people without health insurance report lower communication satisfaction ratings and a reduced access to care (Devoe et al., 2009; Devoe, Wallace, Pandhi, Solotaroff & Fryer, 2008 in Jensen et al., 2010). Possible
communication problems between low-income populations and healthcare providers are worrisome, as low-income individuals have fewer resources and limited healthcare interactions (Devoe et al., 2008; Fiscella, Franks, Gold & Clancy, 2000; Hussey et al., 2008 in Jensen et al., 2010). Until today, relatively few studies have focused on the extent to which the patients themselves experience this discrimination in healthcare (Lillie-Blanton, Brodie, Rowland, Altman & McIntosh, 2000; Hobson, 2001 in Piette, Bibbins-Domingo & Schillinger, 2006).

The fieldwork conducted in the context of this thesis is situated within the Gulliver Study (see appendix 1). The aim of this study is to closely look at the patients’ perspective of a good doctor-patient communication. A survey is being tested to examine the comprehensiveness, uniformity and degree of difficulty of the questions by using cognitive interviewing. After analyzing the cognitive interviews and feedback from the experts in the Netherlands, the final version of the survey was available. In a next phase, the survey will be pretested in a varied group of respondents (n=100).

Besides performing the cognitive interviews and pretesting the survey, the main part of this thesis consists of writing the systematic review “The social gradient in doctor-patient communication” (see part one). The aim of this systematic review is to explore the following questions: “Is the doctor-patient communication related to the socio-economic status of the patient, if so, which aspects of the communication are affected, and are there any changes in doctor-patient communication over time?”. By comparison of the results of 20 studies, 12 studies from the former review (Willems, De Maesschalck, Deveugele, Derese & De Maeseneer, 2005) and eight studies from the current review, conclusions concerning the different aspects of communication can be made.

This thesis consists of two principal parts, being the systematic review itself and this complementary paper. The latter includes an additional literature study, the used method, discussion and conclusion, a few limitations of the study and at last a number of implications for future research and practice. First, an introduction to the physician-patient communication is being made. Afterwards, several possible explanations for the socioeconomic inequalities in health are being studied. We proceed by discussing the patients’ participation in the medical encounter with the influencing factors and
benefits. Next, a few important aspects from the physician’s point of view are being highlighted. There are three important goals of communication, which are discussed in the next part of the literature study. The last theme of the literature study comprises the different communication behaviours, with a link to the patient’s SES. Ultimately, a discussion and conclusion with regard to the literature study is given. After the literature, a description of the used method concerning the survey and the systematic review is being composed. Subsequently, a general discussion and conclusion is given. This mainly focuses on the findings represented and described in the systematic review. Next, a few limitations of the conducted study are being highlighted. Afterwards, recommendations for future research and implications for the practice are being described.
3 Literature

3.1 General introduction

The consultation between the patient and healthcare provider is an essential component of the delivery of healthcare (Street & Millay, 2001; Monnickendam, Monnickendam, Katz, & Katan, 2007). The consultation is a communicative event in which physicians and patients talk to each other in order to exchange information, to share expertise and points of view. By communicating, they are able to build a trusting relationship and to make decisions (Street & Millay, 2001). Physicians play a crucial role, as they are the first to have contact with the patient and his or her problem. They are the key person to decide whether it’s necessary to refer them to a specialist (Boerma, van der Zee & Fleming, 1998 in van den Brink et al., 2003). There has been a lot of research and descriptive literature concerning this subject, with a wide range of topics relating to poor patients. Examples of these topics are the quality of care (Choudry, Fletcher & Soumerai, 2005 in Monnickendam et al., 2007), referrals to specialists (Chan & Austin, 2003 in Monnickendam et al., 2007), doctor-patient special concordance (Laveist & Nuru-Jeter, 2002 in Monnickendam et al., 2007), power and paternalism (Goodyear-Smith & Buetow, 2001 in Monnickendam et al., 2007), trust (Keating, Gandhi, Orav, Bates & Ayanian, 2004 in Monnickendam et al., 2007) and the physicians’ attitude to deprived patients (Willems, Swinnen & De Maeseneer, 2005).

A conceptual model, as presented in the figure hereafter (Mead & Bower, 2000; Ong, de Haes, Hoos & Lammes, 1995 in Zandbelt, Smets, Oort, Godfried & de Haes, 2007), connects several patient, physician, and visit characteristics with the communication style during the consultation and the possible outcomes. How a physician and patient communicate during the consultation depends on an interplay of factors including the communication goals of the physician and patient and their style of communicating as well as the characteristics of the patient and the physician. Also, the visit characteristics, the perception of one another and the emotional state seem to play an important role in doctor-patient communication (Street 1991; Street, 1992 in Gordon, Street, Kelly, Souchek & Wray, 2005). These factors in turn have an impact on the communication behaviours and the level of patient participation during the consultation. Evidence
indicates that patients who are more actively involved receive more patient-centred care from physicians and are more satisfied with their healthcare (Street & Millay, 2001). Patients who are more active participators also receive more information from their physician (Street, Gordon, Ward, Krupat & Kravitz, 2005). In addition, physicians provide more information when patients are more active participants (Gordon et al., 2005). Consequently, physicians’ patient-centred communication and an active patient participation is thought to improve patients’ satisfaction and their adherence to the medical treatment plan (Zandbelt et al., 2007). An effective patient-doctor communication also leads to a better physical and mental health of the patients (Ong, de Haes, Hoos & Lammes, 1995).

Fig. 1: conceptual model

3.2 Explaining socioeconomic inequalities in health

3.2.1 Socioeconomic inequalities and doctor-patient communication

Health status in developed countries has improved a lot over the last 50 years. However, disparities in health across socioeconomic groups persist (Hayes, 2002; Piers, Carson, Brown & Ansari, 2007; Yu, O’Connell, Gibberd & Armstrong, 2008 in Achat, Thomas,
Close, Moerkerken & Harris, 2010). Socially disadvantaged people, whether measured by income, education or social class, are dealing with a disproportionate burden of all forms of injury, illness and disease compared to patients with a higher SES (Marmot, 2004 in Blacksher, 2008). Studies have shown that poor people have more illnesses, consume more medical services and show a higher mortality rate (Kuh, Hardy, Langenberg, Richards & Wadsworth, 2002; Lurie & Buntin, 2002; Watt, 2002 in Monnickendam et al., 2007). On top of this, poor people, who are already more vulnerable, are the least well-served in terms of healthcare services (Mercer & Watt, 2007 in Loignon et al., 2010). There is considerable evidence that patient socio-demographic characteristics have an impact on the physicians’ behaviour during the consultation (Armitage, Schneidemann & Bass, 1979; Bertakis, Callahan, Helms, Azari & Robbins, 1993; Wallen, Waitzkin & Stoecke, 1979; Ventres & Gordon, 1990 in van Ryn & Burke, 2000). The socio-demographic characteristics of the patient also influence the diagnoses and treatments they receive (van Ryn & Burke, 2000). It seems that patients with low SES are likely to be less healthy, require more healthcare resources and engage in less healthy behaviours than better off patients (Epstein, Stern & Weissman, 1995 in Blacksher, 2008). People from lower social classes more often report to have less positive feelings about their healthcare and healthcare providers (Blendon, Sheon, DesRoches & Osborn, 2002; Blendon et al., 1995; LaVeist & Nuru-Jeter, 2002; Malat, 2001; Ohldin et al., 2004 in Malat et al., 2005). They also tend to have more negative health care experiences and sometimes feel judged by the physicians who treat them (Hutchison, 2007, Loignon, 2006; Liognon, Bedos Sévigny & Leduc, 2009; Mercer, Cawston & Bikker, 2007; Reid, 2007 in Loignon et al., 2010). This last point is very important because the quality of the physician-patient relationship is a key factor in the effectiveness of care. Therefore, it is important that any effort to improve medical services to the poor must take into account the relationship between the poor patient and the physician (Beck, Daughtridge & Sloane, 2002 in Monnickendam et al., 2007).

