Internet and Health Contents

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Abstract

Information and communication technologies provide autonomy possibilities to individuals, concerning their social and individual background, favouring a disposition to escape from traditional control, enabling them to face modern society's contradictions, without forgetting the relevance of networks in constructing new social movements, possible only in a context of a broader use of information and communication technologies. Therefore, the question that is discussed in this paper is what is the meaning of daily information and communication practices to the health problem individual management? How ICT's are shaped by individual needs and social contexts, namely in the case of health communication? Individual health and its daily management never involved as much information as nowadays. Great amounts of health and medicine information are available from several sources – whether professional health sources, different kinds of specialists, public and private institutions or patient and/or consumers groups – through a multiplicity of information channels, from media to local or interpersonal base, interacting with doctors and other health professionals, family, friends, work colleagues, etc. Closely connected to network societies problematic and a relevant health component in contemporary societies, is the issue of understanding how Internet and media in general contribute to subjects autonomy. In this paper we will focus on the questions related directly with the internet use for health purposes, in the Portuguese case.

Keywords: health; communication; information society; media; internet; 'informed patient'; Portugal.

1. Health and Media in the Information Era

Modern societies are characterised, amongst other features, for having a high information diffusion and circulation. Information access and distribution are growing and the ways in which this information and knowledge democratisation occurs are many, scattered and diverse.

Simultaneously, our societies are places where relationships and interconnections between people, and between these and institutions, organisations and various systems are also diverse, intense, and complex, proceeding mostly from information and communication technologies evolution and its penetration in individuals everyday lives.

Manuel Castells (2003a) focus our attention on the main relevance that information and communication technologies represent in modern western societies, related not only to technologic transformations, but to social organisation and fundamental structural changes in societies. Those technologies "connect" the world and shape, what Castells calls, the "network society". Images, sounds, wealth and power flow through ICT's; they are dynamic and are at the base of the information and knowledge flow, making a new society model emerge. A new model, where generating, processing and transmitting information becomes

fundamental both for productivity and power sources. Information and communication technologies and the networks they generate, reveal the globalization process trends and also a reconfiguration of time and space. Through Internet – the most revolutionary information and communication technology in contemporary societies – we live the experience of being able to move through virtual space and time, allowing us the possibility of new ways of doing, being, and living in the present world, inducing deep changes in all domains of human action.

But information and communication technologies also provide autonomy to individuals, concerning their social and individual background, favouring a disposition to escape from traditional control, enabling individuals to face modern society's contradictions, without forgetting the relevance of networks in constructing new social movements, something possible only in a context of a wider use of information and communication technologies (Castells, 2003b).

Therefore, the question here addressed is what is the role of daily information and communication practices for health individual management?

Individual health, and its daily management, never involved as much information as nowadays. Great amounts of health information are available from several sources – whether professional health sources, different kinds of specialists, public and private institutions or patient and/or consumers groups – through a multiplicity of information channels, from media to local or interpersonal base, interacting with doctors and other health professionals, family, friends, work colleagues, etc. This constant information flow encourages the individual to be responsible for his own health, as for his family's health (Kivits, 2004). In this framework of general health information access, Internet has been fundamental. In the United States, considering WIP[*] data, health information search is the seventh more common activity (50,6% of Internet users claim having accessed health information in the last year). Simultaneously, the constant presence of health related media coverage, on television or newspapers, leads us toward the need to build an analytical frameork approach that links medical, or health, sociology studies with media studies.

Medical information analysis is often confined to the relationship/communication between doctor and patient. But an "informed patient" concept begins to emerge in several debates, bringing to light the issue of doctors' authority being "challenged" by their patients, increasingly informed and aware of their own medical condition. Even health promotion campaigns recognize that the use of media is influencing the "audiences" attitudes, their beliefs and behaviours regarding health issues (Kivits, 2004). The role of media in this context gives us a new research perspective, in understanding daily health information reception and perception scopes, where media presence prevails. At the same time, Internet growth as a health

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[*] *The Digital Future Report* (2004), Annenberg School Centre for the Digital Future, WIP – World Internet Project, University of Southern California

information source grants us also an opportunity to analyse the growing importance given to information in individuals' daily life.

In the "Network Society in Portugal" study (Cardoso & al., 2005b) it is possible to acknowledge that, in average, 18% of Portuguese Internet users search for health information, although this use varies according to generations and academic qualifications. Amongst individuals aged 16 to 26 health search is 13,6%, as from 27 years old rates reach more than 20% of Internet users. Between subjects over 51 years old and the ones aged from 39 to 51 years old it is respectively the 8th and 9th subject most searched.

This kind of information brings awareness to the importance of health issues in modern societies and in our daily practices, and to the need of understanding the use of media in the health domain, taking special attention to the relationship between public, media and health care providers. Furthermore, it is important to understand the use of communication strategies to inform and influence individual and collective decisions regarding health. Grasping the health communication field demands, necessarily, a multidimensional approach, implying an empirical research on health communication, understanding health communication theories, risk and uncertainty communication and even ethical and legal issues that health communication always involves. Since it is not possible, nowadays, to cover health communication themes leaving aside concepts such as "Information Society", "Knowledge Society", "Digital Economy", "Virtual Reality" or "Cyberspace" and "Network Society" we must focus our attention on the meaning and consequences of these concepts, and its appropriation in daily life, namely in the health field information and communication production and consumption.

Data gathered in Portugal in 2003, shows that Internet begins to arise as an alternative to more traditional methods to obtain health information. Questioned about what do they do when themselves or someone in their family becomes ill, most users (63,9%) - apart from an initial contact with their doctor - , gets information by their own means, while this percentage is 52,6% for non users (Cardoso & al., 2005b). The first mean used for health information search use in Portugal is talking to friends or family (44,2%), followed by reading specialised magazines (30,7%) and Internet (15,9%) (Cardoso & al., 2005b).

By comparison, Internet non users resort much more to talking to friends or family (61,6%); less to reading specialised magazines (18,3%); go more to the pharmacy (12,7%) and to other doctors or specialists (5%) (Cardoso & al., 2005b). Two profiles are outlined: one of users resorting more to options specialised on reading or technological supports; and the other represented by Internet non users, preferring personal contacts whether with friends, a pharmacist or doctors and general practitioners.

Complementary information about media and Internet roles on health is obtainable through the analysis on how Internet users get informed when a new drug is prescribed. Those claiming to read the information leaflet reach 80,6%, while only 9,1% use Internet. Therefore it seems that using Internet is the choice

when it comes to look for information about diseases, but not when taking a new drug is necessary. However, reading medicine information leaflets is done by less 10% of individuals by non users case (70,1%) (Cardoso & al., 2005b).

