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**The role of communication, relationship and individual factors in
the quality and outcomes of medical services**

PhD Dissertation Theses

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1. Introduction and topic relevance

The health status of a population is not only determined by health spending expressed in monetary units. This is confirmed by the fact that in Hungary, life expectancy in years is lower than it is expected based on its GDP/capita or health spending/capita (OECD 2012). Several factors that go beyond medical care in its strict sense play an important role in the health of both individuals and the whole society. This is especially true of the so-called lifestyle diseases, the development of which is affected by not only biological, but behavioural and psychological factors as well.

Because of the poor health indicators of the Hungarian population and the structural and financial problems of the healthcare system, there is not only a need for reforms, but also for an overall attitude change and the acceptance of a holistic approach in order to consider medical system an investment.

As a corresponding process, doctor-patient relationship has got through significant changes during the past: from a healing point-of-view, there has been a shift from a biomedical approach to a bio-psycho-social approach, suggesting a more complex and interpersonal relationship between doctor and patient. Medical care is increasingly considered to be a service, and as a result of this, bigger emphasis is put on economic- and marketing considerations, patient satisfaction, personal relationship management and risk communication. Proper communication and involving patients into the decision making process are more widely seen as factors that could contribute to the success of the healing process and the increase of satisfaction. Patients' attitudes to health and to the healthcare system as well as their compliance are important components of this, as these may not only affect communication but are the consequences of it too, and could contribute to the success. These are factors that may improve medical outcomes, thereby improving patient safety, reducing relapses and hospital admissions – which in turn have considerable social and economic benefits as well.

The topic of doctor-patient communication and relationship is internationally extensively researched. A common feature of these research is that they primarily investigate medical or psychological aspects, and an overview of them suggests that in the doctor-patient relationship, it is the doctor who is in a dominant role and whose healing approach (being patient-centered or not) affect the process of consultations (Molnár and Csabai 1994). Health behaviour studies are important because they contribute to explore the role of patients' own attitudes and values in their behaviour relating to their health and in the healthcare system. In

this context, I consider sense of coherence (Antonovsky 1993) and Health Belief model (Rosenstock et al 1988) important. These are also used typically in a medical context. From an economic aspect, healthcare is usually investigated at a system-level, in connection with maintaining or reforming the health system. Evaluating the quality of medical care is an issue of health economics on one hand and an issue of services marketing on the other hand; investigating patient satisfaction has an important role in the latter approach (synthesized by Simon (2010)).

However, according to my secondary research, there is a lack of combining the different approaches. Therefore, I considered it important to build up a research that is multidisciplinary and is connected to several disciplines (economics, marketing, behavioural sciences, psychology); that provides innovative results for all these disciplines and at the same time, investigates constructs originated from them in a complex manner. It is also important to consider how using bio-psycho-social approach can improve results in a health system struggling with financial difficulties. Thus, it may be possible to formulate findings that may serve as a base for the innovative enhancement of medical care.

2. Dissertation objectives, background and hypotheses

The main objective of my research is to answer how individual, communication and relationship factors that influence perceived quality, patient satisfaction and cooperation, and through these, healthcare outputs and the overall quality of healthcare are interconnected. To answer this question, secondary and primary research has been carried out.

The basic goal of my secondary research was to develop an interdisciplinary theoretical model that then may be tested by empirical methods, exploring the Hungarian peculiarities related to this topic.

When assessing the quality of services it is an important question how the provider of the service should use its quality providing resources, and by this, what results should be produced for the customer. Consequently, two dimensions of service quality may be distinguished: technical quality (that answers the question ‘what is provided?’) and functional quality (that answers the question ‘how it is provided?’). Customers perceive both dimensions, but in many cases, they cannot evaluate technical features, therefore, when evaluating the service, they will rely heavily on the evaluation of the process (Grönroos 1998). The analyses of the discipline of health economics emphasise the technical side of