The main point of interest in the context of this thesis is how these social inequalities are expressed within the medical consultation. More specific, the influence of this all on the communication between the physician and the patient with lower SES. The last years, there has already been written a lot about the relational dynamics that exist
between a physician and patients of lower SES, and specifically concerning the importance of class-based barriers to communication (van Ryn & Burke, 2000). In the following, a few possible explanations for the socioeconomic inequalities in health are reported.

### 3.2.2 Possible explanations

Socioeconomic inequalities in health, as defined by Adler et al. (1994), are usually presented as a gradient. This can be defined as a systematic increase of the rates of morbidity and mortality as a person moves down the social ladder (Adler et al., 1994 in Mackenbach, Meerdig & Kunst, 2010). Lower positions in the social hierarchy expose people to a variety of health risks, such as unfavorable living and working conditions, psychosocial factors, health behaviours, etc. (Marmot & Wilkinson, 2006 in Mackenbach et al., 2010).

Several possible explanations have emerged as to why inequalities in health appear to be related to the SES of the patient, including the materialistic and lifestyle explanation (Carroll, Bennett & Smith, 1993; Elstad, 2000 in Thrane, 2006). The materialistic perspective claims that people who are well off, in socioeconomic terms, can afford better and more regular healthcare, are less subjected to occupational hazards and live in ‘healthier’ environments. In contrast to people with lower SES, patients of higher SES have better social support. As the latter mostly experience closer family ties and are more integrated in the community they receive an increased level of social support in comparison. The conducted research in this field has documented a positive relationship between SES and health, namely the higher the SES, the better the health (Elstad, 2000 in Thrane, 2006; Ross & Wu, 1995; Bobak, Pikhart, Rose, Hertzman & Marmot, 2000).

The lifestyle perspective often discusses health inequality in terms of the results of various behaviours such as smoking, exercise behaviour, dietary habits, etc. They claim that lifestyle choices in which people differ, such as smoking, drinking and exercise, are the main causes of health inequality (Sacker, Bartley, Firth & Fitzpatrick, 2001; Stronks, Mheen, Looman & Mackenbach, 1996 in Thrane, 2006; Droomers, Schrijvers, van de Mheen & Mackenbach, 1998; Manderbacka, Lundberg & Martikainen, 1999). Consistent with this theory, van Ryn & Burke (2000) found that physicians perceive lower SES patients as less likely to desire a very physically active lifestyle. This
suggests that socioeconomic inequalities in health can be reduced by improving the life situations of people with lower levels of education, occupation or income. For example, by giving people with lower socioeconomic positions a higher education or income, or by changing their lifestyles and living conditions. However, evidence has not supported the idea that the effects of SES would vanish once controlled for the lifestyle factors. Some authors claim that even after dealing with the lifestyle factors, the health inequalities in terms of SES remain persistent (Manderbacka, Lundberg & Martikainen, 1999; Ross & Wu, 1995; Borg & Kristensen, 2000; Stronks, Mheen, Looman & Mackenbach, 1996 in Thrane, 2006;). Several ways to reduce inequalities in health have been examined. In general they concluded that policies and interventions should aim for an ‘upward leveling’ of health inequalities. This means that the higher rates of morbidity and mortality of the lower socioeconomic groups are reduced to the level of more advantaged groups in society (Whitehead & Dahlgren, 2006 in Mackenbach et al., 2010).

3.3 Patient participation and physician’s communication

3.3.1 Introduction

In medical communication there are two main actors involved, namely the physician and the patient (Bensing, 2010). They both play an important role as they influence each other continuously. Not only the characteristics of the patient, but also of the physician may influence the quality of the patient-physician communication. Consequently, the communication during the consultation is being shaped by the physician as well as by the patient (Roter, Hall & Aoki, 2002 in Piette, Schillinger, Potter & Heisler, 2003).

The table below gives an oversight of the most important features of physician-patient communication, from the patient’s as well as the physician’s point of view.
Table 1: The different aspects of communication

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<thead>
<tr>
<th>Patient’s communication</th>
<th>Physician’s communication</th>
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<tr>
<td><strong>Participation behaviours:</strong></td>
<td><strong>Verbal:</strong></td>
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<tr>
<td>Asking questions</td>
<td><em>Instrumental:</em></td>
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<tr>
<td>Assertive responses</td>
<td>Giving information</td>
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<tr>
<td>Expressing concerns</td>
<td>Giving directions</td>
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<td>Expressing other negative emotions</td>
<td>Asking for clarification</td>
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<td>Counseling</td>
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<td></td>
<td>Asking questions</td>
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<td></td>
<td>Giving explanations</td>
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<td><strong>Affective:</strong></td>
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<td>Social talk</td>
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<td>Showing concern</td>
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<td>Reassurance</td>
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<td>Reflections</td>
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<td>Signs of agreement or disagreement</td>
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<td>Paraphrasing</td>
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<td><strong>Non-verbal:</strong></td>
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<td>Eye contact</td>
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<td>Nodding</td>
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<td>Gaze</td>
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<td>Tone of voice</td>
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<td>Laughter</td>
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<td>Facial expressions</td>
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<td>Physical distance</td>
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<td>Nodding</td>
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<td>Active listening</td>
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<td><strong>Patient-centredness:</strong></td>
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<td>Partnership building</td>
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<td>Supportive talk</td>
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<td>Involvement in decision-making</td>
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3.3.2 **Patient participation**

3.3.2.1 **General**

Research has shown that when patients fully reveal their concerns, expectations and preferences, their physicians can assess their problems more precisely and offer a better advice to them (Frederickson & Bull, 1995; McCann & Weinman, 1996 in Kim, Putjuk,
Basuki & Kols, 2003). Several authors have defined patient participation as “the extent to which patients produce verbal responses that have the potential to significantly influence the content and structure of the interaction as well as the healthcare provider’s beliefs and behaviours” (Kaplan, Greenfield & Ware, 1989; Roter & Hall, 1993; Street, 1991; Street, 2001 in Street & Millay, 2001). Active patient participation can be represented in several communicative behaviours such as asking questions, giving assertive responses (e.g., offering opinions, making a request, introducing a new topic) and expressions of concern or other negative emotions (Street et al., 2005).

3.3.2.2 Influencing factors

There are a number of characteristics that influence what patients expect of the healthcare, but also what they are willing or able to do in order to comply with physicians’ recommendations. Some characteristics include the patient’s age, background, social, educational and financial circumstances (Aita, McIlvain, Backer, McVea & Crabtree, 2004). This statement is supported by Street et al. (2005) who have indicated that the degree to which patients actively participate during the consultation is a function of multiple patient, physician and contextual factors (see Fig. 1). This study shows that patients are more active participants when interacting with physicians who are more engaged in partnership-building and supportive talk (Kaplan, Gandek, Greenfield, Rogers & Ware, 1995). It seems that patients often become more active when their physicians are supportive and encourage their participation. On the other hand, patients are less involved when their physician is overly controlling, for example by interrupting or changing the subject (Street, 1991, 1992; Street et al., 1995; Thompson, Nanni & Schwankovsky, 1990; Wissow, Roter & Wilson, 1994; Wissow et al., 1998 in Gordon et al., 2005). Consistent with other research, the study conducted by Kaplan et al. (1995) also reveals that patients with a higher educational level were more active participants than less educated patients. A possible explanation could be that patients with lower SES may be less active participants because their physician less frequently solicits their involvement.
3.3.2.3 Benefits of patient participation

