Information Technology – The Unredeemed Opportunity to Reduce Cultural and Social Capital Gaps between Citizens and Professionals in Healthcare

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Abstract. Patient empowerment and involvement are significant aims in long-term diseases, but short appointments give only little room for conversations. However, the patients need various information and support from healthcare professionals. So, there are pressures to develop new, effective ways for reciprocal communication in addition to the traditional ones.

Courses of action related in care, amongst other things, are unfamiliar to ordinary citizens, as professionals operate on their home ground having the power to control situations. Furthermore, healthcare jargon, often used in healthcare settings, is unintelligible for many laymen. This is problematic because it may inhibit the aimed empowerment and involvement from happening.

Key findings from Coper-pilot research project alongside the former research´s findings indicate that cultural and social gap between citizens´ and healthcare professionals´ may hinder their communication and mutual understanding. Information technology and salutogenic approach together can act as means to reduce that gap by strengthening layman's position.

Keywords: information technology, cultural capital, social capital, professional-patient relationship, communication, health services, layman´s terms.

1   Introduction

Patient involvement has become an important factor for healthcare and policy makers [1]. Research on patient centeredness and patient empowerment has shown the crucial meaning why people must have a possibility to participate to their own health care [2,3,4]. If people are treated in a paternalistic way, the outcome is not supporting patient commitment to their own care of health and wellbeing. At the same time there is a discussion in the society of how to support and encourage people to take better care of their health. The conflict is obvious but the reasons for this situation are complex and not easily solvable. In this paper, we are approaching this issue by presenting some common problems in healthcare and by reflecting those problems with research

which is conducted in the Coper-pilot project, a sub-project of the Pump-project[1]. Firstly, traditional behaviour in healthcare settings emphasizes the unbalanced interaction between patients and professionals. Secondly, in communication and language level occurs many problems that complicate interaction. Thirdly, also structural problems exists - the medical appointments are arranged mainly to meet professional's needs.

When thinking of the problems in healthcare, Bourdieu's work can be seen as a strong tool to help understanding the reasons behind faced problems. Bourdieu is one of the most known sociologist who has researched power and social relations in different organizations and different levels of social life [5,6,7,8]. The field of healthcare seems to be a field which has a strong own hierarchy, strict rules, dominant biomedical worldview and self-governing mechanism securing the field. Western healthcare is strictly regulated and healthcare professionals are required to have formal education and authorisation to act in their positions. This is essential for the safety of the patient, but it has also costs - it creates unequal relation between layman´s and professionals´ positions. When some field have very strong cultural and social capital, the field gains an extraordinary position in society. In this paper we claim that professional's cultural and social capital may leave patients outsiders or visitors in encounters within healthcare. The aforementioned forms of capitals are used as Bourdieu is using them in his own work [7].

Common language may miss in a patient-doctor interaction because of the differences of professionals´ and laymen´s cultural capital. If a doctor uses professional jargon when (s)he talks with patients, unintelligible language leaves the patients as an outsiders. This kind of behaviour can be seen as a symbolic violation. In addition to that, patient contacts with healthcare – like doctor's appointments – are still too often arranged in such a way that doesn't enable patient empowerment or cannot be described as patient centric. Current healthcare system seems to have such a strong biomedical worldview, which does not take the patients´ everyday life sufficiently into account.

The key area of this paper is in developing the worldview and the social and cultural characteristics of healthcare to better enable patients´ empowerment and participation. In addition, we argue that information technology can be used to reduce effects of the aforementioned problems of healthcare, even though technology itself is not in the focus of this paper. Patients´ cultural and social capital related their own health can be increased with proper technology, which is designed to meet the patients´ needs. That kind of systems can lower the needed effort for gaining such capital that establishes more equal relationship with healthcare professionals. So, information technology is seen as a tool which can be used to reduce the gap between patients and professionals, but the main aim of the paper is to raise awareness about the issue of problematic inequality of cultural and social capital in healthcare.