medical care, based on the scientific and professional appropriateness of procedures used (Gulácsi 2005). A holistic approach to the quality of medical care on the other hand clearly includes patients' appraisal process, in which, due to information asymmetry, the way of information flow, patient-staff relationship and care provided by the staff have a special role. One of the best known models of measuring functional or perceived quality of services is the SERVQUAL model (Parasuraman et al 1988) that considers customer expectations and perceptions (and the gap between them) through the dimensions of tangibles, reliability, responsiveness, assurance and empathy. Satisfaction is the pleasure or disappointment of the customer resulted by comparing his expectations and perceived results (Kotler 1998, in: Hetesi 2006). One of the objectives of my research therefore was to adapt a SERVQUAL scale appropriate for measuring perceived quality of medical care. Research with the similar purpose has been conducted in the international field (e.g. Babakus and Mangold 1992, Miranda 2009), but not in Hungary.

Health status is not only affected by medical care provided, but by users' health behaviour as well. I therefore considered psychological background factors in my research that could be used for predicting this. Sense of coherence (Antonovsky 1993) can be described as the responsiveness of an individual when facing challenges; it is not a personality trait, but an orientation shaped by experiences, which is proven to be correlated with health (Balajti et al 2007). Health Behaviour Model (Rosenstock és tsai 1988) is a framework for a better understanding of health behaviour, according to which this type of behaviour depends on the perceived susceptibility and severity of a specific health condition and on the perceived benefits and barriers of alternative behaviour, as well as on personal efficacy. I have used this model in my research due to its popularity, flexibility and adaptability, and my objective was to confirm that the scale in its general form (and in Hungarian) is valid and can be used in a research investigating healthcare experiences and attitudes. A further goal was to form patient segments (based on these psychological background variables) that can be described by different health behaviour and participation in the healthcare system.

During the treatment, doctor and patient get together in an interaction, which (and its outcomes) are formed by factors depending from parties. The doctor's patient-centeredness, decision making styles used (that can be paternalistic, informative and shared (Brown et al 2006, Elwyn et al 2000)) and cognitive and affective care given (Little et al 2001, Di Blasi and al 2001, Wolf et al 1978) may contribute to better medical outcomes. I defined cognitive and affective care, satisfaction and perceived quality of patients together as subjective

outcomes; this is the group of outcomes I intended to investigate and of which I suppose to be in relationship with objective or technical outcomes (directly or indirectly, especially through patient compliance).

I defined patient compliance as the individual's behaviour that meets the healthcare provider's recommendations in connection with taking medicine, following lifestyle changes, going to additional tests or undergoing serious intervention. Measured compliance has a very wide range (in developed countries, average compliance with long-term therapies is about 50% (Sabaté 2003, Young and Oppenheimer 2006)), and has not only individual but societal consequences too. Costs of non-compliance include the costs of developing new symptoms and worsening conditions, or the costs of side effects due to not taking medication as supposed. I consider compliance as an intermediate outcome affected by both patient-specific and doctor-specific factors, which is in a clear connection with objective outcomes, based on my literature research.

Therefore, the basic objective of my research was to examine the relationships among the constructs described above, and, for some of them, to develop a methodology that could be used in further research. For my empirical research, I decided to focus on general practice. The reason for this was that I had to choose a specific area of care of which opinions can be told, and this is the type of care of which most potential respondents have an opinion. Also, general practitioners have an important preventive and 'gatekeeper' role and it is a form of care that is based on long-term, on-going and personal relationships (Karner 2011).

I have both methodological and substantive hypotheses. As for both the Health Belief Model and the SERVQUAL model I have developed new, Hungarian-language scales, it is important to control whether they are valid and can be used in my research – my methodological hypotheses refer to these. My substantive hypotheses focus on the relationships between constructs that have a role in medical consultations and outcomes. I could support or reject these hypotheses in regard for general care.

Based on my secondary research I concluded that the concept of functional quality can be interpreted for healthcare, and it refers to how patients perceive the process of care received. To measure this, I have developed a SERVQUAL scale for general practice. The first group of hypotheses refer to these variables.

H1.1. The Hungarian version of SERVQUAL scale measuring general practice is interpretable and valid.

H1.2. There is a negative gap between the perceived and the ideal general care.

H1.3. Higher perceived quality is associated with higher satisfaction.