Active patient participation during the medical consultation is expected to benefit the patient. It may reinforce patients’ confidence in their ability to manage their disease, leading to closer adherence to treatment regimes. This in turn leads to an improved health status (Kaplan, Greenfield & Ware, 1989 in Zandbelt, Smets, Oort, Godfried & de Haes, 2006). Active participating patients seem to be more committed to the recommended treatment, have a stronger sense of control over health and even experience better health following the visit than more passive patients do (Street & Millay, 2001). Patients who actively participate in consultations are able to change the focus of the consultation and control the amount of information provided (Street, 1991 in Zandbelt et al., 2006). Patients are much more likely to be satisfied with care when they establish a rapport with the physician, are given information about their symptoms and the treatments prescribed, are able to ask questions and to discuss their ideas and those of the healthcare provider, and perceive the physician as seeking to build a partnership (Baumann & Amara, 2007 in Baumann, Baumann, Le Bihan & Chau, 2008). A study by Street et al. (2005) shows that more educated patients tend to be more active communicators by asking more questions and being more assertive than less educated patients. However, the more educated patients do not more often express concerns. This conclusion is supported by Siminoff, Graham & Gordon (2006). They reveal that better educated patients and patients with a higher level of income asks their physicians more questions, as do their counterparts.

3.3.3 Physicians’ communication

Physicians are generally expected and expect themselves to be neutral when it comes to the patient’s social or demographic characteristics in forming judgments of patients (Hooper, Comstock, Goodwin & Goodwin, 1982 in van Ryn & Burke, 2000). They should be able to view each patient objectively, because the perceptions of and beliefs about patients can have a significant impact on the consultation characteristics and treatment recommendations (Eisenberg, 1979 in van Ryn & Burke, 2000). However, physicians have been shown to be less comfortable with low SES patients (Magnus & Mick, 2003 in Blacksher, 2008). According to several authors, there is a possibility that the physician brings to the consultation certain expectations about patients based on
their socio-demographic characteristics and epidemiologic data (van Ryn & Fu, 2003; van Ryn & Burke, 2000 in Piette et al., 2006). Burgess, Fu & van Ryn (2004) reveal that physicians possibly apply stereotypes when picturing certain patients. These expectations and stereotypes can bias the way information is interpreted (Darley & Gross, 1983; Duncan, 1976; Sagar & Schofield, 1980 in van Ryn & Burke, 2000) and may influence the choice of treatments and physicians’ communication style (van Ryn & Fu, 2003; van Ryn & Burke, 2000 in Piette et al., 2006). This may be more likely to occur in medical relations with lower SES patients, since communication barriers increase with physician-patient socio-demographic disparity. This may be due to differences in illness beliefs (Allhouse, 1993; Helman, 1990; Kleinman, Eisenberg & Good, 1978 in van Ryn & Burke, 2000), differences in general perceptions due to differences in social and cultural backgrounds (Huby & Salkind, 1989; Rothenburger, 1990; Weddington & Gabel, 1991 in van Ryn & Burke, 2000), and/or differences in styles and patterns of communication (Fisher, 1988; Muller, 1990 in van Ryn & Burke, 2000).

Some authors differentiate the physicians’ behaviour in a facilitating or stimulating communication style and an inhibiting communication style (see Fig. 1). Facilitating behaviour refers to an attentive style of interacting with the patient using verbal and non-verbal encouragements. The physician summarizes the patients’ words, asks open and closed questions and uses respectful statements. The opposite is the inhibiting interaction style which refers to a way of interaction by which distance is created between the physician and patient. Utterances of this type of style are ignoring or changing the subject, changing focus, expressing criticism, sarcasm and making inappropriate interruptions (Zandbelt et al., 2007; Roberts and Sarangi, n.d. in Schouten et al., 2008). Evidently, research has shown that patients are more satisfied when their physician displays more facilitating behaviour (Zandbelt et al., 2007).

3.4 Goals of communication

By communicating with a patient, the physician gets to know the patient’s problem and concerns. History taking, making the diagnosis and determining the treatment are carried out through exchanging verbal and non-verbal information (Bensing, Kerssens
& van der Pasch, 1995). The main goal of the physician-patient communication is to increase the quality of care. Several studies have shown the importance of effective physician-patient communication on health outcomes (van den Brink-Muinen et al., 2003). According to Ong et al. (1995) there are three different main purposes of communication between doctors and patients that can be distinguished: creating a good interpersonal relationship, exchanging information and making treatment related decisions. These three goals are mentioned briefly in the following.

3.4.1 Creating an interpersonal relationship

There are different opinions when it comes to defining a good interpersonal relationship. Some authors declare that laughing or making jokes, making personal remarks, giving compliments, friendliness and honesty are all essential ingredients to shape a good interpersonal relationship with the patient (Roter, Hall & Katz, 1987; Buller & Buller, 1987; Freemon, Negrete & Davis, 1971; Garrity, 1981 in Ong et al., 1995). Other authors agree that empathy is a necessary condition to make patients feel safe enough to speak up about things they are really worried about (Carkhuff, 1969; Truax, 1971 in Bensing et al., 1995). This in turn is an important component to create an interpersonal relationship (Squier, 1990; Hornsby & Franklin, 1979 in Ong et al., 1995). Empathy means that the physician is able to show the patient that he or she understands the patient’s problem (Hornsby & Franklin, 1979 in Bensing et al., 1995). Empathic doctor-patient relations consist mainly of reflecting, listening to what the patient has to say, evoking feelings, encouragements and non-verbal behaviours (Riskó, 1992; Comstock, Hooper & Goodwin, 1982; Lovert, Cox & Abou-Saleh, 1990, Dimatteo, Taranta & Friedman, 1980; Maguire, Fairbairn & Fletcher, 1986 in Ong et al., 1995).

3.4.2 Exchanging information

The exchange of information between a physician and his or her patient consists of information-giving and information-seeking. On the one hand, the physician needs information to make the correct diagnosis and treatment plan. On the other hand, the patient needs to know and understand what is going on and he or she also wants to feel understood by their physician (Ong et al., 1995). Studies reveal that the SES of the
patient is associated with having enough information. Physicians tend to give more information to the more highly educated patients and higher income patients (van den Brink-Muinen et al., 2003; Murray, Pollack, White & Lo, 2007; Siminoff et al., 2006) (See 3.5.1.1.1.).

3.4.3 Decision-making

Another goal of communication in the medical consultation is to enable the physician and patient to make decisions about treatment. In order to make such decisions, the physician and patient both need information (Ong et al., 1995), which is another previously discussed communication goal. The different types and the importance of decision-making during the medical consultation are being discussed more precisely in 3.5.2.4.3.

3.5 Communication behaviours

With regard to the communication behaviours during the medical consultation, communication behaviours can be divided into verbal behaviour (instrumental and affective), non-verbal behaviour and at last patient-centredness.

3.5.1 Verbal/ non-verbal behaviour

3.5.1.1 Verbal behaviour

Broadly, verbal behaviour can be defined as ‘the spoken communication’ during the medical consultation. The verbal behaviour in the medical encounter can be divided into instrumental or task-focused verbal behaviour and affective or socio-emotional verbal behaviour (van den Brink-Muinen et al., 2003; Schouten, Meeuwesen, Tromp & Harmsen, 2007).

