Health Related Web Site Usage by Persons with Serious Mental Illness: Design and Use of a Heath Literacy Survey Tool

Len L. Levin
University of Massachusetts Medical School

Follow this and additional works at: https://escholarship.umassmed.edu/lib_articles

Part of the Health Communication Commons, Health Information Technology Commons, Information Literacy Commons, Mental Disorders Commons, and the Public Health Education and Promotion Commons

Repository Citation
Retrieved from https://escholarship.umassmed.edu/lib_articles/199

Creative Commons License
This work is licensed under a Creative Commons Attribution 4.0 License. This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in Library Publications and Presentations by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.
Health-Related Website Usage by Persons with Serious Mental Illness: Design and Use of a Health Literacy Survey Tool

Len Levin1, Zlatina Kostova2, Joanne Nicholson3, Kathleen Biebel4, Elaine Martin5

THE SURVEY
- A literature review identified scholarly research on website design as well as validated health literacy evaluation tools for persons with SMI that formed the basis of the survey.
- A survey tool of 64 questions was developed using pre-existing, validated health literacy instruments, e.g., DISCERN (Nurse, 02).
- Questions sought feedback on format, navigation, usability and credibility as well as content of each site.
- 20 health related websites on topics of physical health issues experienced by persons with SMI (cardiovascular disease, obesity, diabetes, and smoking) were chosen using simple searches through the Google search engine.
- Project team associates (n=5) tested the survey → questions were edited and refined → survey was loaded
- Data was downloaded and analyzed using Microsoft Excel and R, an open source statistical computing environment.

THE RESULTS
- Highest consistency obtained by Smokefree.gov followed by Wikipedia pages and government websites (i.e., Medline Plus).
- For overall weighted score, Wikipedia, CDC/Cardiovascular Diseases and the Mayo Clinic Heart Diseases pages performed the highest.

GOAL OF THE PROJECT
- Create a new health literacy training website specifically for persons with serious mental illness (SMI) to empower them to effectively use online health resources about both their mental and physical health.

CONSIDERATIONS OF DESIGN
- Specific web design accommodations for persons with SMI should be recommended but have not been generally applied to health information websites (Rotondi, 13).
- Within the general US population, the health literacy rate is 1/3 (AMERICAN DEPARTMENT OF HEALTH & HUMAN SERVICES). Figures for persons with SMI are thought to be lower.
- Persons with SMI are often not able to make a “mental map” of a webpage and may not comprehend that additional material is available simply by scrolling or reviewing the page (DaSilva, 00).
- Websites designed for persons with SMI should adhere to the following criteria:
  - Clear, concise, compact home page
  - Small number of primary components, each with discrete conceptual grounding.
  - Hyperlinks only to rest level content
  - Clear, short, link labels
  - No or only limited scrolling on each page
  - Separation of “pathway” or “content” or “destination” pages (Rotondi, 07).

CONSIDERATIONS OF CONSISTENCY
- Consistency primarily measured formatting of each website (e.g., Does navigation remain clear whether viewed on a large or small screen?)
- The Smokefree.gov website obtained highest consistency in format. It will serve as the template for the initial formatting of the website we will create.
- MedlinePlus sites and other government sites (e.g., CDC) had high overall consistency scores.
- WebMD, a site mentioned as a “go to” site in focus groups conducted in relation to this project, scored lower for consistency.
- The Obesity.org website obtained the lowest score in consistency ratings.

DISCUSSION
- Survey was successful in identifying websites that we can use as a template for completion of the project goal.
- The websites that obtained highest consistency scores were government websites and Wikipedia, in which less bias may be present.
- Lowest consistency scores were found in some medical society sites as well as in sites such as WebMD. We hypothesize that ads or the specific missions/voices of the society may be more biased.
- These results correlate well with patient, librarian and mental health professional views obtained through focus groups also conducted as a part of this project.
- This survey demonstrated:
  - The successful creation and use of a survey instrument designed to evaluate websites with the framework of best practice usage for persons with SMI.
  - Reviewers consistency scoring matched formatting guidelines for SMI users recommended in existing research.
  - Provided clear guidance as to initial design methodology for the next phase of this project – creation of a health literacy training website designed for persons with serious mental illness.

PROVIDING RESOURCES TO THIS POPULATION
- Lenexa Super Librarian
- eMental Health Bridges Project: a Web Site Development Project to Provide Needed Mental and Physical Health Information to People with Serious Mental Illness. Psychiatry in Mind. 13(1).
- 1. Lenox Hill Hospital, University of Massachusetts Medical School, Worcester, MA
- 2. Department of Psychiatry, University of Florida College of Medicine, Jacksonville, FL
- 3. Commonwealth Center for Technology and Behavioral Health, Barnet Nath Medical School, Hanover, NH
- 4. Department of Psychiatry, University of Massachusetts Medical School, Worcester, MA
- 5. Francis A. Countway Library of Medicine, Harvard Medical School, Boston, MA