Closely connected to network societies problematic and a relevant health component in contemporary societies, is the issue of understanding how Internet and media contribute to subjects autonomy. An autonomy project is, as suggests Castells (2003a), a person's statement of his/hers own thinking and acting capabilities according to his/hers own standards, values and efforts. In Portugal, the individuals' body control project reveals a pursuit for their own health control and autonomy regarding specialists and health institutions, being empirically defined as reading medicine leaflets and searching complementary information sources, besides a doctor, in case of an illness.

It is, nevertheless, important to notice that this kind of autonomy project presents clearly a higher occurrence amongst women, a distinct tendency in all age groups, although less clear in older people, since additional medical information search is rare amongst this last group. The apparent lack of interest of elderly persons on searching medical information, enabling them to understand information given by doctors, is certainly not connected to the absence of major health problems, a plausible argument to explain equal behaviour amongst younger men. On the contrary, this may be the result of a lack of schooling resources relevant to interpret information eventually given by other sources. Actually, the effectiveness of a "body control project" depends clearly on the possibility of using resources directly linked to longer schooling. Individuals with higher academic qualifications are the ones, regardless of their age or sex, presenting better conditions to search and interpret alternative medical information sources. Those that do not have significant schooling end up being in greater dependency regarding medical and health specialists', not necessarily because they have greater confidence in medicine and its institutions, but essentially by having difficulties in controlling and validating other information. They also tend to become more vulnerable to unfunded indications given by any other agents.

At this point it is worth considering further data (Cardoso & al., 2005b): Internet users group in Portugal is presently around 40% of the population, divided by actual users (29%), occasional users (6%) and proxy users (4%) - i.e., those who ask a third person for information available on Internet.

On another hand, television in Portugal reaches 99,5% of the population, newscasts being the most watched programs (48,5%), followed by soap operas and TV series (15,9%) and talk shows (8,4%). Health themes in 2002 reached close to 6% on Portuguese news, amongst all other addressed themes (Cardoso and others 2005b). The reason for this information comparison between Internet use and TV fruition isof importance given the fact that, in transitional societies like the Portuguese, it is fundamental to recognise a

duality in information access. Analysis of this duality in the health area also suggests that autonomy will be set up differently according to populations' media and Internet access types.

Simultaneously, in modern western societies, there's a general confidence in medical practices and treatments they offer, with an increasing need for information regarding scientific medicine - often along with a certain disenchantment concerning traditional scientific medicine. In this context, there's an approach of medicine to the social domain and at the same time a social approach to medical practice, proceeding, amongst other aspects, from a growing medical and health information access.

Are medical perspectives about health, disease and the body still dominating the public and private speeches and daily social practices amongst the population? Are peoples problems still screened through the scientific medical eye, social problems being reduced to biomedical sciences rationality?

According to Fernando Ruivo (1987:130), medical profession, and the speech doctors adopt, have an important prominence in society, due mostly to medicine professional success, its neutrality and social independence. During the XVIII century, medicine made the transition from caring about soul salvation to caring about body health, this transition process was described by Foucault. The author tells that the years before, and immediately after, the French Revolution saw the birth of two great myths, whose subjects and polarities are opposite. Those were the myth of a nationalised medical profession, organised the clergy way and invested, at health and body levels, of powers similar to the ones clergy had over souls; and the myth of complete disease vanishing, in a society free from commotions and passionless, brought back to its original health (Foucault, Michel (1967) 'The Discourse of History' in (1989) Foucault Live, New York: Semiotexte, 11-33. quoted by Ruivo, 1987:130). Therefore, medicine has been holding a moral authority which legitimates its intervention in the creation of ideas and values in society. A doctor, on another hand, is surrounded by prestige at the people's eye – "Only medical profession is, therefore, qualified to formally speak about health and disease. Its exclusive cognitive base, coded and scientific knowledge constitute a starting point for a public admission of the professional good it brings..." (Ruivo, 1987:136). Similar views can be found in Noémia Lopes analysis, where is stated that the professional autonomy issue represents the domain where power terminology – in which professional strategies and trajectories are inscribed – takes on a major relevance. (Lopes, 2006: 109).

Nevertheless, if we consider the "informed patient" concept given by Kivits (2004), access to up to date and trustworthy health and healthcare information can be a goal shared by both politicians, health professionals and health mobilization groups, beyond just the individual citizen, because all contribute towards autonomy processes. Given that autonomy relations are built with third parties, whether being institutions, some professionals or a wide range of people with whom there is a daily interaction, it is fundamental in the health field to understand how doctors, in different specialties and contexts (medical centres or hospitals,

public and private practices) deal with this interaction with different publics, and how they manage their own professional autonomy, resorting to new communication and information technologies, particularly Internet, in their clinical practice.

Individual autonomy may be seen as self-determination, the ability to build up goals and own values, freedom to choose and plan, and acting according to these values and objectives. Autonomy is linked to a notion of freedom as self-determination, as a possibility of choice or lack of interference, and also to the concept of individualism and emancipation (Singly, 2005). According to Singly (2005), individualism is normally conceived from a market imposition point of view and the struggle of one against each other, looking at the individual as motivated by rationality and forgetting ethics, a selfish and indifferent person towards others. But individualism represents also representative democracy and the rights of men, is connected to rights achievement, acknowledgment, justice, respect, dignity, consideration. In this sense, individualism is not far from the social, since "emancipated individualism" is a form of humanism. An individual is built in the relationship with others; it is an individual journey in a collective context. Social recognition, the recognition of "others", is a condition to individuality, autonomy and the ability to have his own world (Singly, 2005).

Colombo (1993) considers new media all means of communication, representation and knowledge where it is possible to find digitalisation in its content, having multimedia and interactivity dimensions. Therefore *media*, and new *media* in particular, have a central role in building autonomy projects, as they have the capacity to provide fundamental information and knowledge for this process to be fulfilled, and are also able to become themselves into something more than just novelty in technological terms.   Those are also technologies simultaneously promoting communication and new social and economic organization models, creating new audiences, new public and users, possessing a new language and new contents, facilitating new ways of knowledge dissemination (Cardoso, 2002).

But new *media* can, and must, also be defined by changes they induce or produce from its diffusion and use. According to Manuel Castells (2004), technologies allow, fundamentally, new forms of production organization, access to knowledge, economy and, consequently, new forms of culture. They lead us to a different time and space management in our connection networks, between work and organizations, between friends, between the state and its citizens, or between nations. Apart from that, it is also possible to state that these new *media* are introducing new audiences (with new uses) through changes in social appropriation and technology diffusion processes.