3.5.1.1.1 Instrumental behaviour

Instrumental or task-focused verbal behaviour belongs to the cognitive domain (Bensing, 1991 in Ong et al., 1995) and includes giving directions, asking for clarification, asking questions, giving information, counseling, etc. (van den Brink-Muinen et al., 2003; Schouten et al., 2007). Instrumental behaviours can be defined as
technically based skills that are used in problem solving (Hall, Roter & Katz, 1987 in Ong et al., 1995). As mentioned earlier, studies reveal that the SES of the patient is associated with having enough information. Physicians tend to give more information to the more highly educated patients and higher income patients (van den Brink-Muinen et al., 2003; Murray et al., 2007; Siminoff et al., 2006). The poorest patients are less likely to report that their physicians always explain things in a way they understand (DeVoe et al., 2009). According to a study by Schouten et al. (2007), general practitioners show more instrumental than affective behaviour. Nevertheless is the patient’s satisfaction significantly more influenced by affective verbal behaviour than by instrumental behaviour of the physician (Schouten et al., 2007).

### 3.5.1.1.2 Affective behaviour

The affective behaviour in patient-doctor communication is part of the emotional domain (Bensing, 1991 in Ong et al., 1995) and consists of all forms of social behaviour and social talk. Possible affective expressions are: showing concern, reassurance, reflection, signs of agreement or disagreement and paraphrasing (van den Brink-Muinen et al., 2003; Schouten et al., 2007). Affective behaviour can be defined as verbal utterances with an emotional content designed to establish and maintain a positive relationship between the physician and the patient (Buller & Buller, 1987 in Ong et al., 1995). A study conducted by Schouten et al. (2007) revealed that the physicians’ affective verbal behaviour had the most effect on the level of patient participation and satisfaction. It seems that the more affective behaviour the physician displays, the more indirect questions the patient will ask. More educated patients receive more emotional expressions from their physicians (Siminof et al., 2006).

### 3.5.1.2 Non-verbal behaviour

A physician has the task to try to discover the nature of the patient’s problem and translate this into a correct diagnosis. In order to do this, there is an exchange of verbal information between the physician and his or her patient (Bensing, 1991; Cassell, 1991; Roter & Hall, 1992 in Bensing et al., 1995). Yet, most studies are based on frequency of doctors’ and patients’ verbal behaviours, without much attention given to non-verbal communicative aspects (Schouten et al., 2008). Nevertheless, there is a growing interest
in the importance of non-verbal behaviour during the consultation. Non-verbal behaviour has been operationalised in different ways such as eye contact, tone of voice, laughter, facial expressions, physical distance, nodding, etc (Ong et al., 1995). Bensing et al. (1995) claims that ‘gaze’ takes a special place in non-verbal communication. This concept can be defined as the time that a physician looks directly into the patient’s face. It’s an important value in communication in our Western world, as listeners are ought to look at the speaker. This speaker in turn should look at the listener to check whether the information is being understood (Collier, 1985 in Bensing et al., 1995). By looking at the patient, the physician can have more insight in the patient’s emotional feelings and concerns. The results of the study conducted by Bensing et al. (1995), show that the amount of gaze is related positively to the physician’s verbal behaviour. In consultations where physicians often look directly at the patient, patients seem to feel more inclined to talk about their concerns. Patients tend to talk more, present more health problems and give more information. An important result of this study is the indication of the mutually reinforcing relationship of verbal and non-verbal behaviour. The physician’s gaze was found related to the physician’s verbal affective behaviour, such as paraphrases, reflections, etc. When the doctor and patient talked about psychosocial issues, there was a relationship between the physician’s gaze and his instrumental communicative behaviour, such as questioning, information giving and counseling. Zandbelt et al. (2006) have concluded that patients’ relative contribution to the consultation is, besides the verbal encouragements, also related to the physicians’ non-verbal encouragements. The active listening skills of the physician can also be placed under the non-verbal behaviour during the consultation. Schouten et al. (2007) claims that the physicians’ non-verbal behaviour, such as eye contact, has an important influence on the patients’ behaviour during the consultation. Research has revealed that patients are very sensitive to non-verbal messages and inconsistencies between the physician’s verbal and non-verbal behaviours (Hornsby & Franklin, 1979; Friedman, 1979 in Ong et al., 1995). Consequently, it would be very useful to further investigate this aspect of communication in the future.
3.5.2 **Patient-centredness**

3.5.2.1 *Development of the concept*

The patient-physician relationship has developed from being a paternalistic one to a patient-centred one (Lee & Lin, 2010). Traditionally, the ideal doctor-patient relationship was a paternalistic one where the doctor directs the care and makes the decisions about the treatment. Over time, this approach has been replaced by the ideal of ‘shared decision-making’ (Chaitchik, Kreitler, Shaked & Schwartz, 1992; Beisecker & Beisecker, 1990; Sutherland, Llewellyn-Thomas & Lockwood, 1989; Siminoff & Fetting, 1991; Brock & Wartman, 1990 in Ong et al., 1995). With the shift in the balance of power toward a collegial relationship between physician and patient, patient-centred models of care began to appear (Balint, 1957, 1964; Engel, 1980 in Aita et al., 2004). These models increasingly focused on the need to understand patients’ stories within the context of their daily lives (Bartz, 1999; Brody, 1988,1995,1999; Kleinman, 1978; Levenstein, 1984; McCracken, Stewart, Brown & McWhinney, 1983; Stewart, 1995; Stewart et al., 1995 in Aita et al., 2004).

3.5.2.2 *Definition*

Despite different definitions (Mead & Bower, 2000 in Zandbelt et al., 2006) most authors agree that patient-centred care acknowledges the patient as a person with a unique personal history and specific individual needs (Stewart, 1984 in Zandbelt et al., 2006). Patient-centred communication can be operationalised as the presence of facilitating behaviour (Zandbelt et al., 2007). It can be distinguished into several aspects such as supportive talk, being attentive to patients’ psychosocial as well as physical needs, enabling the disclosure of patients’ concerns, conveying a sense of partnership and actively facilitating patient involvement in decision-making (Bensing, 2000; Mead, Bower & Hann, 2002 in Lee & Lin, 2010).

3.5.2.3 *Effects of patient-centredness*

There are some discrepant findings considering the positive effects of patient-centred communication (Lee & Lin, 2010). There are studies that report that there is no, or even a negative relationship between patient-centredness and health outcomes (Kinmonth,
Woodcock, Griffin, Spiegel & Campbell, 1998 in Lee & Lin, 2010) and patient satisfaction (Mead, Bower & Hann, 2002 in Lee & Lin, 2010). It seems though, that most studies support the finding that patient-centred communication enables patients to express their perspective on illness, treatment and health-related behaviour (Levenstein, McCracken, McWhinney, Stewart & Brown, 1986; Smith & Hoppe, 1991 in Zandbelt et al., 2006). By using patient-centred communication, the physicians aims to ensure that the patients’ concerns, ideas and expectations are expressed. This technique is assumed to increase the confidence of the patient that his/her problem is fully explored and understood by the doctor (Griffin, Kinmonth, Veltman et al., 2004 in Zandbelt et al., 2007). In addition, this type of communication may promote a sense of shared ‘ownership’ of the treatment plan and confidence that it can be performed. Consequently, patient-centred communication is thought to enhance patients’ satisfaction and their adherence to the medical treatment plan (see Fig. 1) (Zandbelt et al., 2007). Siminoff et al. (2006) reveals that both patients and physicians spend time trying to build an interpersonal relationship with each other. However, physicians seem to engage in more relationship building with more educated patients and patients with a higher income level. Patient-centred communication includes several aspects of which trust, consultation length and decision-making are being discussed in the following.