The second group of my hypotheses refer to individual psychological background-factors. I suppose that individual factors like perceived health, sense of coherence and health belief are characteristics through which patient segments can be differentiated, and that the members of these segments can be described by different preferences and attitudes for doctor-patient relationship and communication, by different levels of trust and by different features of compliance.

H2.1. There is a correlation between perceived health and sense of coherence: higher perceived health is associated with higher sense of coherence.

H2.2. The Hungarian and general version of the Health Belief Model scale is interpretable and valid.

H2.3. Patient segments can be differentiated through the variables of health belief and sense of coherence.

H2.4. There is a relationship between the membership in these segments and expectations for general care (ideal doctor style, ideal patient style).

H2.5. There is a relationship between the membership in these segments and trust in the healthcare provider.

H2.6. There is a relationship between the membership in these segments and factors considered important in compliance.

In addition to individual factors, I consider those primarily influenced by the doctor (referring to doctor-patient relationship and the process of communication) as important in the formation of subjective outcomes. The third group of my hypotheses refer to these variables.

H3.1. The dominant style of most general practitioners is paternalistic.

H3.2. There is a gap between what doctor styles are considered to be ideal and what style is generally perceived.

H3.3. There is a relationship between perceived doctor style and perceived quality of care.

H3.4. There is a relationship between perceived doctor style and patient satisfaction.

H3.5. Meeting the expectations for communication and decision making of patients is in connection with perceived quality of care.

H3.6. Meeting the expectations for communication and decision making of patients is in connection with patient satisfaction.

The fourth group of my hypotheses refer to the cognitive and affective care given by doctors and its effect on subjective outcomes.

H4.1. Paternalistic doctors provide poorer cognitive and affective care.

H4.2. Cognitive and affective care given is in a relationship with perceived quality.

H4.3. Cognitive and affective care given is in a relationship with patient satisfaction.

I considered patient compliance with taking medication, following lifestyle changes, going to additional tests and undergoing serious interventions an intermediary outcome that is in clear connection with objective outcomes, the success of the healing process and therefore has quantifiable effects on healthcare systems. The fifth group of my hypotheses refer to the connections among the above examined variables and compliance.

H5.1. Patient segments based on sense of coherence and health belief dimensions tend to have different compliance levels.

H5.2. There is a relationship between perceived doctor style and patient compliance.

H5.3. There is a relationship between meeting patients' expectations for communication and decision-making style and patient compliance.

H5.4. There is a relationship between perceived quality and patient compliance.

H5.5. There is a relationship between patient satisfaction and patient compliance.

H5.6. There is a relationship between cognitive and affective care given and patient compliance.

3. The structure of the dissertation and research methodology

3.1. The structure of the dissertation

In structuring my dissertation, I proceed from general to specific topics, and after processing the interdisciplinary literature background of my topic, I present my research results.

In Chapter 2, I write about why it is important to deal with the topics of health and healthcare (also due to economic considerations). I review the related concepts and processes and introduce the approach of health economics of the technical quality of care, and suggest that patients' (as receivers of care) perceptions are important according to the majority of

approaches of healthcare quality. In Chapter 3 therefore, I deal with the theory and methodological issues of perceived or functional quality, from the point of view of services marketing. I review SERVQUAL, the most popular model of this approach. In Chapter 4, I present models for individual psychological background factors (perceived health, sense of coherence and health belief) that may have important role in patients' health and healthcare related decisions. In Chapter 5, I turn to present factors connected to the other actor in the medical interaction and to the interaction itself: I review models of doctor-patient communication and relationship, covering the issue of trust and the effects of these constructs on medical outcomes. In Chapter 6, I review the concept of patient compliance, factors affecting it and its potential consequences. In Chapter 7, I present those early results of empirical research that I found both working in a research team and individually. I designated a separate chapter for these research (conducted by both qualitative and quantitative methods) because they took place before creating my final theoretical model, and their role was – besides providing relevant information in the topics investigated – to contribute to the improvement of my final model and methodology. My theoretical model – developed through my secondary and early primary research – is relatively complex, therefore, I present it gradually through chapters 2-6, showing more and more constructs of it. Arriving to the end of this process, I present my final model and hypotheses in Chapter 8. This is where I disclose the methodology of my questionnaire research and exhibit its sample as well. In Chapter 9 I present the results of this questionnaire research in the logical order of hypotheses, and then I outline the model of doctor-patient interactions and outcomes and summarize my findings. In Chapter 10, I synthesize the most important conclusions of my dissertation and give an outlook of their applicability and potential for further research.

