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Compliance and health behaviour in medical services

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Compliance or adherence to health service provider recommendations is widely considered to be a remarkable factor in health outcomes. It is reported to be in relation not only with patient safety, but health system effectiveness, health costs and the health of populations as well. Although literature results suggest compliance rates to be quite low, results of empirical research show a relatively high compliance in a Hungarian setting. This may be due to the authoritarian characteristic of doctor-patient relationships, but also to the effect of measuring only intentions, not actual behaviour – which is a general problem of compliance-measurement methods.

Keywords: healthcare services, doctor-patient relationship, decision, compliance, health behaviour

1. Introduction

The nature of doctor-patient relationship has gone through remarkable changes in current times. From the healing aspect, a shift can be perceived from the biomedical model (most important characteristics of which are: emphasis on biological reasons of diseases and on biology-based treatments, reductionism in the practice of consultations, an estranged doctor-patient relationship, doctor-and illness-centeredness) to the bio-psycho-social model (the most important characteristic of which is that not only biological, but both social and psychological factors are taken into consideration in diagnosing diseases and treating patients). This means that doctors have to take this multi-faceted approach into consideration when planning therapies, which implies a more personal relationship with patients in which personality, behaviour and feelings of both sides are increasingly important (Molnár–Csabai 1994).

Concurrently, changes can be seen from an economic and marketing point of view as well. Economic considerations have come to the forefront due to financing problems of healthcare systems, amongst other problems, even in the most developed countries. Interest towards economic studies and management has increased among healthcare workers, and their conscience of costs has risen compared to proceedings (Vajda et al 2008). Medical attention is increasingly

considered to be a service, which results in a greater emphasis on marketing approach, consumer behaviour and satisfaction, personalized relationship management, and risk communication. A health care service is realized at a given place, according to specified technology, based on pronounced or not pronounced expectations, with a particular person, and usually cannot be repeated. That is why controlling service processes gains an increased importance (Hajnal 2005). The aim of healthcare services can be represented in different ways like assuring the activity of human resources (Kincses 2000) or as meeting the need for health, harmony, comfort, painlessness and adequate quality of life complemented with the need for acceptance (Pikó 2004).

Moreover, social trends increasingly affect the health-behaviour of people and, as a result of which, these trends are getting involved in the daily work of physicians. Törőcsik (2007) summarised trends affecting health care as the following:

1. A new interpretation of health. Besides the market for patients, the market for healthy people is gaining more ground and importance. The basic WHO definition of health (stating that it is the state of complete physical, mental a social well-being and not merely the absence of disease or infirmity – WHO, 1948), which is not limited to a biomedical definiteness of state of health, may predominate in more and more areas. Besides, globalisation is increasingly present.
2. The increasing numbers of regular customers on the health market, the demand for "buzz shopping". Being free from complaints is not enough; people search for activity and happiness.
3. Media effects. The media piques the attendance towards different products, services and interventions.

The development of healthcare leads increasingly to wide-ranged choice alternatives, shared responsibility between patient and physician in case of health and treatment decisions, and a higher self-management of individuals (Sihota–Lennard 2004). Both areas of changing aspects incorporate the rise of the theory and practice of doctor-patient relationship and communication. Proper communication, a good doctor-patient relationship and the involvement of patients in the process of decision making about the therapy are increasingly considered as factors that may facilitate the success of the healing process and increase satisfaction.

However, economic sciences have not paid much attention to this issue. Despite the fact that more informed consumers, wishing to be involved actively into decisions, are very important subjects of investigations (Vick–Scott 1998). This naturally may be due to the fact that both supply and demand side of medical

services are different from those of profit-oriented services. As Kornai (1998, p. 45.) formulates: "there is a general agreement on healthcare being significantly different from other branches of social activity". He also calls the attention to the following specific characteristics of medical care:

- As health has a value that is not like anything else, market forces may miscarry, and measuring costs and benefits is largely difficult.
- It is difficult to determine the rate of "basic needs".
- Due to the special value, most people accept egalitarian views of the allocation of medical services – equal access becomes a moral principle.
- The supply side has more information about the subject of the transaction (information asymmetry); this is partly the reason of the asymmetry in the relationship between doctor and patient: doctors – independently from social systems and economic incentives – have control over patients.
- As a consequence of the shortage economy in healthcare, the lack of quality improvements and the defencelessness of consumers characterize this system.

One of the factors of doctor-patient relationship is patient compliance. It is not only one of the determinants of communication, but also a consequence of it. Communication style and process, attention, listening to their problems and getting adequate information about their illness and therapy may be the most important factors that influence patient compliance which then affects healing and satisfaction with doctors (Molnár–Csabai 1994). Nevertheless, the role of compliance in healthcare is important from several (social and economic) aspects.