3.5.2.4 Aspects of patient-centredness

3.5.2.4.1 Trust

Recently, research has focused on patients’ trust in their healthcare provider. Trust is seen as an important basis for any sort of satisfactory physician-patient relationship (Luban-Plozza, Laederach-Hofmann, Knaak & Dickhaut, 2002; Mechanic, 1996 in Kowalski, Nitzsche, Scheibler, Steffen, Albert & Pfaff, 2009). Trust can be promoted by the physician by communicating effectively with patients such as listening carefully, answering questions, giving the patients as much information as they want or need and involving them in the decision-making process (Trachtenberg, Dugan & Hall, 2005). A trusting relationship between a patient and his/her physician leads to an increase in the patients’ willingness to follow the recommendations of their physicians (Schneider, Kaplan, Greenfield & Wilson, 2004 in Kowalski et al., 2009), to seek care, to rely on
physicians’ judgment and wanting to give the physician more control (Trachtenberg et al., 2005). Trust also promotes patient satisfaction (Janssen, Ommen, Neugebauer, Lefering & Pfaff, 2007; Hall et al., 2002; Thom & Campbell, 1997 in Kowalski et al., 2009) and improves health outcomes (Mollborn, Stepanikova & Cook, 2005; Safran et al., 1998; Berrios-Rivera et al., 2006 in Kowalski et al., 2009). A study conducted by Kowalski et al. (2009) shows that the physicians’ communication behaviours perceived by the patients is a substantial predictor of the level of trust that these patients place in their physician.

3.5.2.4.2 Consultation length

The last years, there has been increased interest in the time that general practitioners spend with their patients (Wilson, 1991; Buchan & Richardson, 1973; Westcott, 1977; Bain, 1979; Wilson, 1985 in Videau, Bérengère, Paraponaris & Ventelou, 2010). The length of the consultation is an important determinant of primary care, as longer consultations are associated with higher patient satisfaction (Baker, 1990; Wilson, 1991; Bolton, Mira, Roberts & Usher, 1998 in Furler, Harris, Chondros, Davies, Harris & Young, 2002). As mentioned earlier, research has shown that people with lower SES have higher rates of nearly all chronic diseases and have a higher mortality rate (Glover & Tennant, 1999 in Furler et al., 2002). Consequently, it would be expected that they require a higher rate of longer consultations. In practice however, this is often not the case. There has been little research on the importance of patients’ SES on the length of the consultation. This research has shown a positive correlation between the patients’ SES and duration of the consultation (Wiggers & Sanson-Fisher, 1997; Buchan & Richardson, 1973 in Videau et al., 2010). Furler et al. (2002) concluded that people in disadvantaged areas, with a lower SES, visit their physician more often annually, but they are less likely to have a long consultation. Short consultations are thought to be determined by the characteristics of the physician, rather than the health status and needs of the patient. Possible characteristics that may influence the duration of the consultation are time pressure, number of patients to see and density of the general practitioners. Consultation duration has also been linked to the physician’s demographics and professional characteristics (Wilson, 1991; Buchan & Richardson, 1973; Westcott, 1977; Bain, 1979; Wilson, 1985 in Videau et al., 2010). One possible
explanation has been given by Videau et al. (2010). They concluded that patients with low SES (measured by the level of education) experience shorter consultations, not because of their individual characteristics but because they tend to visit physicians who are delivering shorter consultations. This is what they call ‘a matching hypothesis’. An explanation they bring to the front is that the densities of physicians are much lower in areas with deprived patients than with wealthy patients. An outcome of this is that the workload of the general practitioners in deprived areas is higher. The matching effect is that poor people tend to match physicians who, confronted by overburdened workload, have to shorten their consultations (Videau et al., 2010). Siminoff & Step (2005) conclude that physicians devote more time to patients they perceive to be more educated and intelligent and less time to those who presumably have greater need for patient education.

3.5.2.4.3 Decision-making

As mentioned above, patients’ preferences regarding the degree of involvement in their care are variable. Some patients prefer a more active participation in the medical encounter, while others wish to rely entirely on their physicians to make decisions (Swenson et al., 2004 in Lee & Lin, 2010). Therefore, some researchers highlight the importance of flexibility in the decision-making process. In this way, the patients’ individual differences and preferences are best respected (Charles & Gafni, 1999; Ryan & Sysko, 2007 in Lee & Lin, 2010).

There are three styles of decision-making that can be distinguished in medical care, namely the paternalist model, the consumerist model and the shared-decision-making model. In a paternalist model, doctors make the decision based on what they think is in the best interest of the patient. The opposite of this type of model is the consumerist model, in which the patients make their own decisions when it comes to their health. The shared decision-making model stands in the middle. In this model, the physician and the patient deliberate together and discuss how the various treatment options meet the patients’ needs and priorities. This model respects patients as persons (Lo, 2000; Emanuel & Emanuel, 1992 in Murray et al., 2007). The shared-decision-making model may, just as a patient-centred approach in general, have a positive impact on health outcomes (Kravitz & Melnikov, 2001; Golin, DiMatteo, Duan, Leake & Gelberg, 2002.
in Murray et al., 2007). There is not a lot of data available that explicitly looks at the relationship between SES and patients’ experiences of clinical decision-making. It is known that the SES of a patient is associated with disparities in the process and outcomes of medical care, so it is possible that low SES is also associated with disparities in decision-making (Smedley, Stith & Nelson, 2002; Marmot & Bobak, 2000 in Murray et al., 2007). Murray et al. (2007) concluded that SES was strongly associated with the style of decision-making experienced. People with low income and people of low educational status were less likely to experience shared decision-making and more likely to experience paternalism or consumerism.

3.6 Conclusion and discussion

The overall conclusion that can be drawn is that patients are much more likely to be satisfied with care when they establish a kind of relationship with the physician, are given information and are able to ask questions and discuss their ideas (Baumann & Amara, 2007 in Baumann et al., 2008). The more patients are involved in their own care, and the more the physicians encourage them by their verbal and non-verbal behaviour during the consultation, the better the outcomes will be (Schouten et al., 2007). Good physician-patient communication also leads to an increase of the quality of care and health outcomes (van den Brink-Muinen et al., 2003).

Several studies have shown that poor people have more illnesses, consume more medical services and show a higher mortality rate (Kuh, Hardy, Langenberg, Richards & Wadsworth, 2002; Lurie & Buntin, 2002; Watt, 2002 in Monnickendam et al., 2007). Added to this is the fact that these people, who are already more vulnerable, are the least well-served in terms of healthcare services (Mercer & Watt, 2007 in Loignon et al., 2010). Literature shows that communication dissatisfaction appears to be more common in the case of patients with lower SES than for higher SES patients. Patients from lower social classes often have less positive feelings about their healthcare and healthcare providers (Blendon, Sheon, DesRoches & Osborn, 2002; Blendon et al., 1995; LaVeist & Nuru-Jeter, 2002; Malat, 2001; Ohldin et al., 2004 in Malat et al., 2005). Vice versa, physicians have been shown to be less comfortable with low SES patients (Magnus & Mick, 2003 in Blacksher, 2008). Patient demographic factors, such as educational level
and income, seem to influence the number of physician utterances in almost all communication categories with patients (Siminoff et al., 2006). For example, studies reveal that the SES of the patient is associated with having enough information. Physicians tend to give more information to the more highly educated patients and higher income patients (van den Brink-Muinen et al., 2003; Murray et al., 2007; Siminoff et al., 2006). The poorest patients are less likely to report that their physicians always explain things in a way they understand (DeVoe et al., 2009).

While there is some evidence on ways to reduce communication difficulties, there is still a lack of knowledge on how to effectively overcome these difficulties in communication between physicians and patients (Diette & Rand, 2007). Most of the recommendations for reducing health inequalities conclude that policies and interventions should aim for an ‘upward leveling’ of health inequalities. This means that the higher rates of morbidity and mortality of the lower socioeconomic groups are reduced to the level of more advantaged groups in society (Whitehead & Dahlgren, 2006 in Mackenbach et al., 2010). It is important that physicians are aware of the fact that patients’ desires for participation vary, and communication about such desires is necessary during visits (Trachtenberg et al., 2005). However, physician recognition of health disparities remains relatively low, and it is not clear whether many physicians agree that expert recommendations on how they can help address disparities are feasible or effective in clinical practice (Vanderbilt, Wynia, Gadon & Alexander, 2007).