3.2. Research methodology

In parallel with my secondary research, I conducted early empirical research that contributed to my final model and methodology. During this, partly in a research team, partly individually I conducted and analysed focus group and in-depth interviews with service providers (doctors). Besides this, a so-called one-occasion diary research was carried out with the participation of paediatricians and the parents of their patients. Additionally, a questionnaire survey was born as well.

After the creation of the final theoretical model, I designed and conducted a questionnaire research. The questionnaire used was quite complex and includes constructs grabbed by the hypotheses.

One part of my questionnaire was the adapted SERVQUAL scale measuring respondents' expectations and perceptions of their general practitioner. To my knowledge, there hasn't been similar research, SERVQUAL method hasn't been adapted for medical services in Hungary. Although in the literature, the model SERVPERF is also supported (which measures only perceptions of customers through the same five dimensions), I have chosen to use SERVQUAL due to its potential to provide more information. When adapting it, I considered its original five dimensions and the original 22-items scale (Parasuraman et al 1988; Veres 2009), as well as that of Babakus and Mangold (1992) and Miranda et al (2009) as a basis. I considered it important to have items not only for the doctor but for the staff as well. As a result of this, I used a scale consisting of 29 items that could be evaluated on a 7-point Likert scale.

The simple question measuring perceived health is a starting question of several health-related surveys, as it is a polite and simple way to introduce respondents into the topic. Also, it is found to be in strong relationship with actual health-related prospects. I have used this question as one of the introductory ones due to similar considerations.

For measuring sense of coherence, I have used the scale of Balajti et al (2007), changing the wording of three items. Therefore, the SOC-13 scale I used consists of 13 statements to be evaluated on a 7-point Likert scale.

My scale measuring health belief dimensions is not investigating specific states or illnesses, but a general awareness of health issues. To my knowledge, in Hungarian language, only Simon (2010) conducted a similar research about attitudes to healthcare. My scale (consisting 19 statements to evaluate on a 5-point Likert scale) focuses on the original dimensions of the Health Belief Model, using several items for all of them, as well as respondents' awareness and perceived self-efficacy.

For measuring expectations and perceptions about the communication and decision making style of respondents' general practitioners, I have used simple choice questions. As with the SERVQUAL scales, first, I asked respondents' perceptions, then their expectations ('ideal style, complemented with ideal patient style). One of three styles could be chosen: paternalistic, shared and informative. Naturally, I didn't use these words, instead, I used relatively short descriptions of these styles.

For measuring cognitive and affective state of patients after consultations, I designed an own scale on the basis of my previous research and research goals (in the specific literature, I have

not found a tool that was appropriate for by objectives). My scale consists of 15 items (8 of which refer to the cognitive, while 7 to the affective care received) evaluated on a 5-point Likert scale.

Measuring patient compliance is highly problematic. During my own research, it was not possible to use methods like pill-counts or markers. Therefore, I could use the self-assessments of respondents. On a 5-point Likert scale, they had to evaluate to which degree they follow the recommendations of their general practitioners in four areas: taking medication, following lifestyle changes, going to additional tests and undergoing serious interventions. As in many cases, even a small deviation from professional recommendations may reduce the effectiveness of therapy, I considered only those compliant who totally follow such recommendations.

Besides these topics, I included questions about habits of going to doctors as well as demographic variables.

The first version of the questionnaire was filled out by 10 students and 4 lecturers of the University of Szeged. The final online questionnaire was created considering feedback and recommendations from the pilot research. The research population was the adult Hungarian population; the questionnaire was distributed by a snowball method. Using sample weights, I fitted the sample to the characteristics of the Hungarian population for age and gender. 448 cases remained in the sample after clarifying the data; for analysis, I have used version 20.0 of the SPSS program.

