Cross-Culture Online Knowledge Validation and the Exclusive Practice of Stem Cell Therapy

Abrar Al-Hasan, Kuwait University, Kuwait

 https://orcid.org/0000-0002-1662-6417

Jiban Khuntia, University of Colorado, Denver, USA

Dobin Yim, Loyola University Maryland, USA

 https://orcid.org/0000-0002-9360-8343

ABSTRACT

Increasingly, people are turning to the internet to access health information despite reports that sites vary in terms of their quality, especially when the health practice is emerging or exclusive, such as stem cell and umbilical cord blood therapy. Given the controversy, patients have to depend on available sources to validate their knowledge prior to going for these practices as treatments. This study explores how the internet supports the spread of stem cell therapy practices, viewing it from a knowledge validation theoretical perspective. The study posits hypotheses differentiating digital and human sources, trust in the media source, and exploratory and verification sources on knowledge validation for exclusive practices. Primary survey data was collected from the US and Kuwait. Key findings suggest that knowledge verification and trust in the internet influences knowledge conversion and the practice decision of patients for less practice-oriented knowledge, and this effect is higher for Kuwait than USA, and more so for stem cell than umbilical cord blood practice.

KEYWORDS

Culture, Exclusive Practices, Health Information Seeking, Health Information Source, Knowledge Conversion, Knowledge Verification, Stem Cell, Trust

INTRODUCTION

Deceitful information and advertisements on the Internet for stem cell therapy practices are misleading, with several businesses engaged in direct-to-consumer marketing of non-approved stem cell treatments (Knoepfler & Turner, 2018). Patients believe and undergo the advertised therapies, resulting in adverse consequences. Examples include three women blinded by unproven treatments (Kuriyan et al., 2017), or halt in the inexorable loss of vision (Mandai et al., 2017), or ending up with new tumors from the treatments (Berkowitz et al., 2016).

Undoubtedly, the Internet is a significant source that aids in the spread of stem cell therapy practices. However, to what extent the Internet influences the validation of knowledge around stem cell therapies for patients, remains a puzzle equivocally crucial for practice and research. This study tries to unravel this puzzle, viewing it from a knowledge validation theoretical perspective. Knowledge validation is an evaluation process of relevant facts about a medical practice or procedure. It may involve activities that intend to reach the structural correctness of the intended knowledge base (i.e., verification), or activities that intend to show the capability of the knowledge base to reach correct conclusions (i.e., evaluation) (Durcikova & Gray, 2009). Knowledge validation is essential when the reliability and credibility of the sources are questionable, and lack of access to relevant and truthful knowledge (ter Hoeven, Stohl, Leonardi, & Stohl, 2019). This is important as the Internet is emerging as the first step information source for health (Daraz et al., 2019) and increasing dependence as an information source (18% in 2016 to 20% in 2017) or a primary knowledge avenue (62% in 2016 to 67% in 2017) (Gottfried & Shearer, 2016; Shearer & Gottfried, 2017).

Extant information systems research has conceptualized that knowledge validation involves a knowledge conversion process, consisting of a series of indirect and direct interactions (Massey & Montoya-Weiss, 2006). Internet and social media, as channels, are helpful in this process that enables the interactions (Carlson & Zmud, 1999). Individuals use the interactions to derive useful knowledge from a source, either at a single instance or across time with varied experiences (Massey & Montoya-Weiss, 2006). Studies also note that irrespective of the knowledge provided by the Internet, trust in such media as a knowledge source and subsequent validation process is a vital puzzle (Daraz et al., 2019; Hou & Shim, 2010). The credibility of contributed online information is questionable (Archak, Ghose, & Ipeirotis, 2011; T. Lu, Xu, & Wallace, 2018), with a push on reality to make the information attractive (Berger & Milkman, 2012). Most search results are driven by keyword-based matches, ranks of websites, and advertisement potential; and thus, they have built-in biases to provide pushed knowledge than facts (Olteanu, Castillo, Diaz, & Kiciman, 2019). Although the internet is emerging as the prominent media for a health information source, replacing traditional providers as a source is dubious (Daraz et al., 2019). Whether or not users are able to attain useful knowledge from the Internet that can be translated into a decision to practice the treatment is not yet clear (Grimm et al., 2019; Marsh et al., 2016). Research has also shown the differentiated impact of cultures on the internet search process (Thoumrungroje, 2018; Tian, Deng, Zhang, & Salmador, 2018). A pertinent question in the context of the Internet as a health information source is does the information provided about practices is useful? If so, to what extent? Do the information search processes translate to valuable knowledge or helpful for knowledge validation? Furthermore, does it lead to a decision to practice the treatment? Do different cultures translate the information search process differently in terms of knowledge conversion of health information?

The study asks the research question: How internet-based knowledge validation and trust influence knowledge conversion, and in turn practice decision, for two exclusive health practices (EHP): stem cell and umbilical cord therapies, in two normative contexts: Kuwait and the United States (US)? EHP are relatively new practices without widespread validated outcomes available to establish the efficacy of the practice, and yet to form a successful and all-embracing clinical guideline to ascertain a practice-to-outcome approach (Ali & Al-Mulla, 2012; Seay et al., 2017). The stem cell therapy and umbilical cord blood are EHP, that use the regenerative properties of body cells to potentially treat diseases for which currently there are no sustainable cures (Vaquero et al., 2018).

Notwithstanding several plausible clinical trials, there are ethical and policy level controversies with the current evidence of efficacy of stem cell and umbilical cord blood therapies (King & Perrin, 2014). Stem cell therapy has significant clinical potential, yet, currently, only a few stem cell therapies are ready for actual clinical applications (Guzzo & O'Sullivan, 2016). This reality has not stopped the rise of clinics worldwide, advertising a wide range of unproven stem cell-based interventions (Dresser, 2010). Many of these clinics have some online presence on the internet and use direct-to-consumer marketing, despite the lack of approval by regulatory organizations (Paarlberg, 2005).

Related Content

Digital Divide: Introduction to the Problem
Liudmila Burtseva, Svetlana Cojocaru, Constantin Gaindric, Galina Magariuand Tatiana Verlan (2009). *Selected Readings on Global Information Technology: Contemporary Applications (pp. 21-36).*
www.irma-international.org/chapter/digital-divide-introduction-problem/28603

Efficiency or Innovation?: The Long-Run Payoff of Cloud Computing
Zhenghua Li, Huigang Liang, Nianxin Wang, Yajiong Xueand Shilun Ge (2021). *Journal of Global Information Management (pp. 1-23).*
www.irma-international.org/article/efficiency-or-innovation/287610

Evaluation of Economic Security of Water Resources and Analysis of Influencing Factors
Licheng Peng, Xiaowei Ma, Wanwan Maand Yuanxiang Zhou (2022). *Journal of Global Information Management (pp. 1-19).*
www.irma-international.org/article/evaluation-of-economic-security-of-water-resources-and-analysis-of-influencing-factors/285007

A Hybrid Cloud Model for Cloud Adoption by Multinational Enterprises
Wu Heand Feng-Kwei Wang (2015). *Journal of Global Information Management (pp. 1-23).*
www.irma-international.org/article/a-hybrid-cloud-model-for-cloud-adoption-by-multinational-enterprises/124899

Semantic Technology and Anthropomorphism: Exploring the Impacts of Voice Assistant Personality on User Trust, Perceived Risk, and Attitude
Wen-Chin Hsuand Mu-Heng Lee (2023). *Journal of Global Information Management (pp. 1-21).*
www.irma-international.org/article/semantic-technology-and-anthropomorphism/318661