Patient satisfaction, e-health and the evolution of the patient–general practitioner relationship: Evidence from an Italian survey

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ABSTRACT

Background: Scientific and public interest in the use of the Internet for health-related purposes has grown considerably. Concerns regarding its impact on patient–doctor relationship and risks for patients have inflamed the debate. Literature provides scarce evidence in this field. This paper investigates whether a patient's decision to use the web also depends on previous experience and satisfaction with healthcare.
Method: Statistical analyses were conducted using data from a survey of more than 1700 citizens in Tuscany (Italy). The Andersen behavioural model was adopted as framework for investigating two patient behaviours: Internet use for health-related purposes; discussion of online findings with the physician. Two separate multivariate logistic models were performed to verify whether satisfaction and experience with healthcare system and general practitioners were associated with the e-health behaviours.
Results: Age, education and dissatisfaction with the healthcare system are the main determinant factors of e-health use. The behaviour of sharing the e-health experience with general practitioners is more diffused among those patients who are more satisfied with physicians for the involvement in the decision-making process and suggestions on life-style.
Implications: Whether patients choice to share information found online with the doctor depends on the ability of the doctor to engage patients in decision-making, e-health can produce a 'double-empowerment' process: experienced by the patient on the Internet, and legitimated by the doctor during encounters.

1. Introduction

The expression "e-health" refers to health services and easily updated health-related information enhanced or provided by the Internet and related technologies [1–3]. Traditionally, healthcare professionals are the patients' most reliable source of health-related information. Greater accessibility to the Internet and the broad availability of online health-related information have provided a new source of health knowledge for people. Currently, 59% of Europeans go online when looking for health-related information [4]. The growing use of e-health [5–7] and its potential contribution to the goals of prevention, promotion and protection in health-enhancing strategies [8–10] have made e-health a key issue for healthcare managers

and policy makers, as well as being an area of interest for the scientific community.

Doctors also need to face tackle the challenges related to e-health, particularly in light of the increasing number of informed patients. E-health can affect the physician–patient relationship, as patients become more (well or badly) informed. Furthermore, the doctor–patient relationship is changing, also in terms of the medical decision-making process. The patient's role is progressively shifting from the compliant or silent patient, to the patient who wants to take his/her own decisions. A consensual, or collaborative, decision-making process requires more than a top–down process [11]. Thus, the patient behaviour of reporting information found online to the physician could be crucial in the development of a better patient empowerment, because based on the legitimation and validation of information found online.

Currently, the evidence on these issues is somewhat conflicting. In the literature, we found agreement only on the general profile of patients who adopt these technologies of information and communication (e-patients). There is also a great fragmentation of empirical research at three levels: (i) the typology of population studied and the sampling methods; (ii) the focus of the study (i.e. different health-related purposes of Internet use or e-patient behaviours after the Internet search); (iii) the determinant factors used to analyse the focus of the study.

Our study thus focuses on two specific patient behaviours: (i) using the Internet for health-related information; (ii) sharing the information found online with the general practitioner (GP). The aim of this research is to investigate whether these two patient behaviours are affected by the previous relationship and experience with the GP and the healthcare system. Multivariate logistic models were used to estimate the associations between patient characteristics, experience and satisfaction with the physician and the healthcare system, and the two patient behaviours described above. Lastly, this work provides insights into the potential role the GP could still play in strengthening the relationship with the patient, also when e-health is used. The Andersen's behavioural model, developed and widely used for investigating patients' health-related behaviours [12], was adopted as framework for testing if and how potential influencing factors impact e-health behaviours of interest.

2. Background

Table 1 reports the results of our literature analysis of e-health related surveys and articles on the use of the Internet for health-related purposes. Despite the wide interest in this topic, the scientific basis of e-health behaviours determinants still needs to be established and the evidence seems limited [2,13,14]. In general, most surveys on e-health use have tended to use skewed samples [15], such as: patients with specific conditions [16–19], patients interviewed in the place where the healthcare service is provided [20–23], Internet users surveyed during the online experience [24–31], or healthcare providers [23,32].

Moreover, published studies on e-health have been conducted both at national [5,16,20,23,24,26], and local levels

[21,33–35], and most of them in the USA [25,28,35–41]. In the Italian context, we found some studies on e-health [20,33,42] that were not always able to provide population-based estimates of Internet use, its relationship to socio-economic status, and behavioural consequences associated with the relationship with GPs. Furthermore, although associations with previous satisfaction and experience with GPs and healthcare services may seem obvious, they have not been widely explored.

2.1. The e-health user profile

Results from empirical studies on e-health are conflicting, with the sole exception of the e-patient profile in terms of age (young adult or adult, usually between 18–45 years old) and educational level (medium–high) [5,20,21,24,33,36–39,42–46]. There is no gender-difference in most research works. Only certain studies have found that women are more likely to surf the Internet for health information [5,41,47]. Patients' health conditions (one or more chronic diseases or bad self-perception of health status) have both been found to be associated [5,20,24,45], as well as not associated with e-health use [22,38,39,48]. In a few studies, patients' bad experience and dissatisfaction with their relationship with primary care (PC) services or the healthcare system were found to be determinant in deciding to use the Internet for health-related information [20,25–28,38].

2.2. The e-patient behaviour and the relation with the GP

Despite the physician remaining as the most preferred and trusted source of information for patients [5,34,36,40,42,49–51], by using the Internet, the patients could occupy a new position in the relationship with the family doctor and have a different kind of power in the decision-making process [52]. The Internet is considered as a potential powerful tool for health education and empowerment [15,30,51,53–56], as well as for a positive reconsideration of the patient–doctor relationship [57]. Some studies have investigated the consequences of Internet use by patients in terms of change in general health-behaviour [5,16,20,29,58] and/or in the relationship with physicians [5,20,26,27,30,36,37,40,59].

Among the e-health related behaviours described in literature, the e-patient choice of sharing information found online with the GP is considered an important step in the patient empowerment process. In fact, some authors have described this latter not only as an individual pattern, but also as product of a complex process involving several actors, based on interactions and relationships and on a productive partnership with the family doctors [55,60–62]. In this sense, the empowerment process is thus also based on the legitimation by an expert professional of the new knowledge acquired on the Internet [29].

However, we found a great variability in the literature of the rates of e-patients who discuss the information found online with their GP: more than a third [59], almost two fifths [35,63], almost a half [26]. In a few works, the e-patients did not report any of their health-behavioural changes to the family doctor [27,50]. We were