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[1] The Pump project (2011–2014) is a project aiming to develop citizen-centric services to the field of health and well-being services in Finland. The project, funded by European Regional Development Fund (ERDF), is divided into five operational units. Each unit focuses on seamless service provisioning from a different perspective. In the Coper-pilot, the focus is on cardiac patients. http://workinformatics.utu.fi/coper/index.html

2   Cultural and Social Capital as a Source of Asymmetry between Citizens and Professionals in Healthcare

Cultural capital can exist in three forms: in an embodied state, in an objectified state and in an institutionalized state. The Embodied state is a form of capital, which is achieved by self-improvement or other personal investment, and thus has personal costs. One cannot get such capital by second hand; it is embodied to a person and in many cases in the person's body (e.g. gained capacity or embodied skill) [7]. Healthcare professionals have created this kind of capital by developing medical skills and knowledge. On the other hand, patients possess crucial understanding and information about their own life, health and potential consequences of their own actions, and that knowledge is not obtainable for others and thus is embodied state of their own. That kind of deep understanding differs from professional's capital and can be achieved only by living one's life. The objectified state is a kind of cultural capital which is objectified in its embodied form [7]. One form of this are writings which have cultural value in the society. In healthcare such cultural capital are e.g. papers and information systems (artefacts) which contains medical and other relevant information. Likewise, patient can have capital which is objectified: notes, diaries etc. but it seems that those are not recognised like the professionals' ones are. The institutionalized state is a form of capital which has granted a formal position (e.g. academic education, qualification for a physician´s job) and thus can be seen as the way to give recognition for some certain embodied skill or set of skills [7]. While embodied state of capital is implemented by personal self-improvement the institutionalized one is recognized by some institution or society, like doctors are usually licensed (institutionalization) to act. However, this institutionalization is not implemented for the capital possessed by patients, and thus it elevates the position of professionals by cost of the position of patients supporting asymmetricity in their relationship.

Bourdieu's social capital is such form of capital which is bounded to some social group. It can be seen as a network of relationships which produces benefits for its members. Usually the network members have some common goals and benefits. This social network (as healthcare is) is a product of investment strategies, individual or collective, and it establishes or reproduces the relations which are worthwhile for the network [7].

2.1   Status, Attitude and Organization Culture as Manifestations of Cultural and Social Capital

Healthcare professionals have gained certain cultural capital (education, knowledge and experience) during their education and practise of the profession. They need this kind of embodied capital to apply when practicing the care and treatments for patients. However, along with objectified and institutionalized capital (which are seen e.g. in courses of action and decision-making structures), it enables professionals to exercise power [1]. Doctors are highly respected professionals, who are often thought to be capable of even heroic actions. When healthcare professionals have such social

capital, the inequality between professionals and patients is understandable but still not acceptable.

Buetow et al. have pointed out, that along with information societies, where increasingly many occupations have become professions, people´s behaviour have changed. These effects of modernisation has reduced social distances between doctors and evermore educated patients and revised healthcare´s traditional patterns to more modern ones. Many of these patients want to be active social actors and collaborate with their doctors. However, like less modern or non-modern patients, there are also non-modern doctors [9]. So, not everyone long for or welcome more active collaboration in doctor-patient interaction. Because of doctors´ medicine-based capital, their position in healthcare settings enable them to choose, what kind of course of action is used. As for patient, (s)he does not necessarily have sufficient authority for influencing them. Difficulties, that hinder the abandonment of traditional patterns[10,11] keeping patients more passive, involve both individual- and organization level in healthcare [10]. Still existing asymmetry of cultural and social capital in doctor-patient interaction may in part explain why these patterns are so hard to revise.

Patient-doctor interaction is significant when it comes to health outcomes [10,11,12,13,14] and patient satisfaction [10,11,15]. Successful communication strengthens the doctor-patient relationship, enhances their mutual agreement and improves patient´s self-care skills [11,16]. Moreover, it can increase the effect of medical treatment [14] and decrease costs through diminishing the need for diagnostic testing [17]. So, there are many reasons to put out for satisfactory patient-doctor interaction.

2.2   Unintelligible Language and Availability Restrictions of Information as Manifestations of Cultural and Social Capital

The relationship and interaction between patients and doctors have developed recently more equal in many countries [9,12]. By providing patients with more information, doctors can enhance communication as well as (care) outcomes [12]. Despite the progress, that has taken place, there are still issues, which need deeper inspection and advancement. Patient-centric care (or patient-driven approach), just like shared decision making, collaboration and partnership, is an issue, which has been discussed widely recent years, and its many advantages have been noticed [10,11]. If the common goal in healthcare is to improve patient-doctor interaction so that it would become a more equal partnership, common and mutually understandable language must exist.

