Research Note

Perceptions of pharmacy faculty need for development in educational research

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ABSTRACT

Introduction: Pharmacy educators have identified that pharmacy faculty need a better understanding of educational research to facilitate improvement of teaching, curricula, and related outcomes. However, the specific faculty development needs have not been assessed. The purpose of this study was to investigate self-reported confidence among clinical doctor of pharmacy faculty in skills essential for conducting educational research.

Methods: Faculty members with primary responsibilities in teaching at the University of Florida College of Pharmacy were invited to the take the Adapted Self-Efficacy in Research Measure (ASERM). Descriptive analysis and independent samples t-tests were used to compare the self-efficacy items by faculty rank, gender, and years of experience.

Results: Twenty-two of the 37 faculty members answered the 30-item survey that identified their self-efficacy in items and categories of skills, including writing skills, statistical skills, research design, research management and dissemination in education research. Senior faculty had significantly higher confidence than junior faculty on seven items. Participants who worked more than ten years had statistically higher confidence in preparing and submitting grant proposals to obtain funding for educational research. Skills where both junior and senior faculty had low confidence were related to using non-traditional methods such as qualitative methods and identifying funding resources for educational research.

Discussion and conclusions: Findings from the ASERM provided insights among pharmacy educators regarding self-efficacy related to skills needed for educational research, options for faculty development opportunities and actions for improving educational research knowledge and skills among them.

Introduction

Health care is experiencing substantial and rapid change that is driving significant transformation in the doctor of pharmacy (PharmD) curricula. Changes in higher education are stimulating new approaches to teaching, learning and assessment in pharmacy education. There are also greater expectations of evaluating the effectiveness of teaching and curricula to improve educational outcomes. As faculty embark on implementing new curricular approaches that address ACPE Standards 2016, they need to be

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prepared to evaluate the effectiveness of these approaches and their impact on educational outcomes.[1]

McLaughlin et al.[2] have advocated that pharmacy educators need to better understand educational research to facilitate the improvement of teaching, curricula, and related outcomes. Educational research involves the use of systematic and critical investigation to explain educational issues. Although some pharmacy faculty have been trained in research, few understand educational research that is more closely related to social and behavioral research than pharmaceutical or clinical research. Since educational research uses a systematic approach to advance knowledge, the researcher must be equipped to guide, contribute, and develop theories related to education. Due to a paucity of literature about faculty efficacy in educational research, this was the focus of our study.

Faculty development that focuses on the knowledge and skills necessary to conduct educational research has not received a lot of attention. The 2009-10 AACP Faculty Affairs Committee provided a critical appraisal and recommendations for faculty development.[3] This report noted that faculty development programs must encompass all faculty subgroups but did not address the need for development around educational research. Zeind et al.[4] describe a sustainable faculty development program that included an assessment of faculty development needs. The assessment determined the broad needs of faculty such as developing courses, managing classroom, using teaching techniques, and preparing manuscripts. There was a single item that assessed faculty needs related to educationally related research activities. To better understand the developmental needs of faculty who desire to accomplish educational research, the assessment should address specific knowledge and skills required. The purpose of this study was to assess self-reported confidence in using skills related to educational research among clinical pharmacy faculty who have primary responsibility for teaching in a PharmD program.

Methods

Survey instrument

The Self-Efficacy in Research Measure (SERM), based on the self-efficacy framework suggested by Bandura, was adapted for this study.[5–8] The SERM is a 33-item survey that uses a nine-point rating scale (1-no confidence to 9-total confidence) originally developed by Phillips and Russell[9] for use with graduate psychology students. Previous studies demonstrated good overall internal consistency for the SERM and for the four subscales.[6,7] The subscales include: (1) writing skills (WS), gathering literature for and writing research papers; (2) statistical skills (SS), identifying hypothesis, preparing and managing data, and selecting and interpreting statistical tests; (3) research design (RD), addressing methodological considerations of a research study; and (4) research management and dissemination (RM-D), management, organization, and presentation of research studies. Since three of the items pertained specifically to completing a thesis or dissertation, these items were not included in the survey administered to pharmacy faculty. In nine of the items, we also added "educational" so that a reference is made to educational research rather than research. This survey was felt to be appropriate because psychology students are taught to use social, behavioral, and quantitative research methods and these same methods are essential for educational research.

Three graduate students and a faculty member with expertise in educational research independently categorized the 30 items to document content validity, which provided evidence that this instrument was appropriate for educational research. This content validation process resulted in articulating representative categories and related items. Based on their consensus, four categories and representative items were identified including: (1) writing skills (WS), items 5, 7, 13, 14, 20, and 29; (2) statistical skills (SS), items 2, 6, 16, 17, 19, 21, 22, 27, 28, and 30; (3) research resign (RD), items 1, 3, 9, 10, 11, 18, 23 and 24; and (4) research management and dissemination (RM-D), items 4, 8, 12, 15, 25, and 26.

Participants

Thirty-seven faculty members whose primary responsibilities are teaching at the University of Florida College of Pharmacy were invited to the take the adapted SERM (ASERM). At the University of Florida's College of Pharmacy, there are 77 faculty members with 37 teaching-intensive (clinical track) and 40 research-intensive (tenured or tenure-track) persons. The participating faculty designated as clinical track have significant teaching responsibility and are therefore encouraged to engage in educational research and scholarship. Tenure track faculty members have research expectations that focus on work funded by the National Institutes of Health (NIH) and other similar agencies. With consideration of these differences, only the clinical track faculty members were invited to complete the ASERM.

The faculty members invited to complete the survey have been able to participate in faculty development opportunities at the college of pharmacy and the health science center. Faculty development opportunities have primarily focused on educational research skill development, teaching, learning, and assessment (e.g., using educational literature, overview of statistical methods, survey and questionnaire design). Among the participants in this study, two faculty members completed the Medical Education Research Certificate Program that was initially developed by the American Association of Medical Colleges (AAMC) and was offered at the health science center in 2014–2015. Two other faculty members have completed education-related courses that are offered by the Harvard Macy Institute.[10,11] These programs included an emphasis on knowledge and skills essential for conducting educational research.

The survey was administered using Survey Monkey-Platinum[12] which is an encrypted version. The Institutional Review Board II approved this study (2015-U-1073).