Publications and Presentations from PharmD Student Research Project: A Systematic Review

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I. ABSTRACT

Objectives: To conduct a systematic review of reports of pharmacy student research programs to describe publication and presentations resulting from the research.

Methods: To be eligible for the systematic review, studies must have described student research programs in which students were required to collect, analyze, report or present findings and be reported in English. Studies were screened and data extracted using standardized forms by two investigators independently with the final list identified by consensus. The primary outcome variables were extramural posters/presentations and publications. Data were summarized in tables.

Results: A total of 6112 studies were screened and 14 studies were identified that described student research meeting inclusion criteria. Two thirds were reports of required projects and a third were elective projects. Required research projects were conducted on a wide variety of topics including clinical, practice, laboratory, public health, education and other topics. Components of the research process were not uniformly described. The terminal project requirement was usually a written report (57%) or a poster (29%). One program required a presentation. More than half (64%) of the student research programs reported that students presented extramural posters and half (57%) reported that publications resulted from student research.

Conclusions: About half of the student research programs described in the literature indicated that student research resulted in extramural posters or presentations.

II. PURPOSE

The purpose of this systematic review is to describe the publications and presentations resulting from research of both national and international pharmacy student research programs

III. METHODS

Source: The electronic databases such as PubMed, EMBASE, ERIC, Academic Search Complete, google scholar, etc., were used to search for studies. Two investigators independently screened and extracted data and final lists were identified by consensus.

Inclusion criteria: The studies must involve pharmacy student research, the report must mention requiring data collection, analysis, written report or presentation of findings. The studies must be reported in English.

Exclusion criteria: Studies involving students who are not attending pharmacy school, PharmD graduate students completing clinical residency program, obtained an undergraduate pharmacy degree, etc.

Data extraction: Screening tools and data extraction forms were created and studies that met the screening tool requirement were analyzed using the data extraction tool.

Data Analysis: A flow chart was constructed showing the included and excluded studies. Tables were used to describe the studies included in this systematic review.

IV. RESULTS

Table: Characteristics of the Studies

<table>
<thead>
<tr>
<th>Study Title</th>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
<th>Data Extraction</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Study 2</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Study 3</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Reported Presentations and Publications

PRISMA Flow Diagram

V. LIMITATIONS

The screening tool excluded quality improvement (QI) projects that pharmacy schools may consider as a student project.

Studies involving students who are not in PharmD programs were excluded.

Some studies did not report the number of students involved in the research project for the specified pharmacy program.

Some pharmacy schools have different doctorate programs such as undergraduate pharmacy program, whereas the pharmacy schools in the U.S are graduate programs.

VI. CONCLUSIONS

This systematic review helped identify pharmacy schools actively participating in student research projects.

Participating in research projects and presentations prepares graduating pharmacy students to become effective in bringing changes and improvement to the future of the pharmacy profession.

There are few studies that describe research involvement for pharmacy students.

It is suggested that more pharmacy schools consider training their PharmD candidates with some type research skills.

VII. DISCLOSURE

Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:

Leah Worede, Sameer Islam, Marion Slack, Jennifer Martin: Nothing to disclose.