According to Katz (2006), concerning new technologies appropriation in health context, there are still some empirical questions unanswered on several levels, such as health information systems efficiency, the way people in different socio-demographic sectors really use them and which are the different use effects in

different systems - as new information and communication technologies are developed, so are new *e-health* uses explored. Katz (2006) points out that information health systems advances require not only empirical data, about each system specific reception by its users, but also a broader frame which understands the logic of personal interest and cultural foundations affecting each system in a wider context. Under this perspective, defined by Katz (2006) as *syntopic* (rejecting *dystopic* and *utopic* perspectives about information and communication social uses and consequences), there is an emphasis on how people, groups, organizations and societies adopt, use and reinvent technologies, so that they make sense to themselves (Katz & al., 2004: 294). Whatever the information systems and technologies used, decentralized and interactive *e-health* uses seem to be getting an outstanding role in health care, adapting to the dominant technology use in the society and culture it is inscribed in.

Trying to identify and understand how individual and professional autonomy processes are built in the health domain in Portugal, in transition to a network society from media use and consumption, in particular through the use of information and communication technologies (ICT), theoretical resources and methodological approaches of several kinds and origins in sociology domain need to be developed, since several sociologic fields of analysis intersect in this analysis, ranging from medical and health sociology to communication sociology - specifically studies on media and ICT.

As referred by Graça Carapinheiro (2006), when "health sociology" designation is used, we must consider the notions of disease, its stereotypes and stigmas, proper of contemporary societies, of which models, according the author, are deeply medical, and where medicine became one of the most powerful social control instruments. Therefore, in this context, following the authors' proposal in which sociology that considers health issues should be designated as *health, disease and medicine sociology* (in its various dimensions and levels) it is important to clarify that the approach presented here is focused on the analytical dimensions of "Health Communication" (as defended by Ronald Rice and James Katz[1]), where Internet and television assume privileged dimensions. When addressing the "Health Communication" approach we are simply stting that we focus our attention in the communication strategies study used to inform and influence individual and collective decisions involving health issues and autonomy promotion, which necessarily connects health and communication fields in the sociology domain.

During the research here described and discussed, three analytical dimensions were considered:

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[1] Report, for example, to Rice and Katz, 2001 or to Katz, Rice and Acord, 2006. Other authors, like Kivitz (2004) use the "health information" concept, but in an Internet information search context, i.e., only from the user side (of information search) and not as much on the available contents side (information or communication offer). Therefore the empirical theory approach being considered, from the "health communication" concept, most fitted to the research developed within the doctor's degree plan presented here.

1. Patients, and their autonomy construction in the health context, through information and communication access;

2. Health care professionals, and their autonomy construction regarding formal and traditional health systems and, simultaneously, promoting their patients autonomy;

3. Internet and television, as health diffusion tools of information and communication.

It is precisely in connection between these three dimensions and their knowledge deepening that it is possible to understand the importance of autonomy processes in contemporary societies, which must be understood as a statement of an individuals ability to think and act according his own standards, values and efforts, but also as an individuals empowerment regarding the health system, presenting himself before traditional systems "armed" with information found in the Internet, or acquired while watching a television series. He is a subject empowered by communication and information technologies, if *empowerment* is understood as in Friedmann's concept (1996), i.e., individual autonomy in decision making, this ability depending always on information access.

Methodological note

To answer these research objectives, a research methodology was used combining quantitative/extensive and qualitative/intensive methodologies.

A research project supported by Calouste Gulbenkian Foundation, allowed to benefit from some information gathering elements, namely the production of a large scale analysis through a questionnaire survey to a representative sample of Portuguese population, which included a specific module about health and media.

The research was developed based on the following information gathering instruments:

1. A survey to Portuguese population about ICT and health – applied to a representative sample of Portuguese population. Having access to a representative sample it is possible to identify social behaviour patterns and observe whether Internet and television contribute to specify, or not, this behaviour and in which conditions it happens, i.e., understanding how Portuguese population deals with health issues, and which is the ICT role in this relationship, concerning its practices and representations;

2. A survey to health professionals, namely doctors. A questionnaire survey was used, by mail post, with the Medical College cooperation. This survey's goal was to verify how doctors perceive ICT role in their professional activity and how they use it, the motivations to its use or refusal, differentiating speech and practice;

3. A television content analysis on drama series directly connected with medicine and health contents, presently broadcasted in Portugal – ER, Hospital Central, Chicago Hope; Scrubs and Dr. House – to understand the mediation role of fiction on health themes and patients practices changes and representations;

4. Institutional sites and blog content analysis with explicit health subjects, to perceive how Internet is institutionally and individually appropriated for its health content availability, what purposes are trying to be reached and which vision on Internet use seems to be dominating the health field in Portugal.

Using these research instruments has allowed a clarification of the questions presented at the start, covering diverse analysis dimensions in this problematic, i.e., constructing an individual autonomy in the health domain, through information and communication access; constructing and managing professional autonomy with Internet and television roles as means of communication, and information diffusion and promotion in this field.

In this paper we will focus on the questions related directly with the internet use for health purposes.

2. Internet health contents

Health General Content on Internet

Internet development and its use in health care and health divulging and information gave patients new opportunities to be "informed" about their health and well being. As seen above, using Internet integrated functions (sites, theme directories, and blogs) by different agents reflects on an Internet user's interaction level increase with the health system[2], enabling different interaction levels in established connection processes.

With the intention to understand how health information is shown on Internet, which are the available contents, the origin and intention of divulged information, which are the audiences that seek it and specifically, what is more sought, the option was to classify gathered information on main health directories available online (*Google* and *Sapo*) and present major online search results guided by key expressions – in Portuguese and English – in *Google* and *Sapo*[3].

Considering developed work at IN3, of Universidad Oberta da Cataluña, several main obstacles to the selected work methodology were identified, such as: 1. Difficulty to classify behaviours that different agents

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[2] Health system: group of institutions, organisations, unities and agents with health related activities.
[3] www.google.com/trends
http://www.google.com/trends?q=health&ctab=0&geo=PT&date=all

undertake when searching on Internet [4] (criterion and search engines, available information choice, language choice) and available resources and information given by health system entities and institutions to agents and individuals interacting with the health system through the Internet; 2. Difficulties (impossibility) accessing *Google* information (main search engine) concerning searched themes and geographical distribution of computers where searches are done. To elude these obstacles, a methodological strategy was chosen, combining a qualitative approach with one more quantitative.