Sometimes the obstacle to an effective communication can be for instance Latin terms and other uncommon words, that doctors use [12], when it comes to illness, operations and care. If healthcare professionals use difficult language - when also comprehensible terms could be used - it can be seen as using symbolic power. Symbolic power is a form of power, which is based on social and cultural capital of agents of some group (such as doctors), and is used to enforce the relations that constitute the structure of social space (in healthcare settings) [8]. When symbolic power is used, it emphasises a situation where professionals are hierarchically above patients. In such

situations professionals have control over the information [12], situation and treatments instead of collaboration, even when the patient would wish the opposite action. Healthcare professional may have a noble goal to make right decisions and ensure the patients´ health and subsistence. However, if the patients are not trained to use that kind of healthcare jargon, it hinders their understanding of the facts related to their own condition and care. Obviously, this situation limits patients´ rights to consider their options and to be aware of potential consequences of their decisions. Furthermore it prevents their empowerment. Therefore, a severe effort to revise communication more effective and break down barriers of cultural differences between patients and healthcare professionals is essential.[12]

It appears that patients would be more eager to revise patient-doctor interaction style from biomedical style to more patient centric than doctors so far [17]. The modern-way, more equal, patient-doctor interaction seems also to create more benefits than costs to patients. These benefits, mostly related to communication and collaboration, would be worth providing to patients and also non-modern doctors, by assisting them if needed. [9]

2.3   Place, Course of Action and Operating Model as Manifestations of Cultural and Social Capital

There are many kinds of asymmetry when it comes to interaction between doctors and patients. These kinds of issues can link at the macro level with the operating model in healthcare organization whereas at the micro level they can relate to courses of action and structures of clinical visits. One micro level example is, who takes the initiative when a patient meets a doctor at clinical setting. Like ten Have has argued about doctor-patient interaction, usually there seems to be some level of consensus that it is the doctor´s right and responsibility to manage the agenda at appointment [18]. So, usually it is the doctor who is the initiator and the patient who responds to his/hers initiatives by asking questions. In this respect, the doctor has more power over talking points than the patient. When the interaction proceeds in such traditional way the doctor controls the situation, where disease-orientation in addition to biomedical issues are in the main part [10,11,17]. Because of this information about patients´ experiences, which could also be highly relevant to diagnosis and successful treatment, are inevitably taken to a back seat. For patients, gaining opportunities to ask questions from their doctors would be also important way to enhance understanding and satisfaction. [15]

Furthermore, Jones [19] has pointed out that after patients´ newsworthy answers in medical interviews, doctors do not usually offer to respond with an assessment although it would be a normal act in everyday talk and it would also be an excellent opportunity to give social support to their patients and to influence positively health outcomes. Instead, they do not respond at all, they just go on and stay strictly in the interview format. An action like this is surprising and troublesome for the patients and because of that there are gaps in the conversation when they think the doctor should answer with an assessment. Sometimes patients try again to get a response from their doctor. They can for example upgrade their answer, request an opinion or offer a lay

diagnosis, but even then the doctors do not respond or when they do so, they use only a minimal acknowledgment token (for example "okay"). As Jones mentions, doctors pass up opportunities such as elaborating with their patients and showing empathy to them, when they direct attention away from patients´ answers. [19]

In Finland the citizens know quite a lot about illnesses because of good education. What is somewhat surprising, it seems that people tend to act in spite of that rather un-assertively with their doctor when the diagnosis is at issue. Peräkylä [20] has explored patients´ and doctors´ interaction in Finnish primary care with data which consisted of doctors´ diagnostic statements. He found that only in one thirds of the cases the patients responded by talking about diagnosis after their doctor had told the diagnosis to them. And, what is noteworthy, even then the patients responded with caution so that they displayed the doctor´s authority in medical reasoning. And further, he found that the way in which the doctor told about the diagnosis had a significant effect to the patient´s response. When the doctor explicated the diagnosis, it was more common that the patient responded by talking about diagnosis, otherwise not. [20] So it seems like the patients expect that their doctor puts across if it is appropriate for them to say something about that issue.