Another important conclusion is that there is still relatively little known about the non-verbal aspects of the communication between a physician and his or her patient. Yet, patients are found to be very sensitive to non-verbal messages and inconsistencies between the physician’s verbal and non-verbal behaviours (Hornsby & Franklin, 1979; Friedman, 1979 in Ong et al., 1995). Consequently, it would be very useful to further investigate this aspect of communication.
4 Method

4.1 Part one: Survey and cognitive interviewing

From the conclusion that the communication between a patient and a healthcare provider sometimes brings along some problems, an international group of well known communication experts has conducted a multicentre study, the Gulliver study (see appendix 1). The fieldwork in the context of this thesis takes place within this research and consists of the cognitive interviewing and pretesting of the questionnaire.

Using the cognitive interviewing technique, the questions of the conducted survey were tested on their level of comprehensiveness, uniformity and difficulty. The respondents were asked to pronounce all of their remarks on the questions out loud. Based on the obtained data, the cause of non-response and response mistakes were traced so that the questions can be adjusted to this. The selection of the respondents is mainly based on their SES, with special attention to a lower SES. People who don’t have an academic or college degree, are not directly involved in healthcare, are older than 18 years and speak Dutch can participate on the cognitive interviews. There has been strived to conclude different age groups in the sample. The goal was set at ten participants who were selected by purposive sampling and who were willing to participate. The cognitive interviews were conducted in cooperation with colleague student Kristien Monté during two days. Social restaurants were contacted in order to ask for permission to conduct the interviews in their facility. Respondents who were willing to participate were given a letter with information and signed an informed consent. It was made clear that the questionnaires were strictly anonymous and that they were free to end the participation whenever they felt the need to. Initially, some respondents were willing to participate but seemed to scare away when they were asked to sign the informed consent. Next, the survey was handed over to the respondents with the instruction to fill in the first 35 questions individually. The next step was the oral discussion of the survey. First, the general layout and clarity of the questionnaire were surveyed. Important here was to examine whether the response categories were clear enough for the respondent. Thereafter, question by question was scrutinized to check the level of comprehensiveness, uniformity and difficulty. At last, the respondents were asked to
answer the last two questions, whereupon these were also thoroughly discussed to make sure the respondents understood what the question asked for. These cognitive interviews resulted in several corrections of the survey, whereafter the survey was sent to the experts in the Netherlands. Despite the relatively small number of respondents, the same remarks about the survey seemed to return. This ultimately resulted in the definitive version of the survey.

In the next phase, the survey was pretested by letting them fill out by a varied population (n=100). The respondents were selected at public places, accessible for everyone, which makes the sample relatively representative. The pretesting was also in collaboration with student colleague Kristien Monté and took place during five days. The analysis and interpretation of the results is part of her master thesis.

4.2 Part two: Systematic review

The main body of this master thesis consists of the elaboration of the systematic review: “The social gradient in doctor-patient communication”. The former review (Willems et al., 2005) ranges from the year 1965 until 2002, and includes an integrated summary of twelve studies. This review will be updated starting from the year 2002 at date. In the following, the used methodology will be described.

In step one, a systematic search in MEDLINE, PsycINFO and Web Of Science was conducted to identify publications on doctor-patient communication and social class of the patient. The following search strings were used:
- MeSH: communication AND (physician-patient relations OR provider-patient relations OR physician-family relations) AND (social class OR socio-economic factors)
- text-words: (doctor-patient communication OR physician-patient communication OR provider-patient communication) AND (social class OR socio-economic status).

The search was limited to publications from 1/1/2002 on. The articles used for comparison in the first version of the systematic review were checked again by searching them on the databases (Pubmed, Web of Science, Google Scholar). This in particular to check their current relevance for the article.
To make the comparison of results possible, articles were included when they mentioned the interaction between the SES of the patient or one of its indicators (educational level, income or occupation) as well as determinants of doctor-patient communication. Articles determining SES by other variables than education, income or occupation (e.g. race, gender, health literacy) were excluded. It was prominent how many articles involved communication differences according to the patients’ race, but these articles were also excluded. Articles that included ‘occupation’ as variable for the SES were prominently in minority. The most articles used income and/or education as variable. Articles that were not original research articles, opinion articles and reviews were also excluded. Another relevant limit concerns the language of the article. Articles written in English or Dutch were included, other languages (e.g. Spanish) were excluded from the search. This resulted in a list of 87 articles of which the references were checked for other relevant articles.

Of the 87 studies under review, 32 were excluded based on title and abstract review since they were not related to doctor-patient communication and social class. The abstracts of the remaining 55 publications were screened for explicit references to social class related concepts (education, income or occupation) and doctor-patient communication. Articles determining SES by other variables than education, income or occupation (e.g. race, gender, health literacy) were excluded. As a result 38 publications were excluded. Most of those publications were measuring SES or social class by other means than income, education or occupation. Some others were too narrow on doctor-patient communication (disease-specific communication). Only 17 publications appeared to be related to doctor-patient communication and social class of the patient.

In the last step of the selection process, an independent full text analysis on those 17 publications was performed by two researchers to confirm the relationship between social class and doctor-patient communication in the publications. Publications labelled as “doubtful relevance concerning social class and doctor-patient communication” by one of the two reviewers, were discussed until consensus was reached. Eight publications were rejected in this phase. Eventually, eight publications were labelled as relevant to assess doctor-patient communication and social class of the patient. Adding the 12 publications from the former review dating from 1965 up to 2002, the current review contains 20 publications.
Each study meeting the inclusion criteria was evaluated to determine the sample characteristics (setting, number of analysed interactions), study design and methodology, the SES and communication variables tested and the statistics used to test correlation. This information is placed in a table, which can be consulted in the review. The articles were all examined thoroughly and critically evaluated. During the reading there was simultaneously examined under which aspect of communication the article could be placed (verbal communication, non-verbal communication, patient-centredness). This distinction was not always very clear, because some studies focused on several communication aspects.
5 Results

The systematic review “The social gradient in doctor-patient communication”, gives a detailed description and summary of the research results (see part one). This article is submitted in the journal ‘Patient Education and Counseling’. The confirmation of this submission is added in appendix 2.
6 Discussion and conclusion

The systematic review “The social gradient in doctor-patient communication” examines whether the communication between a doctor and his or her patient is related to the latter’s SES and if so, which aspects of the consultation are affected. The review also aims to explore if there are any changes in doctor-patient communication over time. As Street & Millay (2001) claimed, the consultation between the physician and the patient is an essential component of the delivery of health care. By communicating with a patient, a physician gets to know the patients’ problem and creates a relationship that is necessary for its management, and if possible, its solution (Bensing et al., 1995). The first version of the systematic review (Willems et al., 2005) ranged from the year 1965 until 2002. The current review is an update from 2002 to date, 2011. The aim of the current review is to give the state of the art on the social gradient in doctor-patient communication.

