

The importance of patient engagement and the use of Social Media marketing in healthcare

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Abstract.

BACKGROUND: The present research aims to identify the application of social media for marketing or communication purposes in healthcare. We studied the opinion of healthcare professionals, organizations and health consumers, trying to identify the current status, trends and beliefs. The research reveals that healthcare organizations have to move forward and engage with their customers. The health consumers are more mature than the health providers. The descriptive characteristics of the sample's responses collected during the survey are presented.

OBJECTIVE: The current research tries to identify the application of social media for marketing or communication purposes in healthcare in Greece. The scope of the paper is to investigate the status in Greece and compare it with other countries.

METHODS: We studied the opinion of healthcare professionals, organizations and health consumers, trying to identify the current status, trends and beliefs. We formed adequate questionnaires which were distributed to the different target groups, while for statistical analysis we performed tests (in order to investigate the dependence between certain respondents' categories) as well as one-way ANOVA analysis for inference purposes. In this context, the results can depict the (average) behavior, as well as the homogeneity of the corresponding general population.

RESULTS: The research conducted took into account the individualities of the Greek environment and revealed that both physicians and healthcare organizations have to move forward in order to engage with their customers. There is also a clear need to measure the effectiveness of any such media marketing effort. Most adopters are not yet-taking maximum advantage of the technology. Social networks are prevalent and several paradigms support their adoption for marketing purposes in the sensitive healthcare domain. Even though the expectations are ambitious, there is a lot of work to do in Greece in order to achieve the desired outcome. An important finding is that patients' attitudes are, in general, differentiated from those of healthcare professionals. Even though the results of the present paper can be generalized, according to the statistical analysis performed, further research would be warranted to cover all possible participants in the healthcare chain. It is clear that both physicians and healthcare organizations have to adopt social media marketing in their daily practice in order to meet the needs of their customers. The present paper advances the current state of knowledge, as there is not any prior study on this field in Greece.

Keywords: Social media, marketing, health, Greece, social networks, social networking

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1. Introduction

Social Media (SM) marketing is widely used in many different sectors. Web 2.0 provides easy access to information and conversations in a wide range of healthcare topics, services and medical products. The time and space limits have been overcome and anyone can get the desired information anytime and anywhere, using an Internet access [1]. The rapid growth of online social networking for health purposes has affected the healthcare systems [2–6]. SM marketing is expected to evolve in the following years [7].

Lately, SM marketing has been used widely in the healthcare industry but not as extensively as in other industries. However, there are several examples of using SM for marketing purposes in healthcare [8–11]. Professionals and companies working in the healthcare industry are living in an era of significant change. Patients, conceived as consumers of healthcare services and products, are increasingly using the Internet to find the right information. On the other side, healthcare companies and professionals strive to attract their potential consumers. The new informed consumer is a demanding one. Healthcare consumers' behavior is influenced by health services, socio-cultural factors and education level [12]. This leads to the need for applying new marketing strategies. The empowerment of patients and the evolution of Information and Communication Technologies (ICTs) have a direct effect on the way health professionals practice [13].

The Health Research Institute conducted a survey [14] about the opinion of patients and healthcare executives regarding the use of SM and of the Web in the field. However, the use of SM and of the Internet in healthcare is not always as simple as it seems (i.e. there is a major concern about the validity of the posted information).

New ways of attracting customers, and influencing patients and health behaviors have appeared (i.e. social network sites, blogs, mobile applications, etc.). However, there are many contradictory views that cast doubt on the effectiveness of such marketing in healthcare, given its particular characteristics (i.e. sensitive data, privacy issues, security issues, the need for a face-to-face meeting with the physician, less control over SM than with traditional marketing, practical and ethical concerns about the ownership of the information transmitted, etc.) [14–16].

The present paper investigates the exploitation and usage of SM for marketing or communication purposes in healthcare in Greece, trying to identify the current status, trends and beliefs. The results of the paper could also be used as a proof of how patient engagement is reinforced in the political process with the role of social media.

2. Materials and methods

The research was conducted in Greece for eight months with the aim to reveal the level of acceptance of SM and of the Internet in the medical world. It focused on health professionals (physicians, nurses, etc.), public and private Health Care Organizations-HCOs (CEO, CIO, administrative staff) and marketers (marketing or brand managers) working in the healthcare industry (in hospitals, clinics or diagnostic centers). Meanwhile, we investigated the opinion of healthcare consumers about similar issues.