Patients are by no means passive members at these occurrences, they have also their ways to influence the conversations with the doctors, but it seems that they have to be careful. It is known that the patients can request a course of action, expand their answers to offer information which the doctor has not asked [19,21], request an opinion, or offer a lay diagnosis [19], which means a sort of explanation about the symptoms of illness that a person often makes himself/herself to make sense of his/her experiences, before (s)he decides to arrange an appointment to see a doctor [18]. However, when doing so, the patients are conscious of how sceptical the doctors might be if they tell about their lay diagnosis [21]. So, if they have enough courage, they try to tell their concerns in a delicate, respectful way and avoid to overtly challenge their doctor´s authority [18,21].

Visit length varies a lot between countries, but when longer visits exist, it enables the doctors to respect patients´ autonomy in clinical decision making [13]. A study conducted in six European countries (Belgium, Germany, Netherlands, Spain, Switzerland, United Kingdom) revealed that the mean length of consultations with general practitioner was only 10,7(SD 6,7) minutes. If the doctor perceived a psychosocial problem, consultation time increased significantly but this was not the case if the patient perceived the psychosocial problem (and the doctor not). So, the doctor has a remarkable impact on the duration of the consultation (and the issues at hand) although variables related to the doctor´s country and those related on patient have also an effect on the use of time. [22]

3   Coper-Pilot - Information Technology as a Possibility for Empowerment of Citizens

Salutogenic approach embeds with understanding of health as patients' experience of *home-likeness* in their own lives is used in Coper-pilot. This kind of viewpoint is

needed if we are going to develop tools, like information systems, for patients [23]. The salutogenic approach focuses on wellbeing and life plan of people instead of sickness and other biomedical issues, which are the general points of view in healthcare. Hence, salutogenic approach foregrounds the patient´s role as a main actor.[24,25] The aspect, which is presented in this paper, is patients´ need to move from their current role into more active role as a professionals of their own life, and by implication of that, into equal partners with healthcare professionals. This is possible through proactive interventions in healthcare whilst developing information systems [23]. This approach - if put in practise - gives patients real possibilities to make informed consent about their care and treatments.

3.1   Coper-Pilot

Coper-pilot is a qualitative, citizen-driven research project, where University of Turku cooperates with Welfare Division of Turku and CGI Suomi Oy to develop and study a communal e-health-service. Defining what sort of requirements citizens have about e-health services has been a key issue in this pilot. Because we looked for patient-involving and empowering solutions, citizens with some kind of long-term disease were considered suitable for the target group. The decision about the target group was made together with the Welfare Division. Eventually, those citizens, who had some kind of heart related symptoms, and who were supposed to have an appointment at Internal Diseases Outpatient Clinic of Turku City Hospital because of those symptoms, were determined as the target group of the pilot. The study protocol was approved by University of Turku ethics committee and Welfare Division of Turu before the study began and the research team began to get in touch with citizens in May 2013.

Coper-pilot´s perspective to information systems can be defined as human scale. Our aim has been to find out ways in which e-services could assist and empower citizens in their everyday life and self-care to feel "home-like being-in-the-world" (see Svenaeus' definition of health [26]) even if there were some health issues on their hands. As for the term "Home-like", it could be figured as a state where one feels comfort in his/hers own life. So, the aim, amongst other things, was to gather understanding about our target group´s everyday life, their experiences about electronic services and their experiences about interactions between themselves and professionals in any kind of healthcare settings.

Citizens suitable for the above-mentioned target group were informed about the Coper-pilot by enclosing a letter of participation request in pursuance of the appointment notice to Internal Diseases Outpatient Clinic of Turku City Hospital. The research team provided the Internal Diseases Outpatient Clinic of Turku City Hospital with copies of the letters of participation requests, which were forwarded to the citizens by the departmental secretary (from May to December 2013). The citizens were asked to get in touch with research team if they were interested to hear more about this project or if they considered to get involved in it. After the citizens had been contacted the research team, they were given more information verbally and also on

paper moreover they had an opportunity to ask further details before signing agreement of involvement in the research.