In terms of the qualitative approach, the analysis is done based on categories creation grouping different health system agents present on Internet, and respective analysis on content information and available services on theme directories (*Google* theme directories are made of different URL's selected by an editorial body, consisting of international members, analysing site contents and including them in a specific directory). In parallel a survey was made about the three main results given by key expressions, in Portuguese and in English, beginning with most sought available information, since Google search engine is based on a ranking which articulates and organizes searches guidance's based on most sought links[5]. Blogs methodological treatment will also have themes, developed whether on contents level, as on its origin creation and destined target-public.

To illustrate and put into context the analysed information, different results for Portuguese terms "*saúde*" *(health)* and "*doença*" *(illness)* obtained in search engines (*Google*, *Sapo*) are presented in the tables below, along with results obtained with the English translation of the same terms – *health* and *disease* – confirming the existence of a smaller health information volume available in Portugal/portuguese.

Table 1 Results obtained on *Google*

Search terms	Number of *GOOGLE* results		
	Results "on all network"	Results "on Portuguese written pages"	Results "on Portugal pages"
Health	84.000.000[6]	81.000.000[7]	7.070.000[8]
Disease	17.500.000[9]	26.900.000[10]	1.180.000[11]
Disease	17.200.000[12]	28.300.000[13]	1.120.000[14]

[4] Contextualisation data: AIMC (Asociación para la Investigación de Medios de Comunicación) advanced date referring to February 2005, where 92,9% of Internet users claim having made, in the 30 days prior to the questionnaire, at least one Internet search based on health related matters. Most visited sites are *Google* (9,4%); Hotmail (4,1%). *Google* is also mentioned as the most used search engine.

[5] "In essence, Google interprets a link from page A to page B as a vote, by page A, for page B. But, Google looks at more than the sheer volume of votes, or links a page receives; it also analyzes the page that casts the vote. Votes cast by pages that are themselves "important" weigh more heavily and help to make other pages "important." (...) [google] combines PageRank with sophisticated text-matching techniques to find pages that are both important and relevant to your search. Google goes far beyond the number of times a term appears on a page and examines all aspects of the page's content (and the content of the pages linking to it) to determine if it's a good match for your query."http://www.google.com/technology/index.html [research date: 2006-26-06]

[6] <http://www.google.pt/search?hl=pt-PT&q=sa%C3%BAde&btnG=Pesquisar&meta=> [consultation date June 16 2006]

[7] <http://www.google.pt/search?hl=pt-PT&q=sa%C3%BAde&btnG=Pesquisar&meta=lr%3Dlang_pt> [consultation date June 16 2006]

[8] <http://www.google.pt/search?hl=pt-PT&q=sa%C3%BAde&btnG=Pesquisar&meta=cr%3DcountryPT> [consultation date June 16 2006]

[9] <http://www.google.pt/search?hl=pt-PT&q=doen%C3%A7a&btnG=Pesquisar&meta= > [consultation date June 16 2006]

[10] <http://www.google.pt/search?hl=pt-PT&q=doen%C3%A7a&btnG=Pesquisar&meta=lr%3Dlang_pt> [consultation date June 16 2006]

[11] <http://www.google.pt/search?hl=pt-PT&q=doen%C3%A7a&btnG=Pesquisar&meta=cr%3DcountryPT> [consultation date June 16 2006]

[12] <http://www.google.pt/search?hl=pt-PT&q=doenca&btnG=Pesquisar&meta=lr%3D> [consultation date June 16 2006]

[13] <http://www.google.pt/search?hl=pt-PT&q=doenca&btnG=Pesquisar&meta=lr%3Dlang_pt> [consultation date June 16 2006]

[14] <http://www.google.pt/search?hl=pt-PT&q=doenca&btnG=Pesquisar&meta=cr%3DcountryPT> [consultation date June 16 2006]

Table 2 Results obtained on *Sapo*

Search terms	Number of S*apo* results
Health	1076[15]
Disease	135[16]
Disease	135[17]

Table 3 Results obtained on *Google* with English entry word

Search terms	Number of *GOOGLE* results		
	Results "on all network"	Results "on Portuguese written pages"	Results "on Portugal pages"
Health	4.020.000.000 [18]	2.700.000 [19]	651.000 [20]
Disease	602.000.000 [21]	984.000 [22]	1.180.000[23]

The methodology used on the quantitative approach for the gathered and selected sample allows a categorization and comparison on health related results selected on Internet. This is a process enabled by URL (Uniform Resources Locator) working as a transversal categorization to all Internet existing contents (Alonso, 2003).

This analysis is made by two processes: **syntactic analysis** and **static qualitative analysis**. The first one consists on decomposing URL's in two segments: in protocol; at *fully qualified domain name* (FQDN) and on servers' document detection. Protocol consists on the formal description of the message format and rules computers must follow to exchange messages (ex: http://). FQDN is the name of the qualified domain of the generalized use data search engine or the name of the central system (ex: in http://wikipedia.org/wiki/Egon, wikipedia.org is the FQDN). The document location within each document server is given by the "tree" accompanying each document and positioning it on a servers map or site (ex: in http://wikipedia.org/wiki/Egon, /wiki/Egon is the document location on the server).