Earlier in this complementary report, a conceptual model is presented which connects several patient, physician, and visit characteristics with the communication style during the consultation and possible outcomes (see Fig. 1) (Mead & Bower, 2000; Ong et al., 1995). This model shows that the degree to which patients actively participate in the medical consultation is a function of multiple patient, physician and contextual factors (Street et al., 2005). Street, Gordon & Haidet (2007) apply an ecological model that takes into account the interplay of multiple physician, patient and contextual factors that collectively influence physician-patient interactions (see Fig. 2). The influence of any variable (e.g. ethnicity) may vary depending on the presence of other factors (e.g. the patients’ level of education, income, the physicians communication style) (Siminoff et al., 2006). An ecological approach recognizes that within the context of any medical encounter, a number of processes affect the way physicians and patients communicate and perceive one another. There are four important sources of potential influences: the physician’s communication style, patients’ characteristics, physician-patient demographic concordance and the patients’ communication. First, how a physician communicates with a patient may depend on his or her style. Some physicians provide more information, ask more questions, are more supportive and use more partnership-building than other physicians (Street, 1991; Street, 1992; Roter, Stewart, Putnam,
Lipkin, Style & Inui, 1997). Second, variability in physicians’ communication and perceptions may be related to the patients’ demographic characteristics (education, income, occupation) (Burgess et al., 2004). Finally, the patients’ communication style can have a strong effect on the physician’s behaviour and beliefs (Street & Millay, 2001).

Patients from a lower social class and doctors often find themselves in a vicious circle. These patients’ communication and actions (e.g. less question asking, less opinion giving, less affective expressiveness, less preference for decision making) elicit a less involving behaviour from the doctor with less partnership building utterances. This might discourage the patient to adopt a more active communication style (Street, 1991; Waitzkin, 1985)(see Fig. 2).

The results of the twenty compared studies, executed in between 1965 to 2011, are being categorized following the axis verbal/non-verbal behaviour. Verbal behaviour can be divided into instrumental and affective behaviour. Yet, some determinants did not fit into these categories but were more related to the concept ‘patient-centredness’.

Concerning the instrumental verbal behaviour, we found in the first version of the systematic review a positive relationship between patient’s social class and information-giving (Hall, Roter & Katz, 1988; Street, 1991; Pendleton & Bochner, 1980). Patients of higher social class received not only more overall communication but also more
explanations (Hall et al., 1988), even when this was not explicitly requested by the patient (Pendleton & Bochner, 1980). Two recent studies reveal that low-income patients are less likely to report that providers always explain things in a way they understand (DeVoe et al., 2009; Jensen et al., 2010). In addition, Street (1991) concluded in an earlier study that the amount of information-giving is positively influenced by several features of the patient’s communicative style. It seems that patients who are more affective expressive, receive more information of their provider. Evidence shows that these communication features depend on the patient’s SES. More educated patients are found to be more expressive, tend to ask more questions and have a higher level of being opinionated (Street, 1992). These three aspects in turn lead to more information and direction giving by the physician. These findings remain partially consistent.

A more recent study conducted by Siminoff et al. (2006) also revealed that patients who had more than a high school education and patients that reported a medium or high income ask more questions and discuss their emotions more than less well-educated patients. Street et al. (2005) confirms this, but they found that well educated patients do not more often express their concerns, in contrast to what the study of 1992 concludes. Current studies still reveal that patients with lower education and income levels report better general communication than their less-vulnerable counterparts. A possible explanation, according to Piette et al. (2006), could be that these patients may have lower expectations of their patient-provider relationship or that they experience a greater discomfort with criticizing them.

Another prominent conclusion was drawn by Fiscella, Goodwin & Stange (2002). They revealed that less educated people are approached in a more directive way during consultation and as consequence see their expectations less met. The physician spends less time on patient’s questions and counseling when they are less educated. A recent study by Siminoff et al. (2006) confirms this finding by concluding that physicians provided more counseling and education to their high and medium income patients.

The meta-analysis by Hall et al. (1988) identifies a link between the affective verbal behaviour of the physician, such as social talk or positive and negative talk, and the patient’s satisfaction and compliance. Data from the updated review confirms this by
revealing that more educated patients receive more emotional utterances from their physician (Siminoff et al., 2006). When patients are more affectively expressive, doctors tend to provide more comments of reassurance, support and empathy. Street (1991, 1992) have already shown that patients with a higher educational level are more expressive, so it can be assumed that physicians show more affective behaviour towards these patients.

**Non-verbal behaviour** is to date still one of the least investigated topics of doctor-patient communication. It is noticeable that the amount of studies concerning this aspect has not significantly increased the last ten years, this unlike the other communication aspects. In the former systematic review, Street & Buller (1988) found that when physicians were talking to higher educated patients, they reciprocated their body orientations more than they did with lower educated patients. An admitted topic to the non-verbal communication behaviour concerns the listening skills of the physician. A recent study by Jensen et al. (2010) showed that of low-income adults, roughly one in five patients felt health providers were not listening carefully enough or respecting what they had to say.

The last ten years, there has been a sizeable amount of research that is focused on the concept ‘patient-centredness’. This behaviour includes five dimensions: using the bio-psycho-social perspective, approaching the patient as a whole person, sharing power and responsibility, building a therapeutic alliance and considering the physician as a person and at last acknowledging the influence of its personal qualities (Mead & Bower, 2000).

The main conclusion of the first research period was that patients’ preference for shared decision-making is influenced by their demographic characteristics. Two studies found that patients with a lower educational level were less involved in treatment decisions (Kaplan et al., 1995; McKinstry, 2000). Kaplan et al. (1995) also revealed that patients with lower educational level gave less a sense of control over treatment decisions and less asked to take responsibility for care than patients with a higher level of education. The more recent studies also show that income and educational level are strongly associated with preferred style of decision-making. According to Murray et al. (2007), people of high SES are more likely to prefer shared decision-making, and people of low
SES are more likely to prefer consumerism and paternalism. Another interesting finding is that in the study conducted by Jensen et al. (2010) almost half of the low-income patients were displeased with the amount of time physicians spent with them.

Patient participation is another well discussed topic in the last years. Research shows that patients with at least some college education tend to be more active communicators than less educated patients. The extent to which physicians use partnership-building and supportive talk has an impact on the degree of patient participation during the consultation (Street et al., 2005). Earlier research has indicated that higher educated patients receive more partnership building utterances (Street, 1991). Two studies were conducted in the field of cancer screening, with as main conclusion that patients with low SES are less likely to report having discussed cancer screening with their physicians (Bao, Fox & Escare, 2007). Maly et al. (2009) revealed that women who had graduated from high school are more likely to report planning of breast reconstructive surgery. This is positively associated with interactive information-giving by the physician and greater patient perceived self-efficacy.

Concluding, in our 2011 review we found that patients from lower social classes receive less socio-emotional talk, a more directive and a less participatory consulting style characterised by for example less involvement in treatment decisions; a higher percentage of biomedical talk and physicians’ question asking; lower patient control over communication; less diagnostic and treatment information, more physical examination. Doctors give more information, more explanations, more (emotional) support and adapt a shared decision making style with higher SES participants.

This review also indicates that the literature on the social gradient in doctor-patient communication that was published in the last decade, addresses new issues and themes. Firstly, most of the found studies emphasize the importance of the reciprocity of communication: the doctor might communicate differently according to the social status of the patient, yet this is –at least partly- determined by the patient’s communicative behaviour. Patients with a high SES tend to ask more questions, ask for explanations, are more expressive and have a higher level of being opinionated than their lower SES counterparts (Street, 1991; Street, 1992; Siminoff et al., 2006). Secondly, there seems to be a growing interest in patient’s perception of doctor-patient communication. While
in the past, patient’s perception was not taking into account or no differences in perception were found, more recent studies show that low SES patients have the feeling doctors fail to explain things in a way they can understand and spend less time with them (Pendleton & Bochner, 1980; DeVoe et al., 2009; Jensen et al., 2010).
7 Limitations of the study