4. Main results and theses

In this section, I present my theses determined on the basis of the dissertation's goals, hypotheses and the main results of the primary research.

Thesis 1. The functional quality of general practice can be interpreted as patient perceptions in the dimensions of doctor care, staff, tangibles, time management and personalization.

On the basis of a factor analysis, I have accepted Hypothesis 1.1: SERVQUAL model is interpretable for general practice, and the scale I devised was proven to be valid. Dimensions resulting from the analysis are different from the theoretical ones, but are well applicable:

- doctor care (variables referring to doctor communication, responsiveness and patient-centeredness),

- staff (characteristics of the medical staff)
- tangibles (the appearance and availability of the consulting room, the equipment and the staff)
- time management (the appropriateness of consultation and waiting times),
- personalization (personalized care and attention).

The reliability of subscales is good, they are stable and the rate of explained variance meets the standards. Hypothesis 1.2 could partly be accepted: although the evaluations of perceived quality in most of the dimensions are below expectations and gaps are negative, but there was an item for which the difference was not significant, and for two items of the tangibles dimension, it was positive. According to my results, it is worth considering using only perception scores as a measure of perceived quality (instead of gap scores) as they have a better explanatory power in patient satisfaction. This result is parallel with the critiques suggesting using SERVPERF method instead of SERVQUAL. Hypothesis 1.3 could be accepted: higher perceived quality scores correlate with higher satisfaction; doctor care have an outstanding role in it.

Thesis 2. On the basis of sense of coherence and dimensions of health belief (perceived threat, perceived benefits, perceived barriers, own performance) patient segments can be differentiated, the members of which differ from each other in respect of variables relating to behaviour in healthcare.

A factor analysis of the health belief scale resulted in components parallel with the theoretical ones (perceived susceptibility and perceived severity melted together to form perceived threat, as suggested in the literature); the reliability of the subscales as well as explained variance are good. Perceived threat is in a moderate negative correlation, while perceived barriers are in a weak negative correlation with perceived health: those who perceive their health to be worse also perceive to be threatened by diseases and to be curtailed in alternative behaviour. There is also significant, moderate positive correlation between perceived threat and the frequency of general practitioner as well as specialist visits, and also between own performance and these latter variables.

A cluster analysis for the sense of coherence variable and the dimensions of health belief resulted in three stable clusters. Those belonging to the segment of ‘attempters’ can be described by an average level of sense of coherence, higher-than-average perceived treat, perceived barriers and own performance, and lower-than-average perceived benefits. Their

most important feature may be that although they try to consciously pay attention to their health, they cannot see its benefits yet. ‘Conscious forward-thinkers’ can be described by higher-than-average sense of coherence, perceived benefits and own performance, while lower-than average perceived threat and perceived barriers. Evidently, the members of this segment are in the best health-related situation and try to preserve it. In contrast with them, members of the segment ‘incapables’ can be characterized by lower-than-average sense of coherence, perceived benefits and own performance, while higher-than-average perceived threat and perceived barriers. Presumably, they are in the worst situation potentially to be worsened by their perceived inertia and the lack of awareness.

On the basis of my results, I accepted Hypothesis 2.1: there is a positive relationship between sense of coherence and perceived health in my sample. I could also accept Hypothesis 2.2: my health belief scale was proven to be valid, Hypothesis 2.3: patient segments could be created through these variables, and Hypothesis 2.5: the segment of conscious forward-thinkers has higher level of trust in doctors compared to incapables. On the other hand, I had to reject hypothesis 2.4: I didn’t find differences in the preferences for doctor communication and decision making between the segments. Also, Hypothesis 2.6 had to be rejected, as out of 8 factors potentially important in patient compliance only two (doctor explanations and own consciousness) were shown to be differently important for members from the different segments.

Thesis 3. The communication and decision making style of the doctor as well as meeting such expectations of patients are in a relationship with perceived quality and patient satisfaction.

