

## Chapter 5

# The Impact of Medical or Health-Related Internet Searches on Patient Compliance: The Dr. Net Study

**Sara Wilcox**

*Saint James School of Medicine, USA*

**Olha Huzo**

*Saint James School of Medicine, USA*

**Annu Minhas**

*Saint James School of Medicine, USA*

**Nicole Walters**

*Saint James School of Medicine, USA*

**Joel Ehis Adada**

*Saint James School of Medicine, USA*

**Mary Pennington**

*Saint James School of Medicine, USA*

**Luckner Roseme**

*Saint James School of Medicine, USA*

**Denelle Mohammed**

*Saint James School of Medicine, USA*

**Aleksandar Dusic**

*Xavier School of Medicine, Aruba*

**Rana Zeine**

 <https://orcid.org/0000-0002-9485-9531>

*Kean University, USA*

### ABSTRACT

*Health-related Internet searches have been associated with cyberchondria and can impact how patients receive and react to medical advice. The purpose of this study was to analyze the relationships between patient compliance and the experiences of 191 Internet information seekers from >12 countries and 27 occupations, surveyed online between 2015 and 2016 using the ‘Dr. Net’ questionnaire. After Internet search, 75% agreed with the diagnosis given by their doctor and 83% remained compliant with their doctor’s orders. Statistical analysis using Kruskal-Wallis H test (“one-way ANOVA on ranks”) and*

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## ***The Impact of Medical or Health-Related Internet Searches on Patient Compliance***

*Spearman correlation coefficient revealed strong positive correlations ( $p < 0.001$ ) between compliance and each of the following: finding the search helpful (86%), being satisfied with Internet information (71%), becoming more cautious about health (60%), finding the information provided by their doctor comprehensible (71%), and agreement with physician. Recommendations are discussed for increasing ehealth literacy and patient-physician trust with improved online medical information.*

## **INTRODUCTION**

Individuals have various motivations to seek health information online. These include but are not limited to determining whether their symptoms represent true illness, comparing health advice regarding current diagnosis, finding additional information regarding their diagnosis, exploring alternative treatments, or networking with ailment-specific support groups. The overall experience of searching for health information through the world wide web or on social media sites is influenced first by whether the information accessed is accurate, readable, valid, reliable, and perceived as helpful, and second by the psychological stability of the seeker. Several studies, including the ‘Dr. Net’ study by the authors (Mohammed et al. 2019), have shown that at least one third of individuals who sought health-related information online were prone to developing cyberchondria, an excessive escalation of anxiety about health. Other studies have provided evidence that patient-physician relationships are impacted by the cognitive and emotional impact of Internet-search on the mindset of nonexperts. The Coronavirus disease 2019 (COVID-19) pandemic has been accompanied by an infodemic that has shaken trust between the public and medical authorities precipitating dangerously wide nonadherence to lifesaving guidelines.

According to the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC), medication nonadherence can tremendously reduce quality and length of life, and increase hospital admission rates, morbidity, mortality, and healthcare costs (Brown & Bussell, 2011; Neiman et al. 2017). One might wonder whether searching the Internet promotes or discourages patients’ compliance with their physicians’ directives. Ideally, finding medical information and health advice through the Internet, or on social media, should reinforce the standards of care and encourage adherence to the safest and most effective treatment plans. However, nonexperts face challenges when exposed to random, complex, or skewed content, and may make critically wrong decisions based on accentuated skepticism and misperceptions.

Efforts are needed to better design websites not only to protect individuals and the public from the potentially undesirable consequences of health-related Internet search on psychological wellbeing, health, and safety, but also to stimulate patient compliance and improve patient success in attaining best health outcomes. The objectives of this chapter are (a) to explore the importance of online medical information, versus misinformation and disinformation, in electronic health (ehealth) literacy and in relation to patient compliance, (b) to present and discuss results from the authors’ ‘Dr. Net’ study, which was designed to analyze the factors impacting patient’s compliance with their own physician’s orders after health-related Internet search, and (c) to recommend measures for quality assurance of Internet-accessible medical information as a strategy for the acceleration of global ehealth literacy and the strengthening of information-seekers’ trust in healthcare professionals.

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