

**Socio-economic status of the patient and doctor-patient communication:
does it make a difference?**

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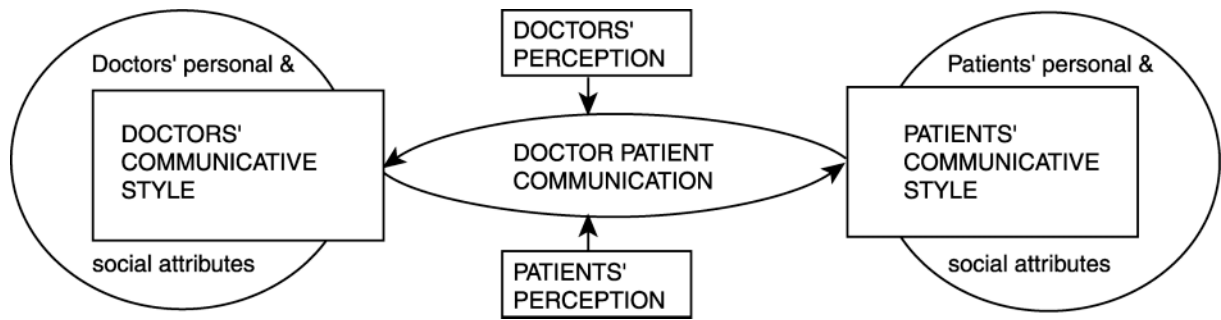
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Table 1

First author (Ref. nb.)	Setting	Method	N Patients	Variable SES	Variable communication doctor	Variable communication patient
Hall (24)	professional health care providers	meta-analysis	157 (mean)	social class indices, education or income	info giving, question asking; task & interpersonal competence; partnership building; socio-emotional behaviour (nonverbal behaviour, social talk, positive talk, negative talk);	
Street (25)	primary care	audiovisual analysis	41	education	information giving (diagnostic, treatment, procedural)	communicative style: affective expressiveness
Street (26)	multipurpose clinic, pediatric consultations	audiotapes	115	educational level	partnership building	parent's question asking and opinion giving
Martin (27)	primary care	questionnaires	500	occupation	listening, explaining, advice giving, examination	idem
Fiscella (28)	primary care	direct observation, chart audits, patient reports	2538	education	time use, preventive tasks, satisfaction, attributes of primary care	
Taira (29)	Employees	questionnaires	6549	income	discussion of health risk behaviours	health risk behaviours
Pendleton (30)	primary care	videotaped consultations	79	social class	amount of information given to the patient	
Street (31)	primary care	videotaped consultations	41	education	nonverbal behaviour consistency and adaptations	
Kaplan (33)	solo & multispecialty practices	questionnaires	8316	education	PDM style	
McKinstry (34)	primary care	structured interview, video vignettes	410	social class indices	shared decision making style	
Roter (35)	primary care	audiotape RIAS; questionnaires	537	income	narrowly biomedical, expanded biomedical, biopsychosocial, psychosocial, consumerist pattern	idem
Stewart (37)	primary care	audiotapes	140	educational level	information giving; patient centredness	

Table 1: Overview of the selected articles

Figure 1



Socio-economic status of the patient and the doctor-patient communication: does it make a difference?

Abstract

This systematic review, in which 12 original research papers and meta-analyses were included, explored whether patients' socio-economic status influences doctor-patient communication. Results show that patients from lower social classes receive less positive socio-emotional utterances and a more directive and less participatory consulting style, characterised by significantly less information giving, less directions and less socio-emotional and partnership building utterances from their doctor. Doctors' communicative style is influenced by the way patients communicate: patients from higher social classes communicate more actively and show more affective expressiveness, eliciting more information from their doctor. Patients from lower social classes are often disadvantaged because of the doctor's misperception of their desire and need for information and their ability to take part in the care process.

A more effective communication could be established by both doctors and patients through doctors' awareness of the contextual communicative differences and empowering patients to express concerns and preferences.