The vast majority of respondents perceive that the style of their general practitioner is paternalistic, while the other two styles in total characterize only about a quarter of general practitioners. As for the preferences of patients, a similar pattern was found, but with much less emphasis on paternalistic style: 41,5% of the respondents would prefer this style, whereas 39,4% would select shared decision and 19,1% informative style. There is statistically significant difference between what styles are perceived and what styles respondents prefer; about half of them do not perceive a style that they would prefer. Therefore, Hypotheses 3.1 and 3.2 could be accepted.

In four dimensions of perceived quality (doctor care, staff, time management and personalization), a smaller proportion of those whose doctor is paternalistic perceive it excellent than those experiencing shared decision making. A significantly smaller proportion

of those who experienced paternalistic style were totally satisfied with the medical care, compared to the other two styles. Therefore, Hypotheses 3.3 and 3.4 could be accepted.

Also, a significantly smaller proportion of those whose doctor's style didn't meet his/her expectations was totally satisfied with the care or evaluated the service as excellent (in all dimensions of quality), compared to those who perceived the same style they expected. These results confirmed Hypotheses 3.5 and 3.6.

Thesis 4. Providing cognitive and affective care that correlates with doctor's style is in a relationship with perceived quality and patient satisfaction.

The scale of cognitive and affective care used is shown to be a unidimensional one and has good reliability.

My analysis has shown that a significantly smaller proportion of patients of paternalistic doctors receive excellent cognitive and affective care compared to patients of doctors using a patient-centered style. Also, a significantly lower proportion of patients of informative doctors receive excellent cognitive and affective care than those perceiving shared decision – thus, shared decision making seems to be ideal from this point of view.

There is also difference between those receiving different levels of cognitive and affective care in their evaluations of perceived quality. For all dimensions of perceived quality, a significantly bigger proportion of those receiving excellent cognitive and affective care gave the highest scores than those receiving appropriate or moderate or worse care. Also this is true in the comparison of those receiving appropriate and moderate or worse cognitive and affective care. Results were the same in connection with patient satisfaction. Therefore, I could accept all Hypotheses belonging here: 4.1, 4.2 and 4.3.

Thesis 5. Full patient compliance is in a direct or indirect relationship with subjective outcomes (there is direct relationship with perceived quality and cognitive and affective care) and individual factors.

Except for following lifestyle recommendations, a high proportion of respondents tend to be fully compliant with general practitioner recommendations. This result is in parallel with findings in the literature.

As for patient segments, conscious forward-thinkers tend to be more compliant with taking medication, following lifestyle changes and going to additional tests – these results fit segment profiles. Therefore, Hypothesis 5.1 could partly be accepted.

As for doctor styles, although there is no statistically significant connection between style and compliance, there are tendencies to consider: patients of paternalistic doctors tend to be less compliant at all areas of following medical recommendations than patients of doctors of the other two styles. Hypotheses 5.2 and 5.3 had to be rejected.

