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Use of the Research Readiness Self-Assessment (RRSA) to Evaluate Medical Students' Competencies in Finding and Evaluating Online Health Information (Poster Presented at MHSLA Annual Conference)

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SYNOPSIS

To maintain awareness of current medical evidence and clinical practice guidelines in order to provide the best possible patient care, physicians must be able to locate, critically evaluate, synthesize, and make clinical decisions based on health information from multiple digital sources. Concerningly, however, medical students and junior doctors have been found to exhibit poor information literacy skills, including an inability to conduct efficient literature searches, find randomized controlled trials and systematic reviews, or evaluate study quality[1,2]. However, embedding information literacy training into medical curriculum and clinical activities can improve students' ability to perform optimal literature searches[3].

Here, we describe our medical library's experience in administering the Research Readiness Self-Assessment (RRSA): Health Version to two cohorts of first-year medical students to evaluate their perceived and actual competencies in finding and critically evaluating online health information. We also describe our creation of online learning modules that aim to improve medical students' health information literacy skills, including one on using Bloom's taxonomy to ask clinical questions and another on deciding when to use various types of information sources (e.g., textbooks, journals, point-of-care clinical decision tools) to answer different types of health-related questions. Our preliminary findings suggest that first-year medical students are better at evaluating health information than they are at finding health information, although both skills show room for improvement. These findings will help guide our development of additional educational interventions to improve medical students' research readiness.

MEDICAL EDUCATION AT WSU

In recent years, the Wayne State University (WSU) School of Medicine has taken significant steps toward helping students become life-long learners by incorporating self-directed learning experiences and time for independent study into the medical curriculum. Self-directed learning involves medical students' self-assessment of learning needs; independent identification, analysis, and synthesis of relevant information; and appraisal of the credibility of information sources.

RESEARCH READINESS SELF-ASSESSMENT (RRSA): HEALTH VERSION

In collaboration with faculty in the WSU School of Medicine's Office of Learning and Teaching, librarians at the WSU Shiffman Medical Library assessed the perceived and actual abilities of WSU medical students to find and evaluate online health information using the Research Readiness Self-Assessment (RRSA): Health Version[4], a fee-based online assessment tool created by researchers at Central Michigan University.

RRSA: HEALTH VERSION CATEGORIES	POSSIBLE POINTS
Beliefs about browsing the Internet	50
Evaluating health information	24
Finding health information	18
Perceived research skills	30
Research and library experience	50
Overall research readiness (evaluating health information + finding health information)	42

ASSESSMENT TIMELINE
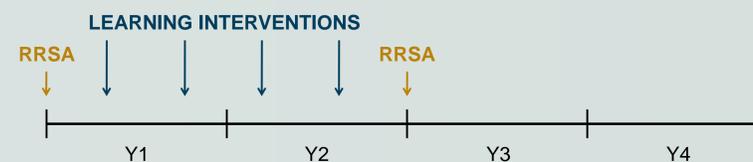
INITIAL FINDINGS

We administered an initial RRSA to two cohorts of first-year medical students. We found that students were slightly more capable of evaluating online health information than finding online health information, but they showed a relative lack of research and library experience. There was notable variation among individual students for all measured skills, beliefs, and experiences.
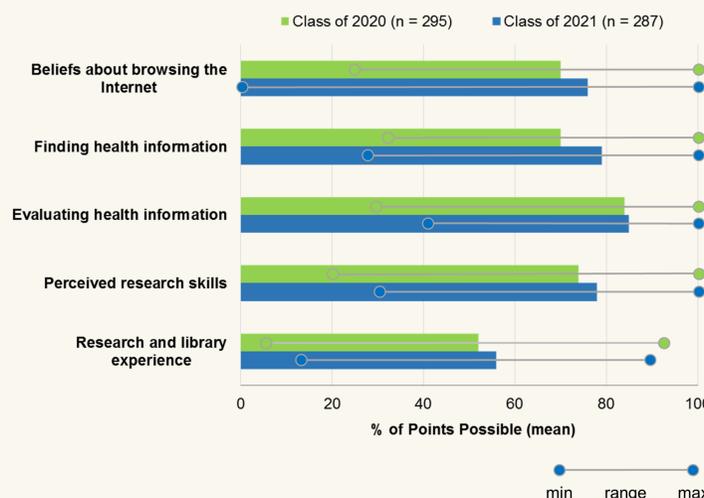
LEARNING INTERVENTIONS

To improve medical students' ability to find and evaluate online health information, we are developing a series of learning interventions to be delivered to students over the first 2 years of their program. These interventions are primarily in the form of online, self-paced, interactive learning modules created using the free Mix add-in for PowerPoint. For example . . .

Asking Great Questions: Using Bloom's taxonomy to compose lower-order and higher-order questions in clinical scenarios and using library resources to answer those questions (15 min).

Types of Health Information Sources: Choosing the most appropriate resource (e.g., textbooks, journal articles, point-of-care tools) to answer particular health-related questions (12 min).

Additional modules will focus on forming PICO questions, medical literature searching, and managing references. To determine whether these learning interventions improve medical students' research readiness, we plan to re-administer the RRSA to the same cohorts of students at the end of their second year.

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