Key-words: communication, physician-patient relations, social class (Mesh)

1. Introduction

Health differences due to differences in socio-economical status (SES) are a matter of major concern in today's public health research. 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. (1, 2, 3, 4) Explanations for these inequalities in health are often explored but remain largely unclear. (4, 5) The causes are multiple and complex and include individual factors such as personal history (e.g. childhood SES and living conditions) and education, structural factors such as income and housing facilities, unequal distribution of risk factors in the population and inequalities in the accessibility of health care. (5-12) An important determinant of accessibility to health care is the quality of the communication between the patient and his/her health care provider(s). Yet this factor has to our knowledge never been included in any of the explanatory models for socio-economic health inequalities.

The communication between patient and physician has a strong influence on the patient's satisfaction and compliance. (13-19, 20) When looking at the impact of components of physicians' behaviour during consultation, both verbal behaviour and non-verbal behaviour seem to correlate positively with patient satisfaction. (13, 14, 15, 16) The important determinants for compliance are mainly more information giving, more positive talk and empathy and an increased participatory style. (13, 17, 18, 20) Though satisfaction and compliance are important indicators, the most important one when evaluating the effectiveness of the communication between patient and physician is the overall health outcome. In this perspective better communication (e.g. more question asking by the physician and by the patient, more information giving, shared decision making, more affective behaviour, ...) seems to have a positive influence. (19, 21)

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?

2. Methodology

MEDLINE and PsycINFO (1965 – 2002) were searched, using the following keywords:

- 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).

This resulted in a list of 42 articles of which the references were checked for other relevant articles.

To make the comparison of results possible, articles were included when they mentioned the interaction between the SES of the patient or one of it's determinants (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.

Articles that were not original research articles, opinion articles and reviews were excluded.

After exclusion, 12 articles were used to compare results.

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. (see fig. 1)

Insert fig. 1

3. Results

The comparison of the results of the selected studies was difficult, given the great variation in communication variables that had been tested. We considered several communication assessment approaches to cluster these variables. (22, 23)

Communicative behaviour can be categorised following the axis verbal/non-verbal behaviour. The verbal elements of communication can be divided into instrumental or task related behaviour (e.g. question asking, information giving,...) and affective or socio-emotional behaviour (counselling, positive and negative talk,...), reflecting the distinction between cure and care.

Yet in some of the articles the tested determinants of communication did not fit into these categories but were rather related to the concept patient-centredness (e.g. shared decision making, participatory decision making style, partnership building, ...).

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

3.1 Verbal/non-verbal behaviour

3.1.1 Verbal behaviour: instrumental behaviour

Instrumental or task-related behaviour is considered as all interactions that serve the "cure" part of the consultation, e.g. giving directions, giving information, asking clarification, asking questions, counselling, ...

Seven studies investigated the relationship between the instrumental behaviour of the physician and/or the patients, and the patients' SES.

In a meta-analysis, Hall et al. explored the correlation between physicians' communicative behaviour towards patients and the patient's outcome variables by reviewing 55 articles on 41 studies carried out between 1967 and 1986. In this study the communicative behaviour of the physician was conceptualised as information giving, question asking, task and interpersonal competence, partnership building and socio-emotional behaviour. The correlation between these variables and the patient's

outcome variables (satisfaction, recall, compliance) or background variables (gender, age, social class) was assessed.

This study revealed a positive relationship between patient's social class (measured by income, education or other, non-specified social class indices) and information giving. Patients of a higher social class received not only more overall communication but also more information (statistics used: the product-moment correlation (r), normalised with the Fisher Z transformation, and the normal deviate Z associated with a p -value; for information giving: maximum r / study, mean Z 2,39, $p < 0,01$). (24)

In an observational study, Street et al. conclude that the physicians' information giving was positively influenced by features of the patient's communicative style such as question-asking, affective expressiveness and opinion-giving. Also, physicians provide varying amounts of information strictly in response to the personal and social attributes of the patients.

Concerning the communicative style, more affective expressiveness and a higher level of being opinionated is related to more information giving. This study shows that more expressiveness by the patient is strongly related to it's education (partial correlation (pr)=0.32; $p < 0.05$), as is his level of being opinionated (pr =0.46; $p < 0.001$). Also more question-asking by the patient leads to more information giving by the physicians, however this study did not find a relation between the frequency of the patients' question asking and his/her educational background.