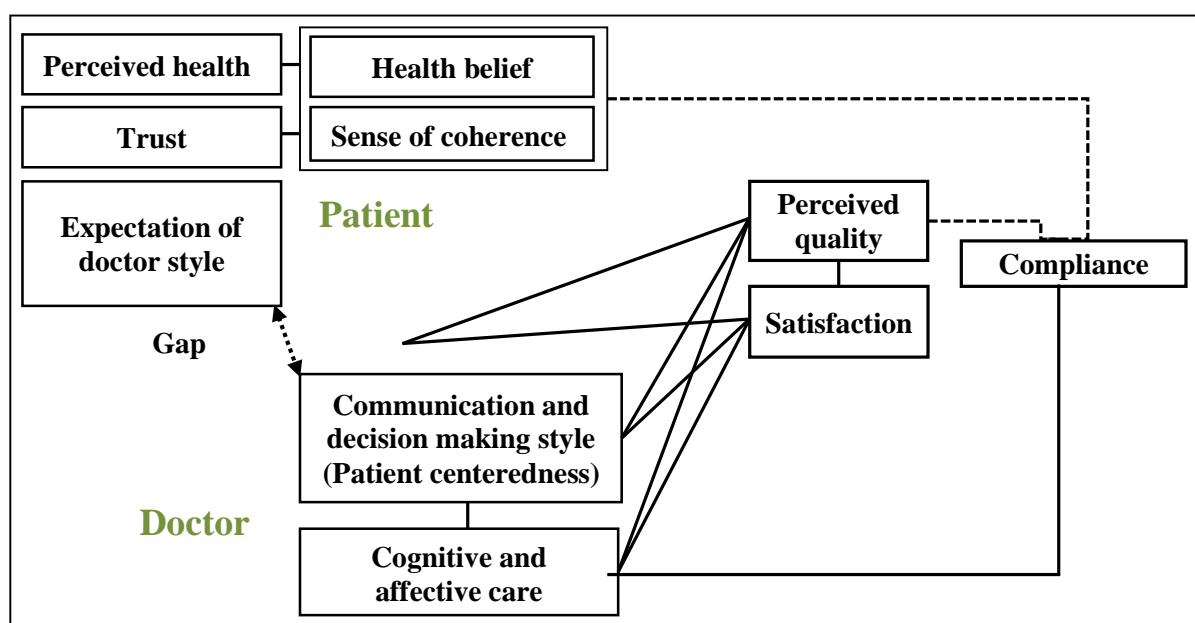
In the relationship between perceived quality and compliance, the former's dimension of doctor care have an important role: a significantly bigger proportion of those evaluating it excellent tend to be fully compliant with taking medication, further tests and serious interventions. The same is true for evaluations for the dimension of staff and going to further tests. All in all, factors of perceived quality explain 13,9% of the variance of compliance with taking medication, 9,3% of the variance of compliance with following lifestyle changes, 11,7% of the variance of compliance with further tests, and 10,9% of the variance of compliance with serious interventions. These results are not surprising, as several factors are expected to be in correlation with compliance – perceived quality is one significant one of them. There was no significant relationship though between satisfaction and compliance. Therefore, I partly accepted Hypothesis 5.4 and rejected Hypothesis 5.5.

The analysis of the connection between cognitive and affective care and compliance has, however, shown a statistically significant connection. A significantly higher proportion of those who received excellent cognitive and emotional care were totally compliant with recommendations for medicine taking, further tests and major interventions as well. According to these results, Hypothesis 5.6 could be accepted.

According to my results, along my hypotheses I have outlined the model of factors and consequences of doctor-patient interaction (Figure 1).

From a theoretical aspect, I consider the creation of an interdisciplinary model about factors of doctor-patient relationship and communication a new result. To my knowledge, factors of sense of coherence, health belief, doctors' patient centeredness, cognitive and affective care, perceived quality and patient compliance hadn't been investigated together. Although in my research, I didn't have the chance to empirically confirm all relationships outlines in this model (especially those directed to objective outcomes), I am confident that this may be an appropriate starting point for future research.

Figure 1 Factors and subjective outcomes of doctor-patient interaction



Note: Solid lines represent relationships along accepted hypotheses, dashed lines represent relationships along partly accepted hypotheses

Source: Own construction

Of the early results of my primary research, I consider it important to show that using one-occasion, semi-structured diaries is a suitable method for studying doctor-patient interactions.

As a result of my quantitative questionnaire survey, Hungarian scales of models could be validated:

- a general version of the Health Belief Model;
- a SERVQUAL scale measuring perceived quality of general practice;
- a scale measuring cognitive and affective care of general practitioners.

Such scales did not exist in Hungarian language before, therefore, they may be considered as novel results. In my opinion, they are suitable to use in further research with necessary minor modifications. This would be important as different levels and areas of medical care are worth studying separately.

Also, a new result of the research is that patient segments could be differentiated along the variables of sense of coherence and health belief, which are likely to have different health behaviour. This is important because it confirms that social marketing campaigns aiming at improving health as well as compliance programs should be targeted differently to these groups and not only to groups with different demographic variables.

As a result of my quantitative research, I confirmed that there actually are relationships among constructs studied in my model, and overall, it could be confirmed that it is worth investigating doctor-patient relationship, patient-related factors, perceived quality and patient compliance in a common framework. I also confirmed that cognitive and affective care as well as some dimensions of perceived quality have a direct, while doctor style and patient satisfaction have an indirect relationship to patient compliance.

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