

SJSM Science

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Your roommate woke up with a headache on Sunday morning and decided to ask Dr Google what it can be. He tested positive via Google to: nausea: yes, vomiting: yes; lethargy, yes; increased thirst, yes; dizziness: yes! Did he have a head trauma yesterday? Wow! He was so drunk when he came home after the party that he cannot remember, but – wait! Here is another symptom: memory loss!

Simple hangover? Hmm... maybe – but it could also be early onset dementia or meningitis or ruptured brain aneurysm or a brain tumor or vasculitis... Should he call the ambulance?

Seems that your roommate just joined the club of people whose fear of the unknown worsens as they seek information about particular real or imagined symptoms on the Internet. People having in fact symptoms of the cyberchondria.

SJSM students decided to conduct a research on this new disorder and if you click on the poster - you will see the results presented on the Science day:

The Effects of Health Related Internet Searches on Patient Anxiety, Patient Health and the Development of Cyberchondria

Anjelika Evangelopoulos, Chasity Serrano, Natasha Turner and
Christine Janke
Mentor: Dr. Rana Zeine

The Effects of Health Related Internet Searches on Patient Anxiety, Patient Health and the Development of Cyberchondria



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Saint James School of Medicine - SVG

Mentor: Dr. Rana Zeine

Introduction

“Cyberchondria” is the escalation of anxiety in individuals who search the Internet to get the answers to their health-related questions with higher frequency and for longer periods of time^{1,2}. Because online information is not necessarily accurate, complete or of a high quality, the patients may formulate improbable and alarming self-diagnoses. Thus the risks of misdiagnosis, anxiety, and hypochondria are substantial. “Cyberchondriacs” may experience “post-search relief” of their anxiety^{2,3} and those who develop high levels of post-search tension are more likely to visit their doctor^{3,4}.

This study probes gender differences in the use of and the effects of internet searching for health-related information.

Methods

An online cross-sectional analysis was conducted using an anonymous survey administered by online survey software Survey monkey:

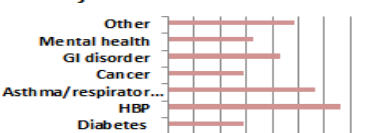
<http://www.surveymonkey.com>. The participants completed 30 items questionnaire on their internet usage for health care advice. The questions were either modified from previously published studies or created by the authors. The results were analyzed using Chi-squared and/or Post-hoc analysis. Descriptive statistical analysis was also performed.

Results

Demographic: there were 171 English-speaking, Internet literate responders, mostly from North America, some from Europe, Australia and the Middle East. There was a large number of students, retirees and health care workers. The majority were female (58.8%). The age distribution was:



164 participants disclosed having a medical history, namely:



Many of the participants did not know if they had any chronic disease, 54.3% reported having one or more of the disorders listed. 77.65% had current health insurance, 17.65% did not have it, 1.76% did not know, and 2.94% preferred not to answer. Out of 169 responses about serious medical emergency that required health care provider's help within the past 2 months, 21.89% responded yes, 76.92% responded no and 1.18% preferred not to answer.

Survey: The primary source for health-related advice was responder's health care provider. Internet was also significant source, particularly for the females (Fig.1). The majority of participants have pre-diagnosed themselves using information found on the Internet. There was no significant gender difference in the pre-diagnosing, but it appears that women were more likely to use online resources in order to pre-diagnose ($p=0.0751$; Fig. 2). Both gender equally sought further health advice from a physician after Internet self-diagnosing themselves (Fig. 3). The majority claims that the physician later confirmed their self-diagnosis. There was no difference between men and women on whether their self-diagnosis was correct and verified (Fig. 4). Roughly half the men and half the women were concerned their doctors did not correctly diagnose them when no illness was identified; there was no gender differences in those concerns (fig. 6). Seems that females exclusively visited doctors more than 10 times within past year, while males tend to have fewer or no doctor visits ($p=0.0290$, X2; Fig 5.) Females were more likely to feel distress, anxiety or depression regarding their health ($p=0.0424$, X2; Fig. 7). Searching the Internet for health and medical information made a majority of survey participants more cautious about their health (Fig. 8).