The questions were constrained to a minimum number in order to avoid null answers and respondent's fatigue. To this end, we used mostly multiple choice questions. Depending on the answer, some questions were automatically omitted, while others employed in order to fit the interests of the subject. The bulk of the questions were related to SM marketing and its usage in the specific sector from the point of view of the respondent. The questionnaires materialized in Google Docs and were posted online and

promoted through the Internet (i.e. forums, blogs, Facebook, LinkedIn). In parallel, they were distributed to university students (nurse and paramedics).

Our survey measured items related to our main points of interest: profile of the respondent, profession and position in the organization, prior knowledge on the Internet and SM Marketing, interest for being promoted through such channels, ease in interacting with peers or patients through these ICT channels, and personal opinion about these media and marketing trends as far as the healthcare sector is concerned. For some questions more than one answer could be chosen, implying that the resulting sum might extend 100%.

The descriptive characteristics of the sample's responses collected during the survey are presented, while for the statistical analysis we performed tests (in order to investigate the dependence between certain respondents' categories) as well as one-way ANOVA analysis for inference purposes. In this context, the results can depict the (average) behavior, as well as the homogeneity of the corresponding general population.

3. Results

During a period of eight months we collected 285 answers from the health industry and 384 answers from healthcare consumers. The profile of the respondents is presented in Fig. A.1 (see Appendix A). One of the main issues explored in the survey was whether the subject (individual or organization) was interested in being promoted on the Internet for professional reasons. The answers of the organizations demonstrated in Fig. A.2 were derived from public/private hospitals and clinics, as well as from private diagnostic centers (in Greece there are no public diagnostic centers), while the interpretation of the answers provided to the above mentioned question is presented in the next two Figs A.3 and A.4. Another question investigated the diathesis (intention) of the subjects to communicate over the Internet with their potential customers, Fig. A.5. The last question was related to the opinion of the subjects on SM Marketing, Fig. 1.

Finally, we interviewed the healthcare consumers to find out their point of view about the presence of a healthcare provider on the Internet, Figs A.6 and A.7.

Moreover, our analysis reveals that 78.5% of the consumers are seeking some kind of health information on the Internet, while 62% of them are looking for advice on a health problem/disease, and 53.2% are looking for a specific service or product.

The last question of the survey was addressed again to the health consumers and aimed to investigate whether their "final decision would be affected by the information provided on the Internet or by the social media". 17.2% of the respondents answered positively, 10.2% negatively, and 72.7% positively albeit under the condition that the provider of the information was valid and credible (i.e. a hospital or a reputational physician, etc.).

4. Discussion

In our study, the majority of the respondents (Fig. A.1) were physicians (56.8%), followed by HCOs (18.2%), and then nurses (14%) and paramedics (10.9%). The answers given by the executive personnel (CEO, CIO, General Manager, Marketing Manager, administrative personnel) were conceived as the opinion of the HCO for the specific questions.

For the interest in ICT promotion, Fig. A.2 shows that paramedics and nurses have the same degree of interest (the sig. level $0.155 > 0.05$ on the corresponding χ^2 test). ANOVA analysis reveals that Greek paramedics and nurses, in general, have the same low average interest on ICT promotion while physicians and HCOs statistically differ (as the only homogeneous subset is that of paramedics and nurses with sig. level 0.227 while physicians and HCOs are having separately a sig. level of 1.0; see also the means plot of Fig. A.2). Therefore, we may say, with statistical certainty, that HCOs in Greece are the most interested (on average) in ICT promotion, while nurses and paramedics have the same least interest, which is in line with the sample's outlook (Fig. A.2).

Nurses and paramedics have the same profile in terms of will for ICT marketing (see Fig. A.3a where the sig. level between them is $0.906 > 0.05$ on the χ^2 test), while physicians and HCOs also have the same profile (sig. $0.348 > 0.05$ on their test). The above situation can be justified on the grounds that most physicians were self-employed and in constant search of “customers”, while nurses and paramedical staff worked mostly as employees and therefore their organization was responsible for searching for new customers. However, in Greece, some nursing staff can often have a more flexible work relationship, which enables them to work at the same time as a free-lancer (for example, as a personal nurse, or offering home care nursing).

