Online Journal of Public Health Informatics

Contents

Roles of Health Literacy in Relation to Social Determinants of Health and Recommendations for Informatics-Based Interventions: Systematic Review

Abstract

In this commentary , I revisit and modify Ackoff's data-information-knowledge-wisdom (DIKW) hierarchy. I suggest to de-emphasize the wisdom part and to insert evidence between information and knowledge (DIEK). This framework defines data as raw symbols, which become information when they are contextualized. Information achieves the status of evidence in comparison to relevant standards. Evidence is used to test hypotheses and is transformed into knowledge by success and consensus. As checkpoints for the transition from evidence to knowledge I suggest relevance, robustness, repeatability, and reproducibility.

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Roles of Health Literacy in Relation to Social Determinants of Health and Recommendations for Informatics-Based Interventions: Systematic Review

Abstract

Objectives: The aim of the study is to explore the eHealth literacy and general interest in using eHealth information among patients with dental diseases. Methods: A total of 171 patients with dental diseases completed the survey including the eHEALS. The effect of participants" age, gender and education on eHealth literacy was assessed. Spearman's correlation coefficient was also used to assess the correlation between the importance of access to health information and the usefulness of the internet for decision-making. Results: The mean score of eHealth literacy in the participants was 30.55 (SD=4.069). The participants" age has significant effect on eHealth literacy level (t=3.573, P-value=0.002). Moreover, there was a significant correlation between the total score of eHealth literacy and the importance of access to eHealth information (r=0.33, n=171, P<0.s001). The difference in eHealth literacy in terms of educational background showed no statistically significant differences (F=1.179, P-value=0.322). Discussion: the participants had a high level of eHealth literacy. Determining eHealth literacy among dental patients leads to a better understanding of their problems in health decision-making. Conclusion: Dental institutions efforts should aim to raise awareness on online health information quality and to encourage patients to use evaluation tools, especially among low electronic health literate patients.

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Abstract

Objectives: Health service providers use internet as a tool for the spreading of health information and people often go on the web to acquire information about a disease. A wide range of information with varying qualities and by authors with varying degrees of credibility has thus become accessible by the public. Most people believe that the health information available on the internet is reliable. This issue reveals the need for having a critical view of the health information available online that is directly related to people"s life. The Ebola epidemic is an emergency situation in the international public health domain and the internet is regarded as an important source for obtaining information on this disease. Given the absence of studies on the trustworthiness of health websites on Ebola, the present study was conducted to assess the trustworthiness of websites which are focused on this disease. Methods: The term \"Ebola\" was searched in Google, Yahoo and Bing search engines. Google Chrome browser was used for this purpose with the settings fixed on yielding 10 results per page. The first 30 English language websites in each of the three search engines were evaluated manually by using the HONcode of conduct tool. Moreover, the official HONcode toolbar was used to identify websites that had been officially certified by HON foundation. Results: Almost the half of the retrieved websites were commercial (49%). Complementarity was the least-observed criterion (37%) in all the websites retrieved from all three-search engines. Justifiability, Transparency and Financial Disclosure had been completely observed (100%). Discussion: The present study showed that only three criteria (Justifiability, Transparency and Financial Disclosure) out of the eight HON criteria were observed in the examined websites. Like other health websites, the websites concerned with Ebola are not reliable and should be used with caution. Conclusion: Considering the lack of a specific policy about the publication of health information on the web, it is necessary for healthcare providers to advise their patients to use only credible websites. Furthermore, teaching them the criteria for assessing the trustworthiness of health websites would be helpful.

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Abstract

Objectives. The Public Health Quality Improvement Exchange (PHQIX) is a free, openly available online community that supports public health practitioners in the rapidly evolving landscape of public health quality improvement (QI). This article's objective is to describe the user-centered development of PHQIX and its current content and examine how elements of a QI initiative may vary by an organization's characteristics or QI experience. Methods. PHQIX was developed by taking a user-centered iterative design approach, seeking early and continued input from users to gather requirements for the website. We performed an exploratory analysis of the published QI initiative descriptions, reviewing all QI projects that PHQIX users shared as of January 1, 2018. Results. PHQIX features 193 QI initiatives from a variety of health departments and public health institutes using a wide range of QI methods and tools. Discussion. Submitted QI initiatives focus on many public health domains and favor the PDCA/PDSA cycle; Kaizen; and fishbone diagrams, flowcharts, process maps, and survey methods. Limitations include data coming only from users who represent health departments with sufficient time to complete the PHQIX submission template. Additionally, many initiatives were submitted in part to fulfill a grant requirement, which could skew results. Conclusion. As the field of QI in public health practice evolves, resources targeted to QI practitioners should build on and advance the available resources. Findings from this study will provide insight into QI initiatives being performed and the types of projects that can be expected as organizational experience and collaboration grow.

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Introduction: Timeliness of data availability is a key performance measure in cancer reporting. Previous studies evaluated timeliness of cancer reporting using a single metric, yet this metric obscures the details within each step of the reporting process. To enhance understanding of cancer reporting processes, we measured the timeliness of discrete cancer reporting steps and examined changes in timeliness across a decade. Methods: We analyzed 76,259 cases of breast, colorectal and lung cancer reported to the Indiana State Cancer Registry between 2001 and 2011. We measured timeliness for three fundamental reporting steps: report completion time, report submission time, and report processing time. Timeliness was measured as the difference, in days, between timestamps recorded in the cancer registry at each step. We further examined the reporting pattern among facilities within each step. Results: Identifying and gathering details about cases (report completion) accounts for the largest proportion of time during the cancer reporting process. Although submission time accounts for a lesser proportion of time, there is wide variation among facilities. One-seventh (7 out of 49) facilities accounted for 28.4% of the total cases reported, all of which took more than 100 days to submit the completed cases to the registry. Conclusions: Measuring timeliness of the individual steps in reporting processes can enable cancer registry programs to target individual facilities as well as tasks that could be improved to reduce overall case reporting times. Process improvement could strengthen cancer control programs and enable more rapid discovery in cancer research.

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Abstract

Objectives: Diffusion of smartphones has normalised consumers' use of mobile applications (apps). But how do app designs and contexts of use interact with differential consumer attributes to impact on their effectiveness, usability and value over time? For consumer food safety, answering these questions is of importance as numerous food choices increase challenges in safe food management (SFM). This research reports on results of a randomised field experiment with Australian consumers using an SFM mobile app developed by the researchers. Method: The SFM app development employed insights from the Health Literacy Online Heuristics framework and the experiment involved evaluation of information and/or knowledge acquisition from the app versus from a paper-based version. The experiment spanned four weeks and involved eight participants (experimental group n=4; control group n=4). Results: The results highlight differentials in cognitive burden between paper and the app; beneficial affordances from the app for refreshing consumer knowledge; and longer knowledge retention on safe food management from app use over-time. Discussion: We identified two key impacts of the app on consumer knowledge acquisition and knowledge retention. First, the SFM app takes longer to achieve knowledge acquisition but results in longer knowledge retention than the control. Second, the SFM app induces some level of cognitive load in adoption however; the affordance of its reuse for quick but infrequent revisitations facilitates knowledge retention. Although the study is limited by the small sample size, it however highlights the need for a large scale and purely quantitative investigation that are generalisable to the Australian population. Conclusion: It is anticipated that the insights gained from this study can be used to develop nationwide interventions for addressing consumer SFM knowledge gaps in the home; thus, moving a step closer towards addressing SFM behaviours of Australian consumers.

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