Discussion

A vast majority of Internet users have searched for a health-related topic online. However, the internet is not shown to be the primary source for health advice. A great deal of physician trust does still exist. Men were less likely to trust their physician's diagnosis than women. Women were more than twice as likely to choose the Internet as their primary source of health advice and men were twice as likely to turn to family members for health advice. Women were more likely than men to search the Internet for health information on other's behalf.

Upon Internet self-diagnosing, 74% of females and 64% of males followed-up with their healthcare provider; those who did not (21% of females, 28% of males) claimed that they have successfully addressed their own health problem(s) based on their internet-guided self-diagnosis.

“Cyberchondria” was induced to a greater extent in females as compared to males.

“Post-search-relief” was reported in more than half of both females and males.

Conclusions and recommendations

Our results confirmed that the Internet plays an important role in the patient's life both leading up to a diagnosis and post diagnosis. The Internet as a self-diagnostic screening method is quite effective, and could be used to cut down healthcare costs and patient-physician wait-time. However, health related online advice can have a positive or a negative effect on a patient thus stressing the importance of an open line of communication with a health care provider.

References

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Poster by: Dr Filipovic

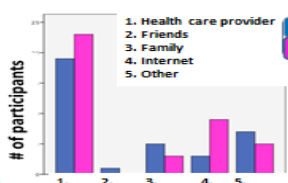


Fig. 1: Health advice provider

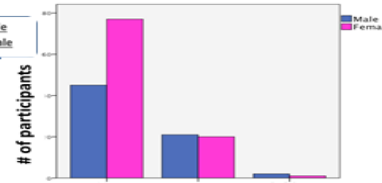


Fig. 2: Internet acquired self-diagnosis

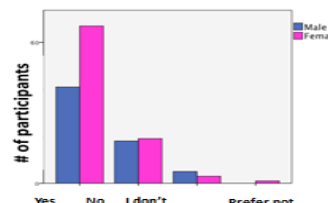


Fig. 3: Pursued health care advice after self-diagnosing

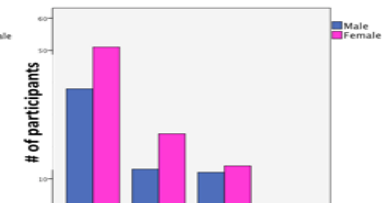


Fig. 4: Verified self-diagnosis

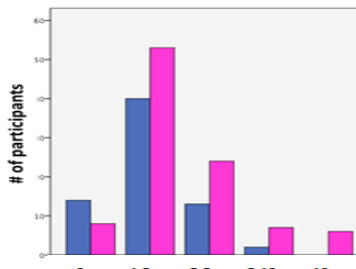


Fig. 5: # doctors visits in the past 12 months

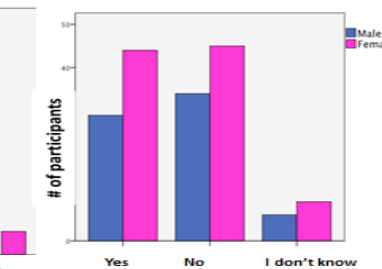


Fig. 6: Worried that doctors have not correctly identified an illness when no illness is found

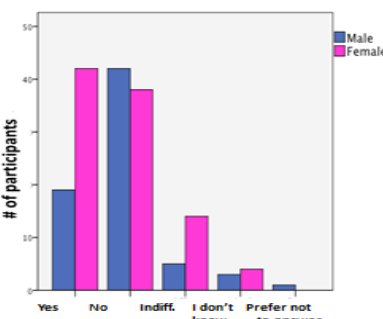


Fig. 7: Health-related distress, anxiety or depression

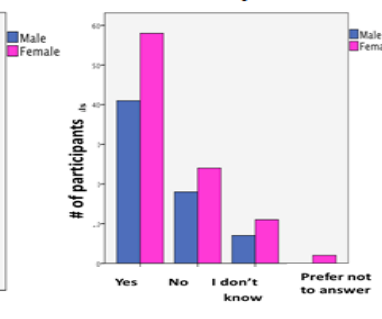


Fig. 8: Searching health-related topics on the internet and cautiousness about the health