Distinguishing between websites and SM platforms, Fig. A.3b depicts the (same average) preference of physicians and HCOs for the use of websites (as it is a more business communication platform than SM platforms), while nurses and paramedics prefer a somewhat informal but immediate communication platform as provided by SM (ANOVA analysis shows these two homogeneity subsets with their sig. levels being 0.995 and 0.973 respectively). These findings may be easily justified on the grounds that nurses do not have to offer a wide range of services and expertise in comparison to the physicians, and most of the times they do not hold an official office as free-lancers. Physicians require a more professional presentation and use websites, while nurses try to approach patients in a more human and friendly way (according to the paradigm of the relation between patient and nurse). Thus, they prefer the approach via Facebook or via other social networks, where one nurse can recommend them to another and so on (word of mouth).

Moreover, Fig. A.3c shows that physicians tend to (significantly) prefer LinkedIn, while nurses, paramedics and organizations prefer Facebook or Twitter (the sig. level is $0.23 > 0.05$ on the corresponding χ^2 test, while ANOVA analysis reveals these two homogeneity subsets). This result is due to the fact that LinkedIn is a professional social network made for exchanging ideas among professionals and for job seeking and it is not built as a network with purposes similar to those of Facebook. Thus, it seems that one fourth of physicians is already aware of it and of its “usefulness”, or perhaps they cannot avoid it because many competitors are already using it. The fact that only a small portion of the HCOs are thinking of SM marketing as an option is due to the fact that the Greek public HCOs lack a marketing department and therefore many related actions are hindered. So, the results are influenced by this situation regarding the opinion of public HCOs. In the private sector of Greece, although marketing is prohibited by the law, there are marketing departments in the private healthcare settings.

Figure A.4a reveals the subjects' unwillingness to be ICT marketed, while Fig. A.4b depicts the reasons behind this behavior. Statistically speaking, physicians and organizations differ significantly (with sig. level 0 on the corresponding χ^2 test), while we have to (statistically) accept that their reasons behind this unwillingness differ, although marginally (sig. $0.042 < 0.05$), despite the rather similar outlook of our sample, as presented in Fig. A.4b. The unwillingness of physicians can be explained by the fact that many of them are not well acquainted with ICTs and therefore the digital gap brings them to this situation. It is also clear, from Fig. A.4b, that both organizations and physicians trust in the “old fashioned” way of traditional marketing, as they cannot see the effectiveness of these new marketing efforts.

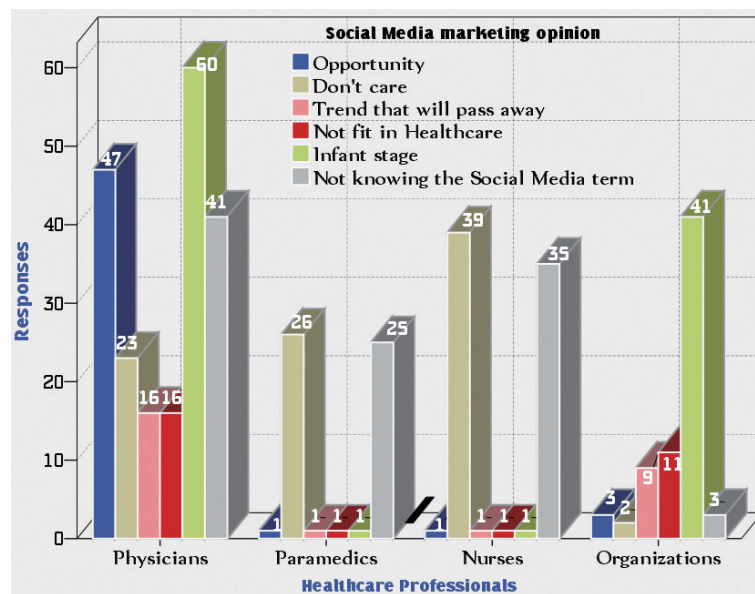


Fig. 1. Opinions of the healthcare professionals on Social Media Marketing. (Colours are visible in the online version of the article; <http://dx.doi.org/10.3233/THC-150918>)

The statistical analysis of the collected data (Fig. A.5) reveals that all the Greek paramedics, nurses and HCOs have (statistically) the same diathesis profile (sig. $0.973 > 0.05$). ANOVA analysis confirms the above means behavior, revealing these two homogeneity subsets. Greek physicians are, on average, more confident about using the Internet for communicating with their patients than paramedics, nurses and HCOs, which are equally less familiar with Internet communication.