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[15] <http://pesquisa.sapo.pt/searchTop?barra=resumo&chan=&channel=&t=0&txtTexto=&q=saude> [consultation date June 16 2006]
[16] <http://pesquisa.sapo.pt/searchTop?barra=resumo&chan=&channel=&t=0&txtTexto=&q=doen%E7a> [consultation date June 16 2006]
[17] <http://pesquisa.sapo.pt/searchTop?barra=resumo&chan=&channel=&t=0&txtTexto=&q=doenca> [consultation date June 16 2006]
[18] <http://www.google.pt/search?hl=pt-PT&q=health&meta> [consultation date June 19 2006]
[19] <http://www.google.pt/search?hl=pt-PT&q=health&btnG=Pesquisar&meta=lr%3Dlang_pt> [consultation date June 19 2006]
[20] <http://www.google.pt/search?hl=pt-PT&q=health&btnG=Pesquisar&meta=cr%3DcountryPT> [consultation date June 16 2006]
[21] <http://www.google.pt/search?hl=pt-PT&q=disease&btnG=Pesquisar&meta=lr%3D> [consultation date June 19 2006]
[22] <http://www.google.pt/search?hl=pt-PT&q=disease&btnG=Pesquisar&meta=lr%3Dlang_pt> [consultation date June 19 2006]
[23] <http://www.google.pt/search?hl=pt-PT&q=disease&meta=cr%3DcountryPT> [consultation date June 19 2006]
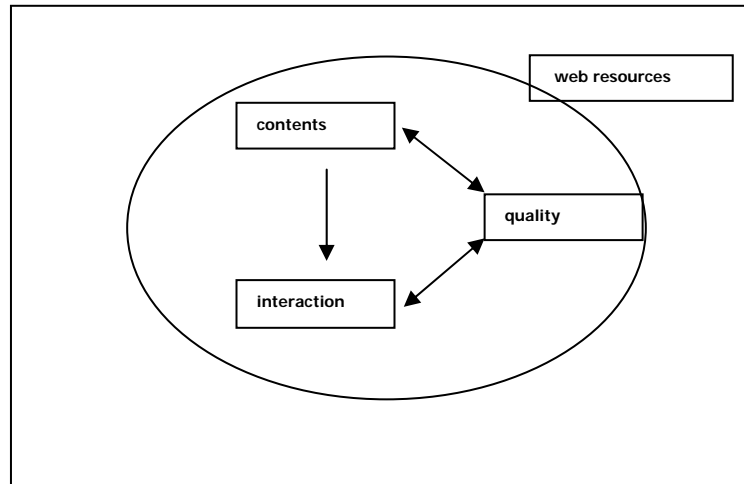
Figure 1 Criteria relation analysis

The static qualitative analysis (Bauer, 2000) of given content results (gathered sample) is based on binary and dichotomy indicators (yes/no) to maximise the analysis objectivity regarding the relation and interaction showed on the following figure.

Aiming to explain the indicators shown in the figure above – *contents*, *interaction* and *quality* – follows a brief description of each of them.

With **information contents**[24] we intend to discover the existence of health related contents; the existence of a post address to write to, asking for clarifications or information; an available phone number and the existence of publicity. **Interaction** can be established between agents in Internet through communication and services. In communication there is the intention to discover functions enabling to establish communication processes, namely through an available address or email for contacts/answers; an available distribution list; through e-forums, chats and online questionnaires. With services, we intend to identify activities destined to satisfy users' needs through Internet like the possibility to use e-commerce; the existence of inquiry forms; the existence of a restricted area access (with login and password) and the existence of other online transaction types. **Quality** criteria are based also in the health information concept definition of eHealth Code of Ethics – Health Informatics Europe 2000 and are related to contents; to communication and services as well as web resources. Content **quality** is checked through the existence of information about the content author; his professional profile and information on the content publishing

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[24] Substantiated on the definition of the health information concept of eHealth Code of Ethics – Health Informatics Europe 2000 "information that may be useful to maintain health, prevent diseases, as well as making health related or health aid decisions". http://hi-europe.co.uk/files/2000/ehealth_ethics.html

date and quality of communication and services rendered, identified by the existence of privacy and confidentiality clauses, and other legal matters.

Web resource quality is judged by the existence of a site map; languages available; associated or existing search engines; FAQ availability; "Help" existence; the existence of web resource accreditation and the existence of objectives and/or resource purpose.
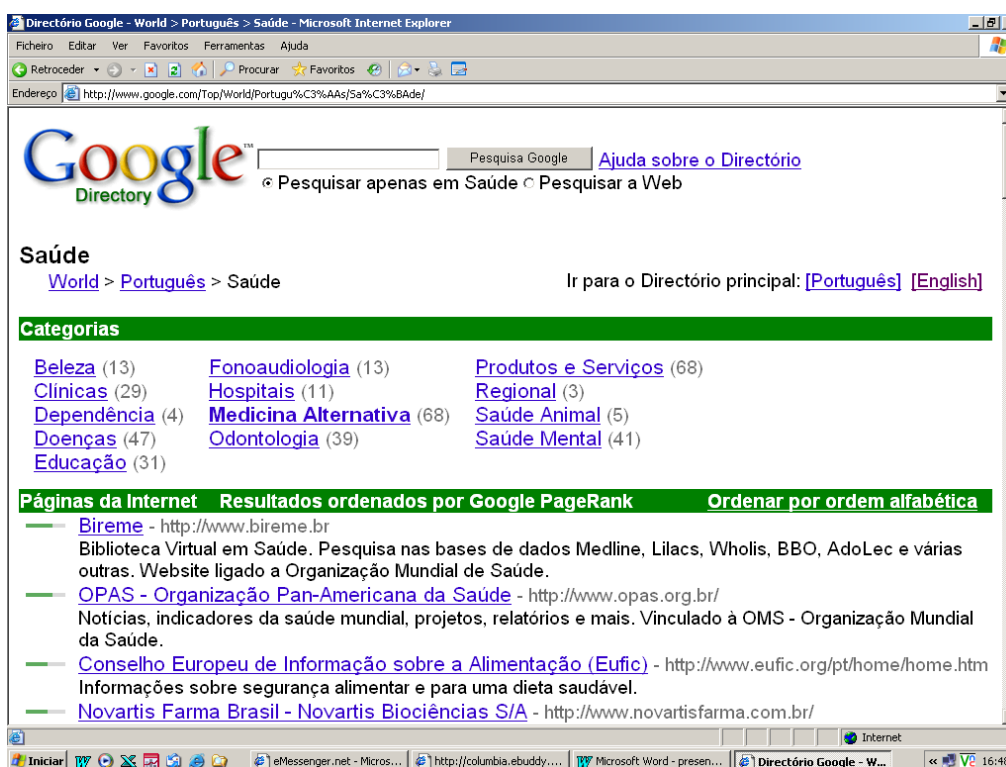
Figure 2 *Google* health directory options

This kind of analysis allows a systematic assessment in different health field web contents, and simultaneously a comparative analysis with web contents and resources developed in other countries, namely Spain (Catalonia), United States and United Kingdom, where similar projects are being developed.

Google Health directory

In *Google Health* directory in Portuguese 382 records were found within the health department, distributed by the following categories:

When the **_hospitals_**[25] option was selected, 26 records were found, from which only 2 are Portuguese and related to the same hospital (Santa Maria de Faro Private Hospital).

When selecting only Portugal[26]results:

By region, the research developed in three specific regions: Coimbra, Lisbon and Porto. Curiously, none of the results obtained regionally is similar to the indicators presented for the national search. As for the thematic analysis of the indicators found, national and regionally, the following distribution is observed according to the categorization that was made, concerning specifically web resources contents origins and its services.