This study has, just as most studies, some limitations to take into account. An important limitation the researchers were confronted with when writing this review, is the limited number of studies on the link between the patients’ SES and the affective and non-verbal behaviour of the physician. Yet previous research has shown the importance of these aspects of communication by proving the influence on e.g. patients’ satisfaction, the number of studies remain relatively small. The few studies that focused on non-verbal behaviour noted that it is very difficult to measure and code non-verbal behaviour (Street & Buller, 1988). As consequence, we are not able to draw conclusions concerning the non-verbal and affective behaviour. Further research on this topic is still needed. Another limitation is the difficulty to compare the results of the existing studies, or even to make a summary due to the great diversity of measurements and frameworks organising these measurements in the different studies. The main variables used to measure the patients’ SES in the selected articles were the patients’ educational level, his/her income and his/her occupational status. As mentioned earlier, articles that included ‘occupational’ as variable for the SES were prominently in minority. Yet, the occupational status is an important indicator because it often adds benefits that can accrue from certain jobs, like prestige, privileges, social and technical skills and power. Educational level is used as a measure because differences in education correspond with different access to information and with different levels of benefiting from new knowledge. Income is another possible parameter for social class as it creates differences in access to scarce material goods. An alternative to determine socioeconomic is to use "proxy" measures (e.g. the insurance status, house tenure, car ownership, sociodemographic measures, race, etc.). Articles using proxy-variables as the only measure for SES were excluded. However, some of the selected articles used these variables in combination with educational level, income or occupational class. It is noticeable that a considerable share of the articles investigated doctor-patient communication according to the patients’ race, and in a smaller amount, gender. This too seems a well studied topic in recent years. In the selected articles many different communication classification systems were used to describe the communicative behaviour of the physician. The variables used in these
classifications are not always comparable, making the creation of a clear overview difficult. We were able to categorise most of the used communicative variables following the axis verbal/non-verbal behaviour. The determinants of communication that did not fit into the categories of this axis, were related to patient-centredness. In order to improve the comparability of future research, a uniform definition and classification of communication variables is indispensable.

Finally, several articles describe the healthcare and patient-provider communication in, what they call, ‘developing countries’ such as Indonesia and Israel. These studies were also excluded because of the cultural differences that makes comparison of the results difficult or even impossible. Nevertheless, this too is an important topic for future research.
8 Practice implications and future research

This review of the literature has further revealed the complex relationship of doctor-patient communication. Physicians behave differently with patients from different SES and patients communicate differently with their doctor depending on their SES. These differences add to the already existing boundaries to health care utilisation by patients from lower SES. The finding that the physician’s communicative behaviour is related to the communicative style of the patient and to his/her personal or social characteristics may have important implications for the daily practice of the physician.

Physicians need to become aware of the existing differences in giving information to and involving patients from lower social classes in the consultation, as well as of the underlying causes (Epstein, Taylor & Seage, 1985). They need to pay attention to the attitudes they have towards patients with a lower SES and they should be aware of how their feelings might impact their behaviour and thus be perceived by patients (Beach, Roter, Wang & Duggan & Cooper, 2006). Physicians should consider the possibility that conscious or unconscious stereotyping may influence their behaviours, including their interpersonal style (Piette et al., 2006). It is an important task of the physician to encourage the patients to discuss their concerns and to ask questions, and he/she should listen actively.

Communication skills and attitudes training can be an important tool to improve the defaults. The effects of such training have been proven and can persist over time (Simpson et al., 1991). Evidently, these skills can only be adapted when the physicians awareness and knowledge increases of how social factors can influence the medical encounter (Blacksher, 2008). Patients have a certain power to control communication during the consultation and to influence the physicians’ communicative behaviour. However, patients from lower social classes seem to exercise this control less than patients from higher educated groups. It seems not only patient’s personal characteristics but more importantly their communication behaviour has an influence on the doctor-patient communication. Therefore it is important to empower the patients on self-efficacy and learn how to express their concerns and preferences (Street, 1991, 1992; Maly et al., 2009; Waitzkin, 1985). Patients can be taught techniques to enable
them to be better communicators during the consultation. They can learn how to ask questions and prompt information. It is important that the patients get ‘activated’, because this leads to a better adherence (Cegala, Marinelli & Post, 2000 in Gordon et al., 2005). It has been shown that interventions to increase the participation of patients with low education obtain a good response and lead to measurable and clinically important improvements in health outcomes (Kaplan et al., 1989). By understanding processes that facilitate or hinder patient involvement, physicians should be better able to adapt their own communication and office practices to help patients more effectively participate in medical encounters (Street et al., 2005). Concerning the length of the consultation, the main aim should be to give people with lower SES more equal access to the physician’s time and attention (Videau et al., 2010). Future research should further investigate low-SES patients’ perceptions of their health care providers’ communication skills. Special attention should be paid to the relationship between patient skills, patient activism and communication satisfaction (Jensen et al., 2010). It seems necessary to conduct more research concerning the non-verbal behaviour of the physician as this too is an important aspect of the doctor-patient communication. However, there is to date still significantly more research concerning the verbal communication. Educational interventions can help physicians and patients learn communication skills to improve the quality of their interaction (Street et al., 2005).
9 Bibliography


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10 Appendix
10.1 Appendix 1: The Gulliver Study - Additional information

An international group of well known communication experts has conducted a multicentre study, the Gulliver study. The purpose of this study is to view the patients’ perspectives when it comes to good communication with his/her physician. This study is conducted in the Netherlands, Italy, Great-Britain and Belgium. The research team of the department of “General practice and primary care” of the University of Ghent is mainly focusing on the differences in expectations according to the SES of the patient. First results tend to show an important social gradient. In the second phase of the Gulliver study, which is directed by the department “ General practice and Primary care”, the results of the first phase will be quantified using a survey. This survey was created after an extensive literature study and will be filled out in the four participating countries. The opinions of patients concerning the communication with their general practitioner is being explored using a Likert-scale. The created questionnaire is being tested for the first time using the cognitive interviewing technique. The questions were tested on their level of comprehensiveness, uniformity and difficulty. The respondents were asked to pronounce all of their remarks with the questions out loud. Based on the obtained data, the cause of non-response and response mistakes was traced so that the questions could be adjusted to this. The selection of the respondents was namely based on their SES, with special attention to a lower SES. People who don’t have an academic or college degree, are not directly involved in healthcare, are older than 18 years and speak Dutch could participate on the cognitive interviews. There has been strived to conclude different age groups in the sample. The goal was set at ten participants who were selected by purposive sampling and willing to participate. Social restaurants were contacted in order to ask for permission to take the interviews in their facility. Respondents who were willing to participate were given a letter with information and signed an informed consent. It was made clear that the questionnaires were strictly anonymous and that they were free to end the participation whenever they felt they needed to. Next, the survey was handed over to the respondents with the instruction to fill in the first 35 questions individually. The next step was the oral discussion of the survey. First, the general layout and clarity of the questionnaire were surveyed. Important here was to examine whether the response categories were clear.
enough for the respondent. Thereafter, question by question was scrutinized to check the level of comprehensiveness, uniformity and difficulty. At last, the respondents were asked to answer the last two questions, whereupon these were also thoroughly discussed to make sure the respondents understood what the question asked for. These cognitive interviews resulted in several corrections of the survey, whereafter the survey was sent to the experts in the Netherlands. This ultimately resulted in the definitive version of the survey. In the next phase, the survey was pretested by letting them fill out by a varied population (n=100). The respondents were selected at public places, accessible for everyone, which makes the sample relatively representative.
10.2 Appendix 2: Confirmation article submission

Van: "Evelyn Verlinde" <Evelyn.Verlinde@ugent.be>
Aan: "'Nele De Laender" <Nele.DeLaender@UGent.be>
Onderwerp: FW: PEC Submission Confirmation

Dag Nele,

In bij deze het bewijs dat het artikel submitted is.

Groet
Evelyn

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Aan: evelyn.verlinde@ugent.be
Onderwerp: PEC Submission Confirmation

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