When controlling for the influence of the patients' communicative style, there is also evidence revealing that physicians give more information to particular types of patients than to others, regardless of the patients' communicative behaviour: more educated patients receive more diagnostic and health information than did their counterparts (pr =0.38; $p < 0.05$). (Statistics used are partial correlations which, when squared, reflect the proportion of the dependent variable's variance that is related to a particular predictor variable independent of the other variables in the model). (25)

A second study by Street et al. compared the degree to which parents' personal and interactive characteristics accounted for variation in doctor-parent interactions during paediatric consultations.

In this study it becomes clear that more educated parents not only are more expressive and have a higher level of being opinionated but they also ask more questions ($pr = 0.24, p < 0.02$). All three of these communication aspects lead to more information and direction giving by the physician.

Further, this study gives information on the relative impact of the patients' communication style at the one hand and his/her personal and social attributes at the other hand. Compared to their behaviour, the parent's personal characteristics had less influence on the physicians' responses. The results of this study suggest that adaptations in the physicians' responses may, besides a function of patients' personal or social characteristics per se, also be the result of the patients' communicative actions. (26)

In an observational study in three general practices, Martin et al. looked at how both physicians and patients perceive what happens during the consultation. In the patients' perception of the consultation most emphasis is put on the prescribing, reassuring and referring. 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 than to 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, the patients did not share these perceptions. An important restriction of this study is that patients from lower social classes were underrepresented. (27)

In a survey among 2538 visits in primary care in New York, Fiscella et al. conclude that for patients with lower education (high school or less) a slightly larger proportion of the consultation was spent on physical examination and nutritional counselling. Less time was spent on patient's questions, assessing their health knowledge, negotiating and counselling, and less screening tests were provided to them. One could say that less educated people are approached in a more directive way during consultation. Consequently, the authors also found that less educated patients saw their expectations less met. (28)

In a patient completed mail survey among 6549 Massachusetts state employees by Taira et al., it was 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. (18) The overall discussion of health risk behaviour (not only with patients with a high risk) was not investigated on any differences between social classes.

Finally, Pendleton et al considered four types of information giving depending on patients' social class. There was a significant (F Ratio 4.04; $p < 0.025$) 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. (30)

3.1.2 Verbal behaviour: affective behaviour

Affective behaviour such as social talk, agreement, paraphrasing, verbal attention, showing concern, reassurance and disagreement, was investigated in a limited number of studies.

The meta-analysis by Hall et al. gives information on social talk and on positive and negative talk. Although a link between these 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. (24)

The studies of Street et al. (supra) concluded that doctors provided more comments of reassurance, support and empathy to parents who 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. (25, 26)

3.1.3 Non-verbal behaviour

Non-verbal behaviour is 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 mentioned in two of the selected articles. (13, 30)

The meta-analysis by Hall et al. could not find any research that was done on the association between the physicians' non-verbal behaviour and the patients' social class. (24)

The same year of the Hall review, Street and Buller examined the non-verbal behaviour level and adaptations in 41 primary care doctor-patient interactions and the relationship with patients' characteristics such as age, sex and educational level. No differences were found in the level of non-verbal communication towards patients of different educational backgrounds. However, when talking to higher educated patients the physicians reciprocated their body orientations more than they did with lower educated patients ($p < 0.001$). Finally, this article refers to specific difficulties in coding non-verbal behaviour, which is much more complex than categorising the verbal interactions. (31)

3.2 Patient-centredness

Patient centredness is a concept that includes many diverse variables of communicative behaviour.

Five dimensions can be identified: using the bio-psycho-social perspective; approaching the patient as a whole person; sharing power and responsibility; building of a therapeutic alliance and considering the physician as a person, acknowledging the influence of its personal qualities. (32) In the selected articles determinants such as shared-decision making, partnership building utterances, participatory decision making style and interpersonal competence occurred, most of them investigating the relationship with the SES of the patient.