Physicians and HCOs differ from paramedics and nurses in terms of opinion (Fig. 1), as they see SM marketing mostly as an opportunity or they believe that it is at an infant stage, while paramedics and nurses don't care or ignore SM (sig. level is 0). The opinions of paramedics and nurses are statistically identical (sig. $0.998 > 0.05$). These results are somewhat surprising, given the introductory section of the paper. Only 4.5% of the organizations see SM marketing as an opportunity, unlike physicians where the percentage reaches 29%. The views of nurses and paramedics are consistent, ignoring SM marketing, while they could not understand the related question. The results of Fig. A.4b are consistent with those of Fig. 1, where physicians and HCOs believe that SM marketing is at an infant stage and they cannot see the Return on Investment (ROI). Some of the aforementioned findings are also consistent with those reported in a prior study [14], where a great percentage (50%) of the interviewees (but still lower than the Greek one) were concerned about the integration of SM into their business, and how to link SM efforts with a ROI.

Although marketing and advertisement is something that interests physicians and HCOs, despite the legal prohibitions existing in Greece, there are a number of issues for which there are no clear answers yet and which makes them to be quite cautious (i.e. security, privacy, misleading information, etc.). The main reason behind the negative opinion of the HCOs is that they fear the negative public comments and they are neither experienced nor prepared to face such conditions. They also lack human resources for setting up the appropriate mechanism. Moreover, any such effort needs continuous monitoring and timely response and thus a lot of manpower.

Patients' behavior differs significantly when it comes to looking for online information for a physician or a hospital (statistical certainty, as sig. is 0), although the sample appears to have similar outlook

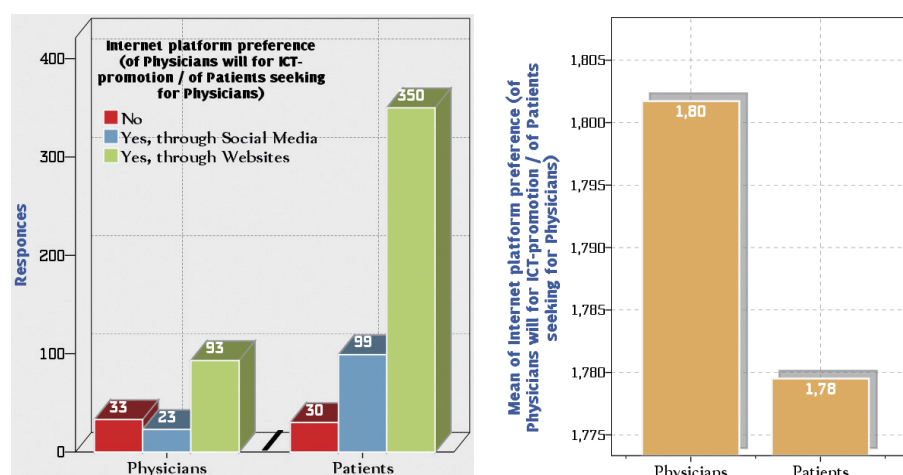


Fig. 2. Interpretation of the relation between the Internet platform preferences of the physicians' will for ICT-promotion vs. patients' corresponding preference (as they seek health advice regarding physicians). The means of the preference ranges from 1 for the "Social Media" response to 2 for the "Websites" response. (Colours are visible in the online version of the article; <http://dx.doi.org/10.3233/THC-150918>)

(Fig. A.6). Our analysis reveals that, websites are the main source of information for patients, but when they seek information regarding a physician they tend to also use SM. The same result (different respondents' behavior) was derived about the active presence of physicians and organizations on the Internet (sig. level again 0 on the χ^2 test). Customers' expectations from the physicians' active presence on the Internet and HCOs (Fig. A.7) are statistically different (sig. level 0).

