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Exploring Greek Population Attitudes Towards Using Health-Related Websites for Managing Their Health

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Abstract. The last few years the Internet has evolved into a prominent information source for many people worldwide. Latest research has shown that an ever increasing number of citizens and patients go online in order to access health information and seek support in managing their health, including understanding their condition, adopting life-saving lifestyle adjustments and keeping up with treatment or aftercare guidelines. Due to this rise on the demand of online health information, health-related sites have increased substantially, with each one of them striving to maintain the most comprehensive and reliable source of health and medical information on the Internet. This paper presents a survey conducted among Greek population aiming at exploring participants general attitudes towards using the Internet to access health information as well as their views regarding a specific Greek health-related website, namely Iatronet. To this end, an online Greek version of eHealth Impact Questionnaire has been used which was developed using RedCAP platform.

Keywords. Health-related web sites, Greek population, e-Health Impact Questionnaire, health management, RedCAP, eHealth

1. Introduction

In recent years, the evolution of the Internet along with the proliferation of portable devices, such as smartphones, tablets and laptop computers, has revolutionized the way health information is being shared and accessed [1][2]. Health information has become available at people's fingertips almost any time of the day, thus making the Internet the first source of information for many of them [1]. Moreover, health-related websites, blogs, and social media communities (e.g. support groups), enabled patients to share their personal health and illness experiences and offer special insights and reflections from the lived experiences of their specific health conditions [1][3]. This type of information, which usually cannot be provided by healthcare professionals, might help patients to become better informed about their illness and also reduce feelings of loneliness and isolation [1].

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The last few years, a number of studies have been conducted aiming at measuring attitudes of Greek citizens towards health-related websites. In particular, a study was conducted in 2015, which investigated the trends among the Greek population regarding their frequency of search, level of satisfaction, and trust towards the Internet as a source for health information; its use as a self-diagnostic tool; and as a source of information for the purchase of medication [6]. Another study was carried out in 2008 and was concerned with Internet use for health-related purposes among Greek consumers [7]. Finally, a study, which was carried out in Greece in 2020 was concerned with digital health literacy and information-seeking on the Internet in relation to COVID-19 among university students [8]. These studies are either focused on a certain category of online health information or have been conducted several years ago.

This paper presents a survey aiming to explore current Greek population attitudes towards using health-related websites as well as their views regarding a specific Greek health-related website, namely Iatronet. Recruitment of research participants was conducted from August 20th, 2023 to November 7th, 2023 with 182 people participating in the survey. Finally, a statistical analysis was performed on the data collected and the interpretation of the results is presented and discussed in the next few sections.

2. Methods

For the purpose of this research, a Greek version of e-Health Impact Questionnaire (eHIQ) was used. The eHIQ is a self-complete questionnaire, which has been designed and developed by Oxford University Innovation, as an instrument to assess the effects of websites containing health information [9]. This questionnaire was validated in 2015 for the British eHealth users [6].

As illustrated in **Table 1**, the eHIQ questionnaire consists of two independently administered and scored parts, **eHIQ-Part 1** and **eHIQ-Part 2. eHIQ-Part 1** (11 items) measures participants general attitudes towards using the Internet to access health information and consists of 2 subscales: attitudes towards online health information (5 items) and attitudes towards sharing health experiences online (6 items). **eHIQ-Part 2** (26 items) measures participants views regarding a specific health-related website and consists of three subscales: confidence and identification (9 items), information and presentation (8 items), and understanding and motivation (9 items). For the purpose of this research, Iatronet was chosen among a number of health-related Greek websites.

Table 1. eHIQ questionnaire structure

	eHIQ – Part 1	eHIQ – Part 2
Introduction	Who is conducting the survey? What is the research about? How long will the survey take? Is the respondent's data safe? What is the structure of the survey? How will the respondent fill the survey?	
Questions for both parts of the survey	Demoraphics (age, gender, education, occupation, marital status, dependent members)	
Main Part	Attitudes towards online health information Attitudes towards sharing health experiences online	Confidence and identification Information and presentation Understanding and motivation

Both parts of the questionnaire have a five point response category for all items ranging from 'Strongly disagree' to 'Strongly agree'. At the beginning of the eHIQ, an introductory page has been added, providing the participant with information regarding the study as well as a set of 6 questions regarding his demographics (i.e. age, gender, marital status, dependent members, education level, occupation).

The eHIQ is designed to be administered electronically as well as via a more conventional paper / pen route. For the purpose of this research, an electronic version of the questionnaire has been developed using REDCap, a secure web application for building and managing online surveys and databases [10]. Recruitment of research participants was conducted from August 20th, 2023 to November 7th, 2023 through invitations submitted by e-mail and posts on health blogs, social networking sites (e.g. Facebook) and health-related websites. Participation was voluntary and anonymous. Participants were asked to access the online questionnaire through a link and complete the series of questions presented above. As a result, a total of 182 participants completed the questionnaire.