Table 4 Indicators Categorization

Categories		National	Coimbra	Lisbon	Porto
Institutional public	Government – health system general and structural information	5	-	-	-
	Hospitals – available services	1	4	1	1
	Support Centres/Ambulatory Care	-	2	-	-
Institutional private	Health insurances	1	-	-	-
	Health club, nutrition, massages	-	2	1	2
	Imaging/exams – available services	-	3	-	-
	Medical specialisation – available services	-	5	9[27]	-
Professional Associations		8	-	-	-
Patient/User Associations		9	1	-	-
Pharmaceutical Industry		3	-	-	-
Services promotion through general health information divulging		3	-	-	-
Specific themes divulging		2	-	-	-

Hence the conclusion that, by region, it is in centre of the country that there is a greater interest in having sites available in _Google Health_ directory, namely concerning sites related to hospital available services and existing private clinics identification/enunciation of services. In Lisbon region, clinics information and psychiatric and psychology private practices stand out. In Porto, in spite of the few records, two URL's related to body care must be referred. At a national level, concerning themes, there is a greater interest from professional associations to facilitate information concerning their activity, as well as patient or users associations in sharing information about their specific health problems.

When the option **_disease_**[28] was selected, 33 records were shown, 14 of which with Portuguese origin.

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[25] World > Português > Regional > América do Sul > Brasil > Saúde > Clínicas e Hospitais [consultation date 26-06-06]
[26] http://www.google.com/Top/World/Portugu%C3%AAs/Regional/Europa/Portugal/Sa%C3%BAde/ [consultation date 26-06-06]
[27] From 9 references found, 6 concern psychiatric and psychology specialties and another one health support given to a political party youth.
[28] http://www.google.com/alpha/Top/World/Portugu%C3%AAs/Sa%C3%BAde/Doen%C3%A7as/ [consultation date: 26-6-2006]

The following table lists according to themes the available information in the **_health_** category. The analysis presented tries to differentiate the general/specific nature of addressed diseases, as well as the site nature and origin.

Table 5 Health Categorisation

Categories		Portugal	Brazil
Specific disease	Patient/users associations	4	5
	Health specific site	5	11
	Health general site	4	1
	Personal site specifically on health/pharmaceutical industry	-	2
General information		1	-

Although a greater occurrence of Brazilian origin sites with available disease information and sharing is noticeable, some activity in Portugal is already observed, with a concern to make concrete diseases information available on specific or more general sites. There has been observed also the intention of patient/users to promote sites where experiences are shared and group initiatives promoted, with the purpose of helping to soften/overcome the effects of specific diseases. Still in a phase of the research project where gathered data is being analysed, it is not possible to further definitive conclusions about the ongoing analysis. However, it is noticeable that health information available on Internet in portuguese (from Portugal and not from Brazil), is mainly institutional, with much more frequent contents of a formal nature (institutional, descriptive and functional) than "health" or "disease" contents, more frequent in brazilian portuguese and incomparably more frequent in english.

There is also an institutional concern to be present on Internet, an expression that has already some tradition in Portugal, the possible tradition considering the few years of www existence, but even so, a high expression in the Portuguese case. But more specific contents about diseases and health do not have such a high expression (consider table 1). It is worth adding the great expression on _Google_ directory on Alternative Medicine, where Brazilian sites proliferation is considerable. This is necessarily an aspect to explore in content analysis and its future interpretation.

Health content analysis on Internet in this research domain is still in progress, making it impossible to present more concrete results in the Portuguese case. However, due to some research carried through internationally, it is possible to further some conclusions. In Catalonia's case, for example, conclusions from the study being carried out in parallel with the "Health in the Information Era" project, lead in its preliminary report to the conclusion that Internet is being confirmed as a reference space for health related

information searches. Beyond this, other issues begin to be outlined, going further than simple online research, related with processes or services requiring a more complex interaction level.[29]

Currently in Portugal, better yet, when an Internet search on health contents is made on national sites, health related information and contents are found, but not communication processes or services with a higher interaction level, as observed in Catalonia. Crossing Internet available information with what users search for and wish to consult, will allow to understand the existence, or not, of a correspondence between contents offer and services and the users expectations.

Health Blogs

Concerning blogs[30], the research approach developed is similar to the one used on general health contents on Internet, although more centred on the qualitative type of approach. From the research list and subsequent interconnected links follow-up, it is possible to analyse selected blog content addressing health themes. Since there is a great content amount and variety, blogs are not, apparently, used by the medical class as a professional nature communication tool, as defended by Canavilhas (2004). The mentioned author suggests an analysis typology to health related blogs that is being used in this research, with necessary adjustments for this research purposes, beginning with the presented categorisation, systematised and adapted, on table 6.

Table 6 Health Blogs typology analysis

Authorship/Origin	- Health professionals (doctors, nurses, pharmacists, health technicians, etc); - National Health system professionals, but with non-medical/health professions; - National Health System patients/users
Purpose	- Communication between professionals - Communication with patients and general public - Communication with professionals/patients
Prevailing Contents	- Diaries centred on the health theme - Mixed diaries (health and other issues) - Health politics - Practice - Research/news in the medicine field - Teaching - General information

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[29] Preliminary Report of the project "Análisis de la Presencia en la Red del Sistema de Salud Catalán", INA, UOC, 2006
[30] A **web log** or **blog** is a web page which updates (called *posts*) are chronologically organised backwards (as an historical or journal). These *posts* may or may not belong to the same writing kind, refer to the same subject or have been written by the same person. The majority of blogs are blends where *bloguer's* write freely and was first used in 1997 (http://pt.wikipedia.org/wiki/Blog).

Even without completely systematised and treated information, it is possible to see, at a first approach on health blogs available online, that in most cases their content is built from a selection and comment on a given event or news, coming from other sources and highlighting only one part[31]. General information blogs and diaries are predominant. "Online practices" through blogs are practically non-existent. Interactivity is very limited.

Blog use as a space for discussion and political claims is rather significant on the case of health blogs, revealing the public nature of this platform and the clear expectation that the blog will be consulted by peers or by patients/public in general, and ideas shown there may have active or passive recipients. Public discussion over the National Health System is recurrent issue. An intensive theme approach of these blogs will allow a better understanding of its creator's expectations.

3. Searching for health contents on Internet

Internet Users and Health

An approach by the contents offer side would not make sense if it was not looked upon according to users' information search with Internet research, but also to what they expect to find when watching health fiction programs. Does anything change in their perception of health issues, in their relation with the formal health system, in their contacts with health professionals? Where does that change come from? And in what direction, if it does happen, is it going?