An interesting finding is that the preference of physicians and patients for Internet platforms does not relate to each other (sig. level 0 on the χ^2 test), despite our sample's similar profile, as depicted in Fig. 2 (the sig. level of the ANOVA analysis between the physicians' and patients' preferences is $0.605 > 0.05$ and hence their preferences statistically differ, although in our sample their average responses are close; see Fig. 2). Physicians should therefore be active not only on websites but also on SM (Facebook, LinkedIn, etc.) in order to match their communication preference with their potential customers (that seek online advice). The opposite results are obtained when we consider the HCOs' preference for Internet platforms (Fig. 3). That is, organizations' and patients' preferences may not relate to each other, as patients seek health advice (regarding a HCO) much more often on websites than in SM (sig. level of ANOVA analysis is again $0.605 > 0.05$ and hence the organizations' and patients' preferences differ statistically, with the patients' seeking advices for HCOs, on average, more often; see Fig. 3). Based on this fact, HCOs have to strengthen their presence on websites to meet the patients' need for health advice.

According to all the above results, Greek consumers are seeking valuable health-related information on the Internet. There is a strong preference to request an appointment online and to receive discounts by and post a complaint to HCOs, using the new ICTs. The active presence of healthcare providers on the Internet is now considered mandatory by most of the consumers.

Even though many professionals are currently skeptical about the effectiveness of SM marketing, the data for patients are showing exactly the opposite. According to the results of our survey, 78.5% of the healthcare consumers are seeking input on health issues on the Internet. The same situation exists also in the USA [17,18]. Similar to the findings of [19], most of them (62%), are seeking advice on health problems on themselves or of their loved ones, while 53.2% are looking for a very specific/special

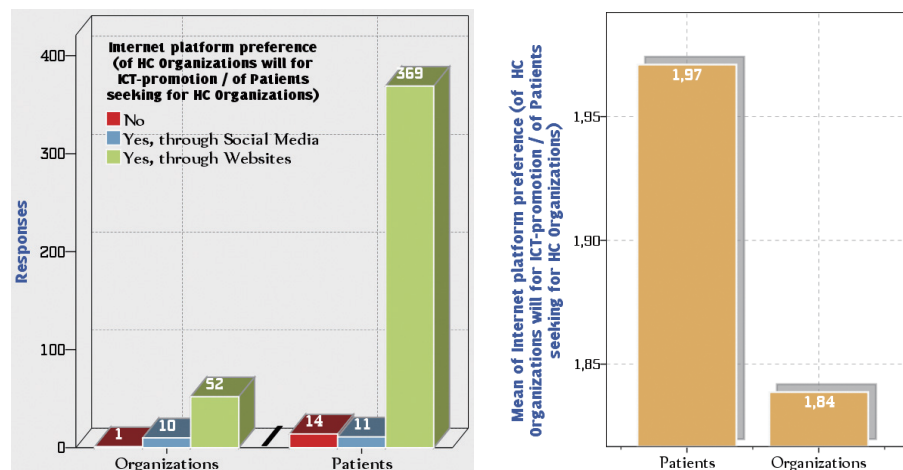


Fig. 3. Interpretation of the relation between the Internet platform preferences of the HC Organizations' will for ICT-promotion vs. Patients' corresponding preference (as they seek health advice regarding HC Organizations). The means of the preference ranges from 1 for the "Social Media" response to 2 for the "Websites" response. (Colours are visible in the online version of the article; <http://dx.doi.org/10.3233/THC-150918>)

health service or product. There are many cases that lead a consumer to search on the Internet [20]. These cases are faced more often when a person faces a severe or rare disease [6,21–24]. The benefits of sharing information among people with disabilities are also reported in other studies [25,26]. This is also supported by several researches [27–33].

Another interesting finding is that Greek consumers expect the presence of physicians on SM to a greater extent than hospitals or other HCOs. This is in line with other studies showing that social networking is changing healthcare consumers' health-related experience [34–36]. This reveals the trend of the future and the desire of the consumers to participate in a continuous and timely communication upon their request. Social Media are everywhere and available anytime, and so should be their healthcare providers.

Finally, the Greek patients seem to feel very comfortable communicating with their doctors on the Internet, as also shown in [14]. 72.6% instead of 45% of consumers would be affected by the information found on the Internet or the SM provided that it comes from a credible source (reputational physician or hospital). This result could be further supported by several researches in other fields [37–47]. Patients seek online information as to complement traditional sources or to challenge their physicians [48].