Statistical analysis was performed using SPSS. Research factors were formulated based on the different scales contained in the eHIQ, namely **F1:**Attitudes towards the use of online health information, **F2:** Attitudes towards sharing health experiences online, **F3:** Confidence and identification, **F4:** Information and presentation and **F5:** Understanding and motivation. As illustrated in **Table 2,** reliability analysis, using Cronbach's Alpha (α) reliability coefficient, showed high internal consistency of the questionnaire.

Table 2. Reliability analysis

Factor	Questions	Cronbach Alpha	Reliability
F1	1-5 (eHIQ Part I)	0,839	High
F2	6-11 (eHIQ Part I)	0,818	High
F3	10,11,14,15,17-20, 23 (eHIQ Part II)	0,929	Excellent
F4	3R,5,6,9,12,24,25R,26 (eHIQ Part II)	0,801	High
F5	1,2,4,7,8,13,16,21,22 (eHIQ Part II)	0,917	Excellent

In addition, statistically significant positive correlations were identified between factors at 1% level of significance in each case (see **Table 3**).

Table 3. Factor correlation

Factor	F3	F4	F5
F1	0.380**	0.290**	0.471**
F2	0.526**	0.343**	0.543**

**p<0,01

In addition, normality check has illustrated that none of the factors satisfied normality (p<0.007). Thus, in order to test the hypotheses stemming from factors F1-F5, Mann-Whitney and Kruskal-Wallis tests were carried out. Finally, regression analysis was performed in order to investigate whether factors F1, F2 can explain the variance in factors F3-F5.

3. Results

Table 4 presents the demographic background of the 182 respondents who completed the questionnaire.

Table 4 shows the results of the evaluation of factors F1-F5 against age, marital status and occupation. As a result of Kruskal-Wallis test, significant differences related to age were observed in factors F1 (H(4)=10,275, p=0,036), F2 (H(4)=12,932, p=0,012), F4 (H(4)=13,077, p=0,011) and F5 (H(4)=11,819, p=0,019). In addition, as a result of the same test, significant differences related to marital status were observed in factor F4(H(3)=10,280, p=0,016), while significant differences related to occupation were observed in factors F1 (H(3)=9,460, p=0,024), F2(H(3)=9,350, p=0,025) and F4 (H(3)=11,939, p=0,008). On the other hand, as a result of the Mann-Whitney test, no significant differences in factors F1-F5 related to gender were observed (p≥0,246). Finally, as a result of Kruskal-Wallis test, no significant differences in factors F1-F5 related to education and dependent members were observed (p≥0.280 and p≥0.260 respectively).

Table 4. Factor evaluation

	Age		Marital Status		Occupation	
Factors	**H (4)**	**p-value**	**H (3)**	**p-value**	**H (3)**	**p-value**
F1	10,275	**0,036**	0,773	0,856	9,460	**0,024**
F2	12,932	**0,012**	4,716	0,194	9,350	**0,025**
F3	6,637	0,156	0,776	0,855	4,920	0,178
F4	13,077	**0,011**	10,280	**0,016**	11,939	**0,008**
F5	11,819	**0,019**	0,249	0,969	5,979	0,113

Finally, the results of multiple linear regression analysis revealed that:

- the independent variable "Attitudes towards sharing health experiences online" (beta=0,471, t=5,948, p<0,001) explained 30.3% of the total variance of the dependent variable "Confidence and identification".
- the independent variables "Attitudes towards sharing health experiences online" (beta=0,327, t=3,854, p<0,001, 67% effect), "ages above 60 years" (beta=-0,241, t=-2,678, p=0,008, 22% effect) and "marital status widowed-Separated" (beta=0,163, t=2,420, p=0,017, 11% effect) explained 30.2% of total variance of the dependent variable "Information and presentation".
- the independent variables "Attitudes towards sharing health experiences online" (beta=0,446, t=5,908, p<0,001, 74% effect), "Attitudes towards online health information" (beta=0,188, t=2,471, p=0,014, 16% effect) and "ages 50-59" (beta=0,141, t=2,313, p=0,022, 10% effect) explained 37.3% of the total variance of the dependent variable "Understanding and motivation".

4. Discussion and Conclusions

Nowadays, the huge quantity of health information being available online, may assist individuals in gaining knowledge on conditions, diseases and risk factors, and perhaps motivate them to adopt health-promoting behaviors. The purpose of this research is to

explore the attitudes of the Greek population towards using health-related websites for managing their health. The results have shown that participants, especially full-time employed, the unemployed and those aged up to 39 years, showed a positive attitude towards sharing health experiences online. Moreover, participants tended to agree that the Internet can help them to learn what it is like to live with a health problem. In addition, participants aged up to 39 years and the unemployed considered the Internet as a safe source of information on health issues. Regarding Iatronet, the participants showed satisfaction with the information provided on the website, while older participants, namely 60 and above, showed less satisfaction with it. Divorced and separated participants considered the website very useful, and most of the participants, especially people aged 50-59, stated that they learned new things through it.

Although the survey presented in this paper has led to the conclusion that the majority of the Greek population has a positive attitude towards using health-related websites, it remains unclear if and how health information found on these sites ultimately influences their daily routines.

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