All in all 34 persons (13 women and 21 men) decided to participate in the Coper-pilot. Their average age was 68 and age range was 47 - 81 years. There were various data collection methods in Coper-pilot, and one of those was interviewing. In this context we are going to present only a few points that came out in the first round interviews. These thematic interviews (n=34) were held at places of interviewees´ choice, generally in a negotiation room at university or at their homes from June to December 2013. The interview themes dealt with health, well-being and being ill and also with experiences of healthcare and information technology in the interviewees´ everyday lives. In these individual and rather informal meetings two persons operated as interviewers at a time. The duration of each of the interviews was approximately two hours. All interviews were recorded digitally. The data collection and also lettering and analysis of its content were made by research team members (four persons).

Next we are going to present a few sections about aforementioned interviews. In some cases there seem to be problematic issues related to unequal cultural and social capital. At times the issues seem to be traditional behaviours or structural problems in healthcare settings that causes a friction between citizens and doctors. Also restrictions on availability of information and unintelligible language (language barrier and healthcare jargon) appear to separate the citizens from the professionals. Beside the problems, the citizens tell also about situations, where patient-doctor interaction has come true successfully and how this happened. All quotes are freely translated from Finnish to English for this paper. After the quote there is an identification letter and a number in square brackets.

3.2 Status, Attitude and Organization Culture as Manifestations of Cultural and Social Capital in Coper-Pilot

In Coper-pilot there were a wide variety of the citizens´ experiences, when it comes to doctors´ status and attitude in healthcare. Some of the citizens feel, that the organization culture enable the doctors to act nearly godlike, as for some of them have noticed positive progress, which has facilitated communication at least with some doctors. Like one citizen [A7] said, doctors attitude is quite important for a patient, it can be also a remarkable thing easing patient´s stress experience.

"It can be seen at hospitals even nowadays…their atmosphere has not changed a much, the doctor is the same as God, dictates everything…it is the hospital culture…it is such a wretched culture like Tutankhamun era, dominated by doctors…"*[A8]*

"He [the doctor] does not bother to listen and he has no time…and if he had [time], he has no interest…I can understand that…there are priests in a rut…doctors in a rut…they do not listen or tell nothing much…" *[A12]*

"The doctors have begun to treat people much better…I do not know if they know nothing, but it is nice to meet them…nicer than earlier, they treat people a bit better…Nowadays they ask, what kind of symptoms there are and what do I think that the problem is and things like that…In the olden days …the patient was not allowed

to know anything at all, he knew everything…even though not anywhere near…that much it has been changed…" *[A10]*

"It depends on the doctor, I must say. Yesterday there was a cardiologist whose attitude was positive. That is a very important point, I can see that now, how important it is… I nearly stopped to be stressed…" *[A7]*

The citizens admit readily, that beside doctors, it is also patients who have an influence to patient-doctor interaction and therefore also citizens have to be responsible for a good contact.

"The doctors will listen..., if you just tell them. But often there are such persons, who do not dare to ask anything….I have got all that I have asked. So, I could not ask anything more and I would not need either [anything more]. Therefore it has been very nice…It depends on a lot of the person, who happens to be on the opposing side, you have to take it into account. There are sometimes difficult ones on the opposing side…such [persons] might be also in healthcare…"[A14]

3.3   Unintelligible Language and Availability Restrictions of Information as Manifestations of Cultural and Social Capital in Coper-Pilot

In Coper-pilot it turned out that many citizens have difficulties getting information about their health, treatments and test results. Sometimes the citizens are not able to get information at all and sometimes the information they get is unintelligible for one reason or another (language barrier or professional jargon). These kind of situations make them angry and at the worst they can feel that the healthcare system have abandoned them.

"After heart operation I have been completely down and out. Information about myself is not obtainable hardy anywhere, because the only doctor appointments at the health centre are once a year. I have learned how hard it is to get information about myself.... It feels like dropping to nowhere, the operation... were handled correctly at the hospital but after that nobody…I have not been able to control…" [A3]

"There were 18 blood tests and the doctor told me nothing at all…I was angry at the night, why I was not allowed to know those…I realized that many issues, that I could had asked there right away, left once again without solving. Yet afterwards, I act up, why I did not ask those issues…" [A7]

Like the citizen cited beneath, many citizens were also interested, if there were some better than present-day ways to make an appointment (to a doctor or to an examination), to get results from examinations and to communicate with their doctor if needed during their care.