In a cross-sectional study on a sample of 8316 patients from both primary care and specialist care, Kaplan et al. identified patients' characteristics associated with decreased mutual decision making between physicians and patients. The results indicate that patients with a high school education or less

were significantly 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. (33)

Also McKinstry observed the patients' preference for shared decision making and the determinants influencing this preference. Pairs of video vignettes of acted consultations on five common problems were used, one in a shared approach style and one in a directive approach style. These video's were subjected to discussion by groups of patients. Patients' preference for one of the two approaches was significantly 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 educational level (leaving school at an age less than 17) was associated with a lower preference for the shared approach, although it was not found to be an independent predictor. Also a lower social class predicted a lower preference for shared decision making style (odds ratio 0,35 (0,13-0,94) for the highest social class and 1,05 (0,54-2.02) for the lowest social class). Prudence in generalising these findings is necessary however, since specific minorities within each group had opposite views than the rest (e.g. lower class smokers preferred a shared approach when talking about lifestyle problems). (34)

Roter et al. described five communication patterns (narrowly biomedical, expanded biomedical, bio-psycho-social, psycho-social and consumerist patterns) and their relationship with several patient characteristics, based on an analysis of 537 primary care doctor- patient interactions. Patients' age and income seem to be significantly related to these patterns. Patients approached in the narrowly biomedical pattern (characterised by low amount of talk about psychosocial issues, high percentage of biomedical talk and a high percentage of question asking by the physician; low patient communication control; physician directed, guided) were more likely to be poorer ($p < 0.02$) than patients approached in other patterns. (35)

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. (25, 26) In the observational study mentioned above by Street et al. it appeared that higher educated patients received more partnership building utterances ($p = 0,50$; $p < 0,01$). (25)

4. Discussion and conclusions

4.1 Conclusions

In this literature review we found that patients from lower social classes receive significantly less positive socio-emotional utterances, a more directive and a less participatory consulting style characterised by e.g. 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.

These differences in the doctors' communicative style can -partially- be explained by differences in patients' communicative style. Also a direct impact of the patients' SES on the doctors' communication can be found.

Insert figure 2.

The patients' communicative behaviour is directly influenced by his/her personal and social attributes such as educational level, age, sex, anxiety, ... (25, 26) More educated patients communicate more actively (they ask more questions, are more opinionated) and show more affective expressiveness, eliciting more information from their physician. Because patients with a higher education experience a smaller cultural distance (due to a similar background) between them and the doctor, they might have fewer difficulties when interacting with the physician. (25)

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, which discourages the patient to adopt a more active communication style.

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. (25, 36) Also they tend to vary the amount of showing affect, involving patients in treatment decisions and express concern by their perception of the patients' interest in or ability to participate in care. Even though physicians often ground their behaviour on these perceptions, this is not always in accordance with reality.

In conclusion, patients with a lower educational level are doubly disadvantaged: first of all because of their more passive communicative style and secondly because the physicians' misperception of their desire and need for information. (25)

Finally, although not immediately related to the patients' social class, we mention the large inter-individual variation in the physicians' degree to which he 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. (26)

4.2 Limitations of the study

An important limitation the researchers were confronted with when writing this review, is the limited number of studies on this specific topic. Even more limited is the number of articles investigating 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 limited number of studies does not allow us to draw conclusions concerning non-verbal and affective behaviour. Research on this topic is needed.

Besides this 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. (38, 39) 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, sociodemographic measures (race, ...) ... 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 centredness. In order to improve the comparability of future research, a uniform definition and classification of communication variables is indispensable.

4.3 Practice implications

Our systematic review of the literature has revealed a vicious circle between patients and doctors in their 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.

We suggest a four-way solution: broader and deeper research on social differences in the doctor-patient communication, promoting physicians' awareness about their communicative style, developing teaching methods on inequalities in communication, and encouraging research on and implications of patient empowerment methods.

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. (40) They should 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. (41) Communication training is very often influenced by middle or upper social class style, since this is the background of the majority of the students and teachers. Efforts should be done to develop teaching methods encouraging and focussing on communicating with patients from lower social classes.

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. Therefore these patients should be empowered to express their concerns and preferences. (25, 26, 36) 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. (21)

These efforts should be embedded in a broader approach to tackle social inequalities and poverty. (6)

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