2. The importance of compliance

The role of compliance (and that of non-compliance as well) is frequently mentioned in the literature regarding doctor-patient relationship and the success of the healing process. It is reported to be in relation not only with patient safety, but health system effectiveness, health costs and the health of populations as well (Sabaté WHO 2003). As the percentage of patients who do not adhere to the instructions varies between 20% and 80% (Paes et al 1998), it is evident that this problem is relevant and has to be dealt with.

2.1. Defining compliance

According to the literature, it is not evident how the concept "compliance" (in relation with health situations) can be interpreted. In addition, different ideas can be used for different health situations. In a survey about differentiating the concepts of

compliance and persistence, the authors determined the meaning of (medication) compliance as it "refers to the act of conforming to the recommendations made by the provider with respect to timing, dosage, and frequency of medication taking; therefore, medication compliance may be defined as the extent to which patient acts in accordance with the prescribed interval and dose of a dosing regimen" (Camer et al 2007, p. 3.). These authors have also stated that compliance is the synonym of the concept of adherence. Contrarily, the World Health Organization (WHO 2003), in its paper about adherence in long-term therapies draws attention to the fact that these two concepts are not necessarily the same. Regarding its definition of adherence, it is "the extent, to which a person's behaviour – taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a healthcare provider" (WHO 2003, p. 3.). The difference between adherence and compliance is the agreement: adherence refers to recommendations in connection to when there has been an agreement between doctor and patient; while the definition of compliance does not contain it (WHO 2003).

The concept that patients should be active partners with health professionals in their own care and that there should be an agreement about the therapy is universally agreed upon; however, meeting the expectations of medical recommendations is an important factor in the outcome mentioned above, regardless of the degree of a preliminary agreement. There will not be differentiation between compliance and adherence – however, naturally, it is acknowledged that the accordance on the therapy may have significant effects on subsequent compliance as well.

Therefore, when the term "compliance" is used, it is referring to "the extent, to which a person's behaviour – taking medication, following a diet, and/or executing lifestyle changes corresponds with recommendations from a healthcare provider", and considers agreement between doctor and patient as an important factor in the extent of actual compliance.

2.2. The role and effects of compliance

It has long been recognized that patients do not follow the recommendations and instructions for the use of their medications (Paes et al 1998). Problems of non-compliance (most frequently, but not always, in connection with medications) and measuring compliance have been an important issue for several decades – for example, a study in the 1970s dealt with the question of patients taking little of the treatments prescribed for them and claiming that non-compliance had been a subject of several reviews at that time (Chaput de Saintogne 1977).

There are several methods used to measure patient compliance, which results in quite different estimated degrees of compliance. There are direct measures, like

observation, biological assays and the use of markers, and indirect ones, like interview, pill counts, clinical response and use of medical monitors – but none of these methods is totally reliable and besides, they probably measure different kinds of behaviour. As mentioned above, the percentage of patients who do not adhere to the instructions varies on a large scale; according to WHO (2003) or Young and Oppenheimer (2006), in developed countries, adherence to long term therapies in the general population is around only 50% and is much lower in developing countries − this statement denotes that compliance is always measured for a more concrete situation (e.g., long term therapies or medication taking), but also indicates a high proportion of non-compliance, which is substantial if we consider its multiple impacts.

The lack of compliance with prescribed medication regimen results in rising health care costs and adverse clinical outcomes such as increased morbidity and mortality rates. In the United States, 125,000 deaths per year, 10% of hospital admissions, and up to 23% of nursing home admissions each year could be avoided if people took their medications as prescribed − it costs $100 billion a year (Young–Oppenheimer 2006). In addition, this number would probably be much higher if we included other types of non-compliance (like not achieving recommended lifestyle changes, the proportion of which can even be higher, even the double of not taking medications - according to Molnár–Csabai 1994), but naturally, its effects are largely difficult to estimate.