The present research aimed to reveal the status quo of SM marketing in Greece and the opinions major stakeholders. The expectations are ambitious, but as the results of the study reveal, a lot of work has to be done in order for healthcare providers to adopt the SM in their work and to believe in the use of the modern means of marketing. Social media and the Internet can and will affect the provision of health services over time. SM marketing can prove to be a valuable tool in the hands of people knowing how to use it. Health consumers are more mature than health providers. This situation has to change. The new environment promotes consulting enriched with informed flexibility [49]. SM marketing can be seen as a great opportunity for both individuals and healthcare providers [11,14,50].

In conclusion, the HCOs in Greece have to move forward in order to follow the current trends and to engage with their customers. There is a great global need to measure the effectiveness of any such media marketing effort [14]. The present paper advances the existing state of knowledge, as there is not prior study on the investigated field in Greece. Our research will continue so as to include all possible

participants of the healthcare chain, and to find out their status and needs, regarding SM marketing, as well as to support the exploitation of the modern ICTs. Finally, the results of this study support the idea that patient engagement is reinforced in the political process with the role of social media.

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Appendix A

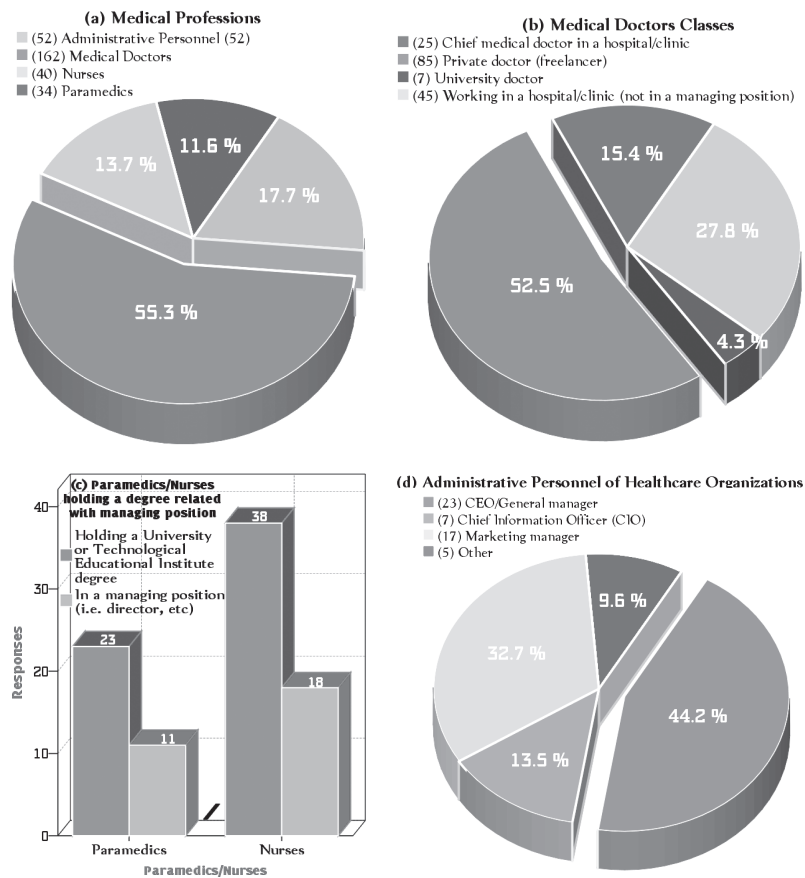


Fig. A.1. Respondents' profile.

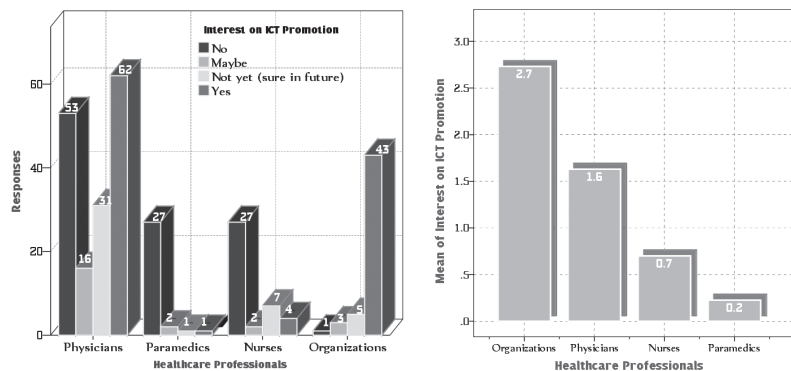


Fig. A.2. Interest for marketing through the Internet. The means plot of the interest degree, ranges from 0 for the “No” response to 3 for the “Yes” response.