"It is one problem. I run, I have just been at the blood tests…Every time I have to call them. I think that it takes also the doctors´ time to no avail. If I could see that [blood test result] there [from computer]…it would be so much easier, the doctor would not have to, I would not have to bother every time the personnel at the health centre. Their time run out anyway…" [A3]

Even if the citizens manage to meet their doctor to get some information about their health, there can still remain some obstacles. Sometimes there seems not to be shared language between citizens and doctors: either the citizens find that some

doctors´ have shortage of Finnish skills or their doctor speaks such professional language, jargon, that they are not able to understand. Lack of understanding causes uncertainty, because the citizen cannot be sure if (s)he has missed some important information. It is common that citizens just try to cope in spite of shortcomings in patient-doctor communication, many of them seek answers elsewhere (for example from Google) and only some of them continue asking until their doctor´s answer is understandable enough.

"All the medicines I use and I get from someone, I search for [from the computer], what it is, to which purpose it is used for and…It was just today, when I checked something about my blood test, what is the meaning of all those words…I have written them one by one to Google, that [an abbreviation of a blood test]and…One at a time it has turned out, what they are and what are those meanings…" [A10]

"It is that monks´ Latin in all those doctor´s accounts, even with Internet you do not manage to make out... what he is meaning…you can only guess…I could ask, if I and the doctor were just the two of us, but usually it is such a hurry that talking is out of question…" [A11]

"Generally speaking I have pretty good experiences about doctors….but when I had an Estonian... doctor...Finnish that she spoke was very weak…she said, she cannot understand…It causes to the patient such an uncertain feeling, that you doubt, if you can get all the information needed. But in other respect she was very kind and nice doctor…" [A20]

Fortunately sometimes a shared language between a citizen and a doctor is possible to find, but does the citizen have to understand medical jargon to make that happen? Is it not required, that the doctor would use such kind of terminology that the citizen can understand it?

"When I visited the cardiologist it was such kind of extremely good co-operation, although it was the first time I met him, we spoke immediately the same language…And he asked me, if I am a healthcare professional." [A27]

3.4   Place, Course of Action and Operating Model as Manifestations of Cultural and Social Capital in Coper-Pilot

The everyday difficulties, that the citizens told about healthcare´s practices, involved most often their doctors´ busyness, too brief appointments and missing possibilities to create a proper relationship in which they could collaborate with their doctor. Many citizens find it hard to settle their affairs with healthcare. Therefore, they are interested in seeking new courses of action to collaborate with their doctors, and they are also open to new operating models in healthcare organizations.

"Usually when you go to doctors´ practice, he is so busy that he has no time to even think. He is not listening." [A22]

"The situation is like that…the doctor´s…there is hurry and it can see…do not feel like bothering them…" [A1]

"Our healthcare is so foolish that these ...doctors change nearly every time when you go to doctors´ practice….There is no time to discuss, there is 15 minutes and

when there is a new patient, a new doctor relationship, it takes 13 minutes to get know each other, so the decisions should be made in 2 minutes." [A2]

"It is also such a nasty thing that you have to hop from one doctor to another doctor and every time you have to tell the same [story]…" [A28]

In those cases when the citizens are outstandingly pleased with their doctors and other health professionals, there seems to be typically a confidential, friendly and at best long relationship. The citizens have a high opinion on their doctor if they have positive, personal relationship with him/her, if they think (s)he is also competent and if they feel that the things move on smoothly.

"I have been in such a blissful situation, that I have had a personal doctor [at private sector], the familiar doctor... has helped me loads of, so I am in a better position than many other." [A21]

"There were a very good male nurse which was sometimes better than a doctor…In a small town, if the person have been there long time, he knows those people…and he is able to immediately…" [A23]

"He [the doctor] sent the referral immediately…so I will get there…Things like these, I feel that the things are taken care of…I do not have to ask everything separately…" [A24]