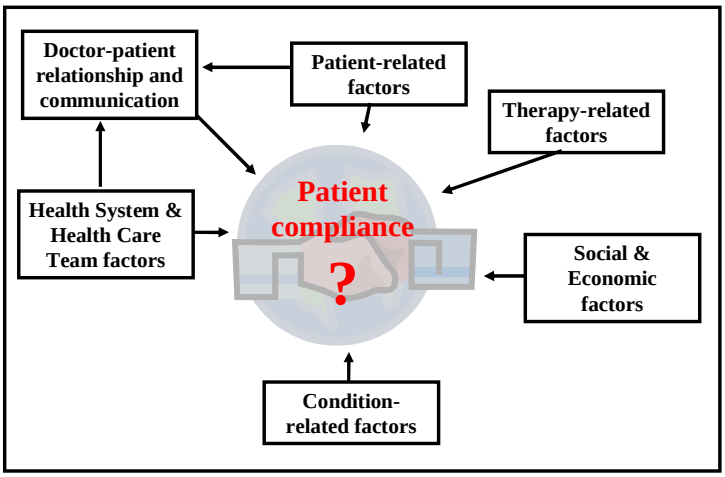
Accordingly, a higher degree of compliance not only has a positive impact on health status, but it confers economic benefits as well (direct savings generated by reduced use of sophisticated-end expensive health services needed in case of disease exacerbation, crisis or relapse; indirect savings attributable to the enhancement or preservation of the quality of life). Improving adherence also enhances patient safety through a decreased number of relapses, lower risk of dependence, abstinence and rebound effect, reduced risk of developing resistance to therapies, and decreased risk of toxicity. In addition, “increasing the effectiveness of adherence interventions might have a far greater impact on the health of the population than any improvement in specific medical treatments” (WHO 2003).

These arguments and substantiations support the fact that the role of compliance is remarkable in healthcare services, and that it is worthwhile examining through which factors a doctor-patient relationship and communication can contribute to an increased level of patient compliance with therapy decisions.

2.3. Factors determining compliance

Compliance is a multidimensional phenomenon; it can be determined by six factors (Figure 1).

Figure 1. The dimensions of compliance



Source: own construction on the basis of WHO (2003) and Molnár–Csabai (1994)

Social and economic factors (like poverty, illiteracy, low level of education, unemployment, high cost of medication or culture) have not consistently been found to be a predictor of adherence; their effect may be more essential in developing countries. As for health-care team and system-related factors, such as: knowledge and training for health care providers, overworked health providers, the level of incentives and feedback on performance, or the capacity of the system to educate patients and provide follow-up, little research has been made. Nonetheless, they are also considered to be factors that affect adherence. Condition-related factors include particular illness-related demands faced by the patient (severity of symptoms, level of disability, rate of progression), and their impact depends on how they influence patients' risk perception, the importance of following treatment and the priority placed on adherence. Under therapy-related factors, the complexity of medical regimen, duration of treatment, previous treatment failures, changes, the immediacy of beneficial effects and side effects can be understood. Patient-related factors represent the resources, knowledge, attitudes, beliefs, perceptions and expectations of the patient (WHO 2003). The concept of health behaviour belongs here as well, as the connection between behaviour and diseases is increasingly proven. Health-

related behaviour may be diverse: health-behaviour serves for observing health, namely prevention, while disease-behaviour shows how we search for treatment (Pikó 2003). Naturally, this distinction is only theoretical; in practise, these two types of behaviour are interlocked and based on the same beliefs and attitudes. Health-behaviour refers to, according to one of its definitions which is accepted as, "those personal attributes such as beliefs, expectations, motives, values, perceptions, and other cognitive elements; personality characteristics, including affective and emotional states and traits; and overt behaviour patterns, actions, and habits that relate to health maintenance, to health restoration, and to health improvement" (Gochman 1997). Health-behaviour is based on a specific order of values, the core of which is accepting health as a value, and consists of habits which enhance a harmonious unfolding, but do not endanger the soundness of the organism and the personality. Health-behaviour is composed of conscious and unconscious elements, these create the so-called health-consciousness, which is part on our self-knowledge and reflects to how we approach our own state of health. Maintaining health does not go spontaneously, it requires conscious activity and social responsibility (Szabó 2003).

According to Molnár and Csabai (1994), research show that compliance is not dependent from any stable personality factors − these rather determine patients' general approach to health and illness or perceived control over their own health status. They claim the quality of the doctor-patient relationship and the patient's satisfaction with it as the most important factors determining compliance. Placing these elements in the concept of the WHO is best realized if relationship and communication are considered to be a separate factor, depending both from the provider (provider behaviour being part of health care team factors) and patient-related factors.

Presenting risk information belongs to the unit of relationship and communication – it refers to how patients get information about adverse effects that may occur if adhering to the recommendations of the provider (side effects of medications, most importantly). According to a research on this topic, informing patients of actual percentages risk of adverse effects is associated with less fear about them, and a greater intent to comply with prescribed regiments, compared to verbal descriptions with semantic terminology (e.g., some people may experience…) (Young–Oppenheimer 2006). This phenomenon can be explained by the Prospect Theory, which establishes that people tend to give too much weight to small probabilities and too little weight to larger probabilities, which leads them to believe that the likelihood of an uncommon event is higher than it is actually. Besides framing, other factors and biases considerably affect perceived risk as well: representativeness, availability, attribution or whether the outcome "can happen to

me". Trust in the one who communicates risks is also a key element in risk perception (Kahneman et al 1982).

