



Searching Skills, Information Resource Use, and Clerkship Grades: Is there a Relationship?

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BACKGROUND

The Keck School of Medicine of the University of Southern California's first year curriculum includes a year-long Literature Search Project. Students receive formalized instruction on Ovid MEDLINE then perform three graded searches during the year.

In 2006, as part of a librarian's dissertation research project, a search assignment was added in the 4th year.

The scores on the 4th year search strategies were compared with other measures of success and attitude to answer the question:

Is there a relationship?

Participants

- Fourth year medical students during the required neurology clerkship.

Assignment

- Conduct an Ovid MEDLINE search on an assigned clinical scenario and question. Submit search strategy & five relevant articles to library for grading.
- Complete an online questionnaire about resource usage, importance of the literature, and skill.

Measurement

- Search strategies were graded by a librarian using a locally-developed assessment tool and rubric.
- Recall, precision, and *F*-measure were calculated.

CORRELATION TABLE

	Medline Usage	Score	Recall	Precision	F-measure	Self-Reported Skill	Perceived Importance	Clerkship Grade
Medline Usage	---							
Score	0.088	---						
Recall	-0.078	0.104	---					
Precision	0.189	0.043	0.087	---				
F-measure	0.121	0.231 <i>p</i> < .05	0.601 <i>p</i> < .01	0.701 <i>p</i> < .01	---			
Self-Reported Skill	0.228 <i>p</i> < .05	0.240 <i>p</i> < .05	-0.066	0.139	0.048	---		
Perceived Importance	0.360 <i>p</i> < .01	0.185	-0.074	0.082	0.009	0.568 <i>p</i> < .01	---	
Clerkship Grade	0.170	0.003	0.041	-0.026	0.008	-0.053	0.028	---



= Weak correlation



= Moderate correlation



= Strong correlation

SUMMARY

Perceived Importance

Students' beliefs about the value of the literature when

- substantiating current knowledge,
- building new knowledge,
- determining diagnostic procedures,
- identifying treatment options, &
- improving patient care outcomes,

is strongly correlated with their searching self-efficacy. (S)

If they believe it's important, they believe they are good at it.*

Value also moderately correlates with Ovid MEDLINE search frequency. (S)

If they believe it's important, they use it more often.*

MEDLINE Usage

Usage weakly correlates with precision (NS), clerkship performance (NS), and self-efficacy. (S)

The more they use it, the better they think they are at searching.*

Search frequency does not correlate with search skill as measured by the grading instrument used by the library.

Searching more does not equal searching better.

Score

Actual skill and perceived skill are weakly correlated. (S)

Students have some self-awareness of their abilities.

Score and *F* are weakly correlated. (S)

There is some relationship between search process & output success.

(S) = Statistically significant
(NS) = Not statistically significant
*No causal relationship measured; inverse cause/effect equally possible.

DATA DEFINITIONS

Medline Usage: # of searches in last six months

Score: Grade on year four searching assignment

Recall: % of relevant articles retrieved

Precision: % of retrieved articles that are relevant

F-measure: Weighted mean of recall and precision

Self-Reported Skill: Self-assessment of searching abilities

Perceived Importance: Value of literature in practice

Clerkship Grade: Overall performance in neurology clerkship