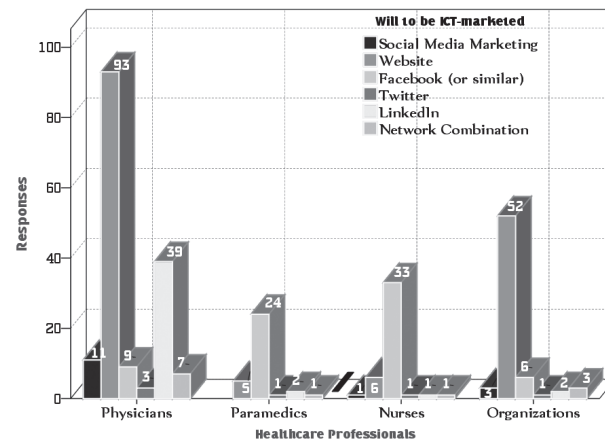


Fig. A.3a. Interpretation of the respondents' willingness to be marketed on the Internet.

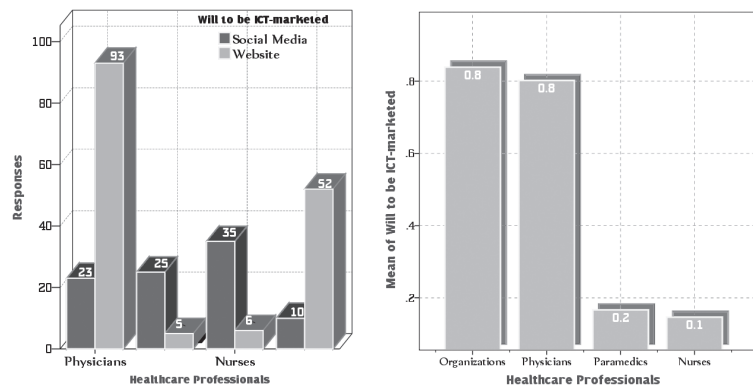


Fig. A.3b. Interpretation of the respondents' willingness to be marketed through the website/Social Media. The means plot of the will degree on SM/Websites, ranges from 0 for "Social Media" and 1 for "Websites" response.

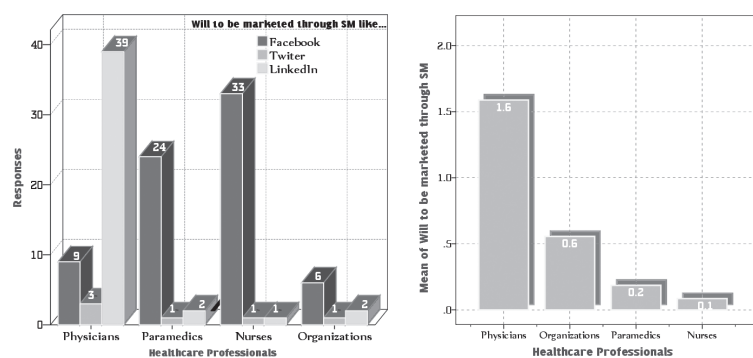


Fig. A.3c. Interpretation of the respondent's willingness to be marketed through Social Media platforms. The means plot of the will degree on SM platforms, ranges from 0 for the "Facebook", 1 for "Twitter" and 2 for "LinkedIn" response.