4   A Possibility to Increase Patients´ Cultural and Social Capital with Information Technology

People are not alike in their desire for autonomy in decisions related in health, in the matter of fact the differences are substantial although most of people want to engage in their health decisions. Although it is known that the desire for autonomy is higher among younger people, it is not clear if it relates to differences between generations or if the attitudes just change when the individual gets older. In any case, detection of patients´ wishes could simplify the patient-doctor interaction in both sides and moreover improve decision-making process.[27] By using information technology we can offer alternative solutions to log, watch and monitor personal health information so that both patients and healthcare professionals have an opportunity to take advantage of them. Furthermore, information technology enables many kinds of data capture, mediation and use. Accordingly, it is worthwhile for supporting self-care with individualized materials and communication between patients and healthcare professionals. [28,29] Moreover, the possibility to use web/video-appointments or communicate with safe web messages alongside with traditional appointments at health centre or by phone, gives long desired alternatives for individual needs. These kinds of new options may facilitate patients´ everyday lives and also the routines at health centres.

There are patients, who have difficulties to get involved in the decision-making process at the doctor´s practice when it comes to their illness, medical procedures and diagnosis. In our research some citizens consider that they have no ability or right to interfere in issues like that. Yet, it is known that patients commonly search information and talk with their family members about the symptoms of illness to search some kind of explanation to their experiences [18]. This kind on pre-clinical phase

when a person is working with the lay diagnosis before (s)he makes an appointment to the doctor, could be one potential moment to take advantage of information technology with supports the needs of patients by offering different ways of communication, gaining and using the needed information even before the first meeting with a healthcare professional. Lee et al. [30], for example, have presented an interesting system, where patients´ (type 2 diabetes) clinical data was integrated into education material so that it enhanced learning and individual care also between the hospital appointments. They found the system easy, efficient and inexpensive in self-care. [30]

Adequate time is important when it comes to clinical visits, moreover it is important how the time is spent [13,31]. Because patients sympathize with pressures on their doctors, even a short visit does not bother if only the patient feels that the quality of time is good, and it is effectiveness of the communications and flexibility in time which influences on that [13]. It is interesting that even a small increase in actual time may have a notable impact to patient´s experience of the adequateness of time [13]. The possibility to communicate before the meeting could raise the quality of an appointment by giving the possibility for the patient to give more information or ask how to prepare for appointment. The technical limitations are not the problem, the needed technology is out there. Instead we need to focus on shifting the development from healthcare towards more patient or even citizen-centric direction [23].

At the fundamental level, ensuring that information system would be suitable for the patient needs, the aforementioned salutogenic approach of developing those systems is needed and should be used as guideline of development of healthcare [23,32]. The aim should be in finding such functions or solutions that support patient control of own life and well-being by enabling access to needed cultural and social capital with information technology. This also demands that the structure of healthcare and interactions between professionals and patients should be focused on patient's personal needs more than current system is doing.

5   Discussion

It seems that Bourdieu's conception of the cultural and social capital and salutogenic approach are strong tools when analysing the common problems in healthcare settings. The cultural and social capital, which is usually possessed by healthcare professionals, may leave patients in insecure positions. Likewise, the traditional biomedical worldview, which has not vanished yet, sets the patient to be an object with some medical problems and does not focus to the person behind the patient-role.

Based on the Coper-pilot´s preliminary findings, which support the former research, there exists a need to assist patients in narrowing still existing cultural and social capital gap in healthcare. We argue, that information technology offers countless opportunities, which are still unredeemed, to reduce cultural and social capital gaps between citizens and professionals in healthcare. The information system, which gives access to patient information and other medical information - that is easily understandable - would give the patients the capital they need: information about their own health and understanding about issue at hand. Then, translating the healthcare

jargon to layman´s language, would give the needed common language for patient-doctor interaction. Information technology enables many alternatives for patient-doctor communication also between the traditional appointments so that interaction can meet both patients´ and professionals´ needs assisting their everyday lives.

For developing needed information systems we should have a new approach – the Salutogenic approach - which is designed to meet the people´s needs, not only the professionals´ and organizations´ needs, which is usually the case in healthcare. Salutogenic approach enables people to be more oriented towards their own health and wellbeing and thus makes possible to gain needed cultural and social capital so valuable in the field of healthcare. Future research, focusing healthcare interactions within different environments and methods, is needed for remeeding the available opportunities, that information technology has to offer.

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