As it was said before, health information research practices have been undergoing deep changes, due to the appearance of new information and communication technologies, namely Internet, but also television, giving contents another kind of solutions in terms of speed, diversity and accessibility regarding more traditional means of research on the health field. Therefore it is fundamental, first of all, to understand the role Internet takes on for medical and health information research in Portuguese society, considering that 35,5% of Portuguese had direct and regular access to the *web* in 2006.

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[31] http://medicoexplicamedicinaaintelectuais.blogspot.com/;
http://saudesa.blogspot.com/
http://www.desabafosdeummedico.blogspot.com/
http://culpadomedico.blogspot.com/
http://internblues.blogspot.com/
http://cronicasmedicas.blogspot.com/
http://www.desabafosdeummedico.blogspot.com/
http://algumaspassagens.blogspot.com/
http://hipocrates.blogspot.com/
http://iceteaaddict.blogspot.com/
http://tabemexisto.blogspot.com/
http://100norte.blogspot.com/
http://compingadesangue.weblog.com.pt/

Data presented at such point are the result of the survey to the Portuguese population about ICT and Health – applied to a representative sample of the Portuguese population[32]. It was then possible to identify social behaviour patterns and observe whether Internet and television contribute to transforming, or not, this behaviour and in what conditions, i.e., understanding how Portuguese population deals with health issues and which is the ICT role in this relation, at practices and representations level.

Therefore 1/5 of Portuguese population aged 15 or more, claiming to be an Internet user, uses this platform to get information about medical and/or health issues. It was then possible to see that age groups where the proportion of this type of practice is higher are not exactly those who would have more health problems in principle but those who have more skills in using this kind of technological tools.

Table 7 Internet use in Portugal to search for medical/health information

	%
Yes	19,6
No	79,7
N/A	0,7
Total (n=589)	100,0

Source: Cardoso, Gustavo, Rita Espanha and Maria do Carmo Gomes, *Network Society in Portugal* survey, CIES-ISCTE, 2006.

As seen on the following table individuals aged 25 to 44 are those claiming to use Internet to research for health related information. While we go further on the age groups this proportion tends to decrease, not because, as mentioned before, these persons do not have health concerns, but because they do not use this information support.

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[32] The presented results were gathered by a questionnaire survey to a representative sample of Portuguese population, aged 8 or more, living in mainland Portugal, in the scope of a study about the *Network Society in Portugal 2006* (CIES-ICTE), coordinated by Gustavo Cardoso (Cardoso, Espanha and Gomes, Network Society in Portugal 2006). Fieldwork was carried out by MetrisGfK, during the 1st semester of 2006. In the case of specific questions about health and media the sample was reduced through a filter to the age group of 15 or more.

Table 8 Internet use in Portugal to search for medical/health information according to age groups

Age groups	Yes %	No %	N/A %	Total (n=589) %
16-17 years old	10,2	89,8	0,0	100,0
18-24 years old	18,1	80,7	1,2	100,0
25-34 years old	24,1	74,7	1,2	100,0
35-44 years old	24,8	75,2	0,0	100,0
45-54 years old	11,7	88,3	0,0	100,0
55 and more	16,6	83,4	0,0	100,0
Total	19,7	79,6	0,7	100,0

Source: Cardoso, Gustavo, Rita Espanha and Maria do Carmo Gomes, *Network Society in Portugal* survey, CIES-ISCTE, 2006.

This kind of research is done more by women (22% of women claim these practices) than by men (17,6% of men). At the same time individuals with a conjugal experience (married or living together) present slightly higher rates to the total of the global distribution over this question.

Table 9 Internet use frequency in Portugal to search for medical/health information

	%
Several times a week	2,2
Several times a month	16,9
Several times a year	22,1
Once in a while	56,7
N/A	0,1
Total (n=115)	100,0

Source: Cardoso, Gustavo, Rita Espanha and Maria do Carmo Gomes, *Network Society in Portugal* survey, CIES-ISCTE, 2006.

Concerning Internet use frequency to search for health information, the previous table shows clearly that the majority of those claiming this practice do it just once in a while, sporadically and not regularly (56,7%). Around 1/5 affirms searching for this kind of information several times a year (22,1%). Having even lower rates, are those doing it several times a month (16,9%) and with a very residual proportion those claiming to do it several times a week (2,2%).

Even if it is interesting to understand what proportion of Portuguese population has this kind of practice and how regularly, it is also relevant to identify if the information they search is for themselves or for others, considering what was mentioned before. The majority of portuguese looks for medical and health information for themselves (83,1%), followed by a significant percentage doing it for someone close or in

the family (66,2%). Having rates under 10% are the options to search for health information for work colleagues (8,9%) and also, having nonetheless some expression, for unknown persons whose request comes through friends or acquaintances (7,9%).

Table 10 Medical/health information search recipients in Portugal

	Yes (n=115) (%)
For himself	83,1
For someone close/family	66,2
For work colleagues	8,9
For unknown persons, whose request is made through friends and acquaintances	7,9

Source: Cardoso, Gustavo, Rita Espanha and Maria do Carmo Gomes, *Network Society in Portugal* survey, CIES-ISCTE, 2006.

These rates show behaviours that in some ways reshape the doctor/patient relationship. Not only because a Portuguese great majority searching for medical and health information uses Internet to access more information for themselves, but also because they are doing it for others, with the emergence of a new information trend for a third party, which would not be possible in the personal relation with doctors, perhaps not for family, but certainly concerning unknown persons.

Table 11 Medical/health information search reasons in Portugal

	Yes (n=115) (%)
Because information access is fast	86,0
Because it is easy to find and search for information	82,0
Because there is a great amount of information available	81,6
Because information is free	78,4
Because research is private/confidential	56,7
Because I have the need to resort to several information sources	48,9

Source: Cardoso, Gustavo, Rita Espanha and Maria do Carmo Gomes, *Network Society in Portugal* survey, CIES-ISCTE, 2006.

Regarding search reasons, it is worth highlighting that main reasons presented concern, precisely, potential advantages of using a technology like Internet: fast access, easy research and available information amount. Another valued aspect is the fact of being fundamentally free information.

