The Significance and Benefits of Student-led Research and Undergraduate Journals: A Review

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Conflicts of interest

None to declare
FIP Workforce Development Goals

1. Academic Capacity
2. Leadership Development
3. Working with Others
4. Workforce Intelligence
Learning objectives

1. Understand the importance of student-led research in practitioner development.
2. Understand the significance and benefits of undergraduate journals in professional development.
3. Appreciate the potential benefits an undergraduate pharmacy journal may offer students.
Background

- National Competency Framework Standards 2016 \(^1\).
  - *Domain 5: Education and Research*
- Australian pharmacy schools offer undergraduate honours streams for research opportunities.
- Anectodal evidence from academics suggests publishing rate by students is low.

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Background

- Multitude of undergraduate journals in the world across a variety of disciplines:
  - Medical
  - Business
  - Law
  - Science
- No current undergraduate journal in the world for pharmacy.
Is this the real life… is this just fantasy?

“If at first the idea is not absurd, then there will be no hope for it” - A. Einstein
Objective

To evaluate the success of current undergraduate journals with a roadmap for research mentorship, improving academic writing and professional development.

To evaluate the benefits achieved from student-led research across a range of disciplines.
Methodology

- Literature was sourced from electronic databases:
  - Google Scholar
  - OvidSP
  - PsycINFO
  - Scopus

- Use of keyword search terms and phrases.

- The search period was between November 20th to December 14th 2017.
Inclusion and Exclusion Criteria

- References were included if they reported benefits of undergraduate student-led research.
- Exclusion criteria:
  1. Emphasis on post-graduate student research;
  2. Did not eventuate in student publication;
  3. High degree of staff input on student projects; and
  4. Written in a text other than English
Themes

- Articles retrieved were subjectively assessed against **FOUR** key themes:
  1. Academic writing and communication skills
  2. Research competency
  3. Mentorship and collaborative learning
  4. Professional development
Search for Student Journals

- “Student-led journals” was entered into the Google Search engine.
- Found a sample of student journals (n = 20).
- No student-led pharmacy related journal was found.
Results - student-led journals

70% of journals are academically peer-reviewed

Five journals have student editorial boards for peer reviewing submissions

Sample of the Variety of Published Student Journals (n = 20)

- Education: 25%
- Law: 10%
- Religion and Theology: 10%
- Engineering and Chemistry: 10%
- Arts: 20%
- No defined scope: 5%
- Social Sciences: 5%
Results - Search Strategy

≈ 36% of references were sourced from pharmacy related journals

≈ 21% of references were sourced from medical related journals

≈ 41% of references were sourced from other journals

Total number of references retrieved from chosen electronic databases (n = 43)

Total number of references included for eligibility after removal of duplicates through Endnote sort function (n = 27)

Articles Excluded (n = 16)

Full-text articles excluded, with reasons (n = 13)

- Emphasis on post-graduate student research (n = 6)
- Articles without the goal of eventual student publication (n = 2)
- High degree of academic staff input in student projects (n = 3)
- Irrelevant studies (n = 2)

Full-text articles assessed for eligibility (n = 27)

Articles included in review (n = 14)
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<th>Academic writing and communication skills</th>
<th>Research competency</th>
<th>Mentorship and collaborative learning</th>
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Discussion

- Findings show that majority of literature objectively and subjectively supports the beneficial outcomes enabled through student-led research and publishing [2].
  - 43% of US pharmacy graduates who published in pharmacy journals as undergraduates went on to undertake a residency program [11]
- Role to expand the current research offerings in Australia complementary to Bachelor Honours Degrees.
  - Findings from NPSS data expressed increased desire for more research opportunities

Discussion

- Undergraduate journals have a role in:
  - streamlining student-led research to publication
  - aligning with university academic faculties
  - Building critical analysis and foundation peer-reviewer skills
  - Supporting the formation of a research network

- Risk of demise in journal continuity of success found in medical student journal experiences, cause unclear [4].
  - Lack of ongoing funding
  - Difficult to sustain enthusiasm from student leaders
  - Poor faculty support and mentorship

Progress: From research to practice

Developing an online research collaborative to facilitate pharmacy undergraduate research in Australia.

Empowering students of today to be researchers of tomorrow
Progress: From research to practice

Working with an established peer-reviewed pharmacy journal to commence the pathway to development of a global-first PEER-REVIEWED, STUDENT-RUN, academic pharmacy student journal.
References