Background and Introduction

Doctorate of Pharmacy (PharmD) programs have a long history of including research-related coursework in their curricula. Research is a variety of activities that includes but is not limited to biostatistics, research methods, drug information, literature evaluation, and partial to full research projects. Full research projects may encompass activities such as meta-analysis all the way to benchwork alongside researchers.

Research in PharmD programs develops practitioners that are more familiar with the process of critical analysis and evidence-based medicine, as well as a proclivity to respond to unanswered questions. ACPE accreditation guidelines have provisions for including research-related coursework in PharmD programs, including drug information, literature evaluation, and research design, but do not currently require full research projects to be completed prior to graduation. Prior studies have found that at approximately 65% of PharmD programs have the requirement to complete a research project prior to graduation.1,2

The problems with requiring research requirements for PharmD students are that they increase strain on faculty members, are time-consuming, and resource intensive. With more than a dozen new pharmacy schools opening over the past few years, a clear slope gives both the opportunity to institute better curricula with regards to research and has the challenge of doing so with sometimes understaffed faculty and fewer resources. This study aims to evaluate the extent and type of research and research-related coursework in the curricula of pharmacy schools.

Methods

- Online questionnaire
- Questions were adapted from Murphy et al1
- Time frame: November 2013 to January 2014
- Inclusion criteria: Schools of Pharmacy in the United States and Puerto Rico that were currently regular or associate institutional members of the American Association of Colleges of Pharmacy (AACP) in Spring of 2013
- Participants were chosen to complete the study that most closely matched the description of Head or Chair of Pharmacy Practice for their respective school
- Distributed to selected survey participants in three waves of emails
- Data analysis:
  - Descriptive variables and demographic variables were analyzed by calculating summary means and standard deviations for continuous variables Chi square analysis for dichotomous data
  - Categorical variables were analyzed by calculating frequencies and percentages

Results

- Twenty-seven questionnaires were completed electronically for a 20% response rate
- Eight respondents (30%) estimated that less than 10% of students graduated from their program required statistics (78%) appears to be on the decline from the prior study (93%)
- Approximately 41% of respondents claiming that their program required research methods and drug information/literature evaluation have remained roughly the same. However, there were respondents claiming their program required biostatistics (78%) appears to be on the decline from the prior study (93%)
- Eighty-nine percent of colleges offered some opportunity for students to conduct a research project, however, by making this non-compulsory, few students take said opportunities—41% of respondents agreed that less than 10% complete elective opportunities
- Research is time intensive to students and advisors, costly, and takes away time from other studies in the PharmD curriculum. One compromise administrators at Tuskegee University in New York made was in excluding data collection from their ‘capstone,’ streamlining the process and still exposing students to some manner of research competencies.

Conclusion

The majority of colleges provide research-related coursework for their students in PharmD programs. Roughly a quarter of the respondents schools require some form of research project to be completed prior to graduation, with a large portion offering some form of research experience or elective with research opportunities.

Recommendations and Future Research

ACPE should disambiguate coursework requirements of research methods, statistics, literature evaluation, and drug information in PharmD programs, what coursework is required to take place in the PharmD curriculum, and which ones are allowed to occur outside (whether that be through pre-pharmacy coursework or otherwise). Future research could compare the impact of including coursework during the PharmD curriculum versus allowing it to take place in the pharmacy years. Further, it is a common perception of students that only a small portion of the faculty completing a research project, and rarely follow up with graduates regarding the impact of including research coursework on their career.

References


Table 1 Research Related Coursework (n=27)

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Conclusion and Discussion

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Limitations

- Small sample size
- Electronic means of obtaining survey data may have limited the survey return versus traditional paper
- Respondents may not have known all the information necessary to complete the survey’s specific questions

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Research-related Coursework and Research Experiences in Doctor of Pharmacy Programs

Victoria Sherbeck and John Murphy, PharmD; University of Arizona College of Pharmacy

Conclusion and Discussion

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