In his qualitative analysis, Kivitz (2004) presents as one of the reasons for Internet health information searches, the fact that doctors do not give patients the answers they need. As a health information source,

Internet offers a wide variety of sources and forms of health related information, as seen above, from commercial sites selling fitness products to science and medical magazines, *peer-reviewed*, with articles based on science research and news of the medicine field. Those searching on Internet seldom do it from just one source, general and commercial searches merge with medical searches at the same level, being given by the user the same importance, turning Internet consultation in the health field a very peculiar experience to the "informed patient". On the following table it can be observed:

Table 12 Medical/health information search means in Portugal

	Yes (n=115) (%)
Search engine	84,5
Internet sites recommended by someone	43,2
Internet sites referenced on magazine articles, newspapers or books	37,8
Links from other sites or Internet advertisement	25,7
Other means	9,6

Source: Cardoso, Gustavo, Rita Espanha and Maria do Carmo Gomes, *Network Society in Portugal* survey, CIES-ISCTE, 2006.

A great majority of searches about the health field are made using search engines, not choices and selections made by other communication mediators. So, there is no mediation between the user and the information itself, with a personalised nature, whether by health professionals, journalists or close persons. However the user debates himself with difficulties proceeding exactly from this lack of mediation, the main one being referred as "wanting more information and not knowing where to find it" (35,5%) or even "not having time to find all the required information" (31%). Regarding information costs, they are not perceived as a limitation, since the user looks mainly for free health information. On the following table major constraint forms found by users during health research can be found:

Table 13 Medical/health information search characteristics in Portugal

	Yes (n=115) (%)
Wanting more information and not knowing where to find it	35,5
Not having time to find all the required information	31,0
Making a great effort to find required information	20,9
Getting worried about found information quality	14,1
Not having energy to find all the required information	12,9
Getting frustrated during the information search process	10,8
Information having an unbearable price	3,1

Source: Cardoso, Gustavo, Rita Espanha and Maria do Carmo Gomes, *Network Society in Portugal* survey, CIES-ISCTE, 2006.

It is worth adding which type of Internet site has more users' research on health matters. The questionnaire applied enabled to short-list as most researched three main types which are *general health sites*, *public health information sites* (ex: gripe.net or saudepublica.web) and *pharmaceutical companies sites*. Less researched are *online newspapers and non-scientific publications sites*, *non commercial medical organisations sites* and *commercial medical organisations sites*. As for Internet most researched themes on health matters it is possible to highlight everything concerning *diseases and treatments description*, *specific insurance programs or health plans* and *Hospitals*. Less researched themes are *retiring homes or residences* and, curiously, *support groups' information*.

Table 14 Medical/health information themes Internet search in Portugal

	Yes (n=115) (%)
Diseases and treatments description	11,4
Specific insurance programs or health plans	8,3
Hospitals	8,2
National health system	7,9
Alternative medicine treatments	6,0
Doctors	5,8
Medical and scientific literature	5,4
Medical or health products (glasses, hearing devices, prosthesis, etc.)	4,2
Experimental treatments	4,0
Prescription drugs	3,9
Support groups information	2,5
Nursing-home or other healthcare provider institution	1,9
Retiring homes or residences	1,5

Source: Cardoso, Gustavo, Rita Espanha and Maria do Carmo Gomes, *Network Society in Portugal* survey, CIES-ISCTE, 2006.

Concerning most researched information on health issues, consider the following table:

Table 15 Medical/health information search on Internet in Portugal

	Yes (n=589) (%)
Fitness and physical exercise	16,2
Nutrition and eating disorders (ex: obesity, anorexia, bulimia, etc.)	11,7
HIV/AIDS	11,2
Drug, alcohol abuse and drug addiction	9,7
Sexually transmitted diseases	9,6
Allergies	9,4
Cancer	8,5
Depression or anxiety	7,3
Flews and colds	6,9
Heart diseases	6,8
Birth control methods (ex: pill, condom, IUD, etc.)	6,1
Headache	5,9
Beauty and well-being (ex: plastic surgery, silicone implants, beauty products)	5,7
Childhood typical diseases	4,7
Diabetes	4,6
Osteoporosis	4,3
Fertility and pregnancy	4,2
Alzheimer	4,0
Mental diseases	4,0
Sexual capacity and performance	4,0
Asthma	3,9
Backache	3,9
Next day pill and voluntary interruption of pregnancy	3,8
Family planning	3,6
Insomnia	3,5
Prostate diseases	2,7
Menopause	2,5
Toothache	2,2
Andropause	1,7
Incontinence	1,5
Arthritis	1,5

Source: Cardoso, Gustavo, Rita Espanha and Maria do Carmo Gomes, *Network Society in Portugal* survey, CIES-ISCTE, 2006.

It is possible to check that most searched information concerns *Fitness and physical exercise* (16,2%), *Nutrition and eating disorders* (11,7%), *HIV/AIDS* (11,2%), *Drug, alcohol abuse and drug addictions* (9,7%) and *Sexually transmitted diseases* (9,8%). This refers us to the discussion raised by Graça Carapinheiro, already mentioned in this article introduction, whether we should talk about health or disease sociology, and which are the privileged themes in contemporary societies, so medically defined. There must

also be a reference to the importance of crossing age groups and health researches. Most appreciated themes here are also the ones most valued by users' lower age groups searching for health information on Internet, the ones that are also the biggest users of this platform, showing a kind of "*generation divide*" in the "*informed patient*" concept.

4. Final Notes

The paper here presented concerns a research still in a beta stage, reason why it frequently presents analysis and not substantial conclusions. However some aspects from the research done can be highlighted.

One of the main aspects to point out, on the multidimensional analysis that has been done, is that individual health and its daily management, historically, never involved as much information as today.

As Sarah Nettleton, Roger Burrows and Lisa O'Malley (2005) support, in this analysis there is present the objective of understanding, not only how people use Internet concerning health, but specially, how health communication influences not only their practices as well as their portrayals - hence the health content anaysis relevance given in this study also to television.

Assuming we live in complex societies where information and communication, and consequently mediation, are increasingly present, and where through the Internet we live the unique experience of being able to experience both virtual space and time, we must recognize that all these specificities of our era cause deep changes on all human activity spheres. One of these changes dwells precisely in promoting individuals autonomy towards social contexts.

We resume, therefore, the initial question: what is the meaning of daily information and communication practices to the health problem individual management?

Data presented here show us that also, in Portugal, Internet appears as an alternative to more traditional methods to obtain health information. We witness, simultaneously, a generalised confidence in medical practices and treatments they offer, but also an increasing need of information regarding scientific medicine, and often a kind of disillusion with traditional scientific medicine (seen through the great online information search about alternative medicines). This kind of information search along with a younger generation that focuses most on health themes (not so much disease) shows that parallel to the "*informed patient*" concept, we must consider also in our approaches the "*generation divide*" concept.

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