As seen, several respects of patient compliance are affected by factors that evolve in the consulting room. Acknowledging the serious effects of non-compliance and also that compliance may be influenced by proper risk communication in addition to doctor-patient relationship supports the intention of examining this topic from a marketing-and-psychology point of view.

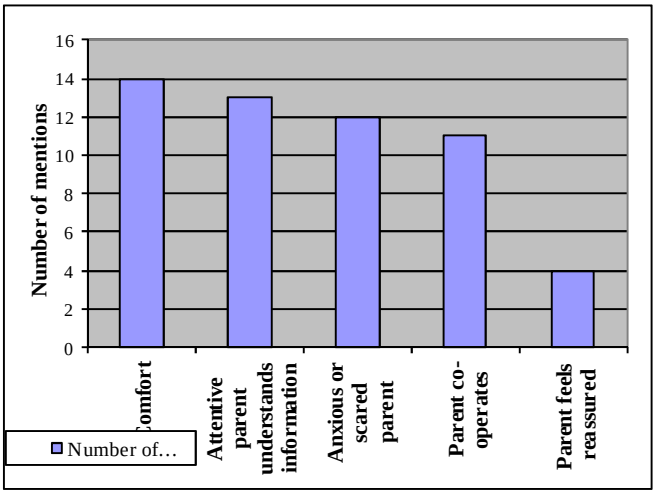
3. Empirical research and results

Research has been carried out in the subject of communication and decision making in the consulting room (see Vajda et al 2008 and Veres et al 2008) with both qualitative and quantitative methods. Semi-structured diaries (filled by 56 paediatricians and 70 parents of children attending them) and self-administered questionnaires were taken in the Dél–Alföld (a south–eastern) region of Hungary, with the intention to explore the realization of and preferences for doctor-patient communication and decision making about the therapy. Both modules have results concerning patient compliance, as the research model contained willingness for cooperation/compliance as an important factor in risk perception of both sides (patient and provider) and the way of communicating with the doctor.

Most of the results of the research have shown an authoritarian style of communication and decision-making being dominant in consultations-fulfilling not only the expectations of doctors, but often that of patients as well. A preference for being involved in decisions is not general at all among patients.

As for the signs of compliance in the results of diaries, it appeared in the recitals of doctors. According to the frequencies of the most often experienced feelings of doctors (Figure 2), their patients (here: the parents of the patients) showed attentiveness, and physicians felt the parents understood information and cooperated with them. Factors that were mentioned less frequently are not indicated in the diagram. As recitals of feelings and thoughts were only semi-guided (instructions only asked for not a professional, but a relationship-oriented approach), these results were considered as signals of a quite high intention of compliance. High compliance may be due to the "traditional" characteristic of doctor-patient relationship; doctors are often in a dominant, authority position, to which patients intend to fit.

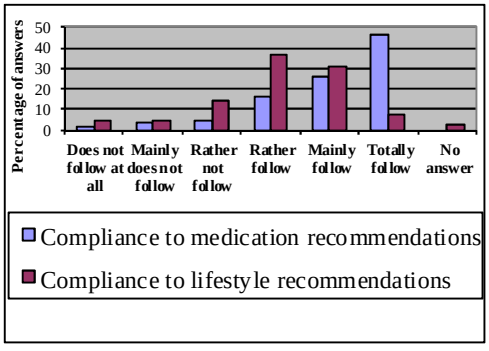
Figure 2. The most frequent feelings and thoughts of doctors during the consultations



Source: own construction

The results of questionnaires further reinforce this assumption. 436 respondents filled the questionnaire, and, as Figure 3 shows, most of them rather, mainly or totally follow the recommendations of their doctors. Although, a difference can be seen between compliance to medication and compliance to lifestyle recommendations, the latter is not so unambiguous, as expected.

Figure 3. The degree of following recommendations of doctors



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4. Conclusions

Compliance or adherence to health service provider recommendations is widely considered to be a remarkable factor in health outcomes. Although literature results suggest compliance rates to be quite low, our results of former empirical research show a relatively high compliance in a Hungarian setting. However, these results are only indications of this phenomenon; limitations of these results include that only intentions and feelings concerning cooperation were investigated; actual compliance was not measured.

On the basis of these forgoing, partial results, it seems that a good relationship between doctor and patient is needed for a better rate of compliance. This suggests that there is a need to take patients' concerns, feelings and preferences into consideration, and whenever possible, shape the communication process according to this.

Further research is planned to explore features of patient compliance within the scope of our research on doctor-patient communication, as it is considered an important tool in improving the quality of healthcare services and satisfaction of both patients as well as doctors.

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