



Evidence Summary

Librarian-Led Information Literacy Training Delivered in Small Groups Improved Medical Students' Confidence in Their Ability to Use Evidence Based Resources Effectively

A Review of:

McClurg, C., Powelson, S., Lang, E., Aghajafari, F., & Edworthy, S. (2015). Evaluating effectiveness of small group information literacy instruction for Undergraduate Medical Education students using a pre- and post-survey study design. *Health Information & Libraries Journal*. 32(2), 120-130. <http://doi.org/10.1111/hir.12098>

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Abstract

Objective – To assess the effectiveness of librarian-led small group information literacy sessions, which were integrated into the second year of a three-year undergraduate medical course.

Design – A pre- and post-intervention survey questionnaire.

Setting – A large university in Canada.

Subjects – A cohort of 160 second year undergraduate medical students enrolled in the three-year programme of a large university

in Canada.

Methods – As part of the redevelopment of the undergraduate three-year medical course, information literacy skills in evidence based medicine were integrated into the seminar and small group teaching programme. Every week for five weeks, 3 librarians each visited 4 small groups of 15 students to deliver a 15-minute session as part of a 2-hour long seminar led by practising physicians. The sessions did not include a formal hands-on component, however, students were encouraged to try out searches on their own devices. Each 15-minute session covered 3 learning objectives, including how to use PubMed clinical queries,

how to use MeSH, and how to search for systematic reviews and guidelines.

A pre- and post-intervention survey design was used to assess students' perceptions of the impact of these sessions. The students were asked to complete an online Survey Monkey survey before and after the five week lecture block. The questions covered resource selection, perception of barriers to finding evidence based information, and the students' confidence in using evidence based resources. The data were analysed descriptively.

Main results – The pre-survey achieved a 90% (144/160) response rate while the post-survey achieved a 75% (112/160) response rate. The post-survey indicated an increase in the likelihood that students would use Ovid MEDLINE, carry out a literature search, and consult a librarian, with a decrease in those who would consult a print or online textbook. There was limited change in the students' confidence that they could find answers quickly, but more of an increase in the proportion of students who were confident they could find systematic reviews and guidelines, and use search limits, PICO, and MeSH. Before the intervention, "knowing where to search," devising a search strategy, and retrieving too many results were all thought to be obstacles by the students. After the small group training, students considered these issues less of a problem.

The post-survey also included an opportunity for the students to comment on their experience with the programme overall. Of the 54 responses received, 34 identified the library component as being the most important thing they had learned in the small group part of the course.

Conclusion – The authors conclude that integrating information literacy into the undergraduate curriculum as part of the small group seminar series is effective. They suggest future directions for research, such as a study to assess the impact of the training on specific skills rather than student confidence and evaluations of other teaching methods.

Commentary

Teaching and training are key elements of the role of a librarian working in the health sector (Sen, Chapman, & Villa, 2014). This study of an alternative method to a traditional library-based session for delivering an information literacy program to medical students was appraised using the ReLIANT tool (Koufogiannakis, Booth, & Brettle, 2006). The study's strength is its rationale and reporting. The objective was explicitly stated and the study population was clearly defined. Each small group contained the same number of participants and they each received the same number of training sessions with a faculty-supported librarian. The mode of delivery was described as engagement and discussion. The learning objectives of each training session were presented and were the same for each group. The authors used a pre- and post-intervention survey design, which was appropriate to assess the short term outcomes that were measured. The survey questions were based on previously published work, and the full questionnaire was appended to the report to allow for reproducibility.

Results were described narratively and presented graphically as percentages to show the pre- and post-intervention comparison. When describing the results, the authors used language such as "significant change" and "significant increase," although no statistical significance tests were reported. The study aimed to assess the effectiveness of the intervention, however it was the students' confidence in their ability to find and use resources that was measured, rather than any quantifiable measure of the effect of this method on skills. The authors of the paper recognise this as a limitation, as well as noting that this is a three-year course therefore the results may not be generalizable to a four-year medical program.

The study does not attempt to compare the integrated teaching method with a different teaching model or control group, as Ilic, Tepper, and Misso (2012) did in their

randomised controlled trial comparing the effect of a formal literature searching workshop with a control group who did not attend a workshop. As there is no control and the outcomes measured are subjective rather than an objective assessment of information literacy skills, the results should be interpreted with caution. However, the integrated method did appear to be successful in improving the students' confidence with using evidence based resources, so other institutions may wish to incorporate this approach into their own programmes as an alternative to the traditional stand-alone library teaching session. They should evaluate the effect of the intervention on students' skills, and directly compare it with other methods.

References

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