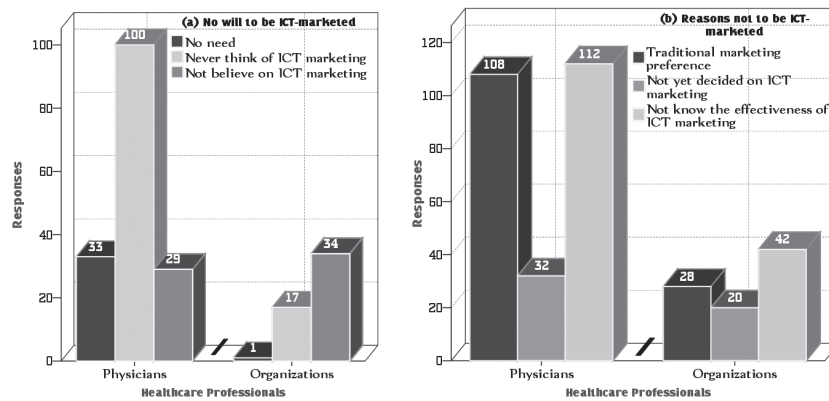


Fig. A.4. Interpretation of the Physicians/HCOs unwillingness to be marketed on the Internet.

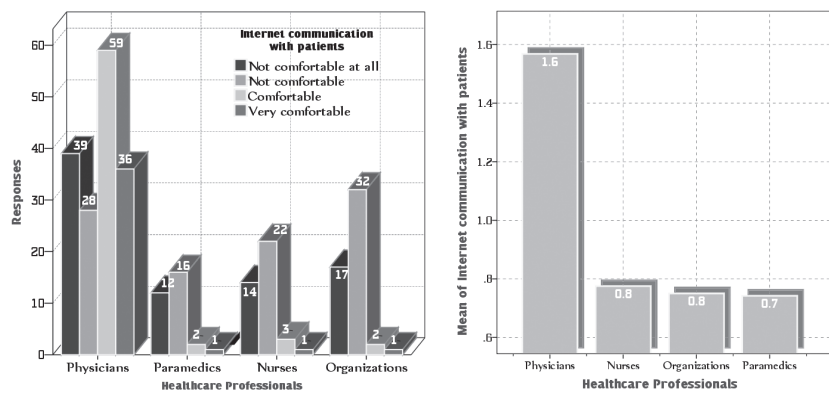


Fig. A.5. Diathesis of communicating through the Internet. The means plot of the diathesis degree, ranges from 0 for the “Not comfortable at all” response to 3 for the “Very comfortable” response.

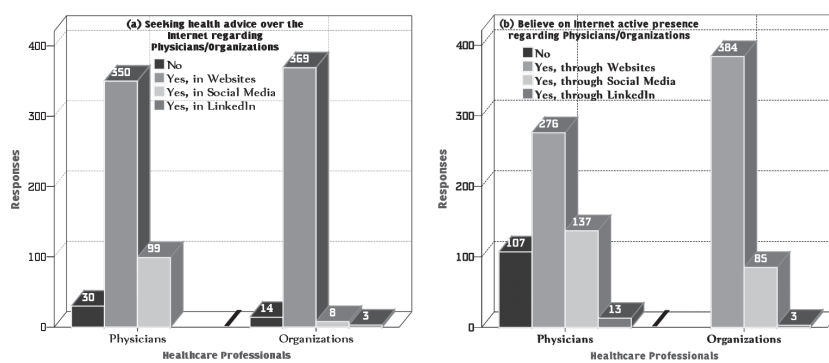


Fig. A.6. Customers/Patients' will to seek advice on health issues on the Internet and their belief on healthcare providers' active presence on the Internet.

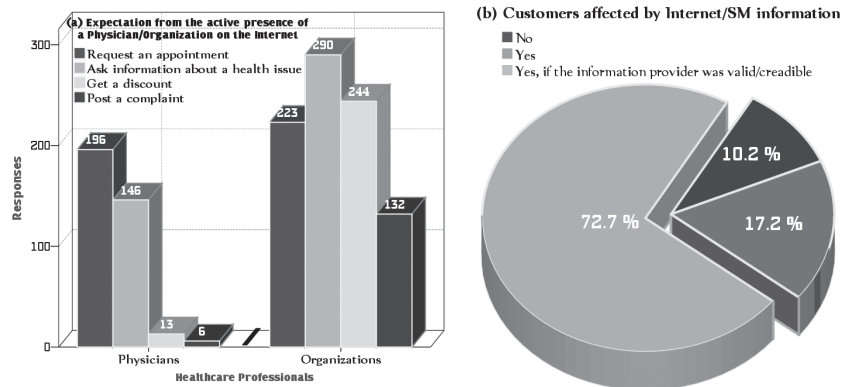


Fig. A.7. Customers/Patients' expectations and the impact of online information provided by a healthcare provider.

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