Engaging Undergraduate Nutrition Students in Research: A Graduate Student Mentorship Approach

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Engaging Undergraduate Nutrition Students in Research: A Graduate Student Mentorship Approach

Authors: MJ Ludy, RM Tucker, AP Crum, CA Young

Background: Research skills are crucial for making evidence-based ethical decisions in dietetics practice (KRDN 1.1). Students require development of skills that will enable them to successfully serve as mentors/preceptors (KRDN 2.8). Opportunities to participate in undergraduate research and graduate mentorship are often limited. A research model where graduate students, under the supervision of RDN faculty, mentor undergraduate students was developed to address these issues.

Methods: Seniors enrolled in a research methods course and undergraduates at all levels were invited to assist with data collection in an on-going research project, alongside two experienced masters-level research assistants. All students completed ethical training and conducted in-depth testing that included anthropometric, blood pressure, and taste/smell sensitivity testing. Students volunteered with a graduate student who oversaw data collection, trained students on proper equipment use and communication skills, and delegated tasks.

Results: Qualitative feedback was overwhelmingly positive. Undergraduate students gained a greater appreciation for the research process; 32% voluntarily continued to assist with data collection for a second semester. Graduate students noted improvement in communication, mentoring, and research skills. Faculty viewed this as a feasible mechanism for increasing student engagement with research while balancing competing demands for time.

Conclusions: Involving graduate students in the mentoring of undergraduate research presents an under-utilized resource for (1) engaging future RDNs in the research process and (2) empowering graduate students to become preceptors.

Funding Disclosure: None

Learning Objective (≤500 characters): Participants will be able to identify the benefits of involving graduate students as mentors for undergraduate research.

Learning Code (select 3):
- #1 – 9000 Research
- #2 – 6080 Training, coaching, mentoring
- #3 – 7200 Team building
Engaging Undergraduate Nutrition Students in Research: A Graduate Student Mentorship Approach

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Abstract

Background: Research skills are crucial for making evidence-based ethical decisions in the dietetics profession (KRDN 1.1). Students require development of skills that will enable them to successfully serve as mentors/preceptors (KRDN 2.8). Opportunities to participate in undergraduate research and graduate mentorship are often limited. A research model where graduate students, under the supervision of RDN faculty, mentor undergraduate students was developed to address these issues.

Methods: Seniors enrolled in a research methods course and undergraduates at all levels were invited to assist with data collection in an on-going research project, alongside two experienced masters-level research assistants. All students completed ethical training and conducted in-depth testing that included anthropometric, blood pressure, and taste/smell sensitivity testing. Students volunteered with a graduate student who oversaw data collection, trained students on proper equipment use and communication skills, and delegated tasks.

Results: Qualitative feedback was overwhelmingly positive. Undergraduate students gained a greater appreciation for the research process: 92% voluntarily continued to assist with data collection for a second semester. Graduate students noted improvement in communication, mentoring, and research skills. Faculty viewed this as a feasible mechanism for increasing student engagement with research while balancing competing demands for time.

Conclusions: Involving graduate students in the mentoring of undergraduate research presents an under-utilized resource for (1) engaging future RDNs in the research process and (2) empowering undergraduate students. Before becoming an undergraduate research assistant, I did not have any real-world experience in performing research and was under the impression that it was a task only for graduate students.

Learning Objective: Participants will be able to identify the benefits of involving graduate students as mentors for undergraduate research.

Methods

• Seniors (n=48) in an undergraduate research methods course:
  - Completed ethics training (Collaborative Institutional Training Initiative, www.citiprogram.org)
  - Collected anthropometric, blood pressure, and taste/smell sensitivity data for an ongoing research project (Laone et al, 2015)

• Graduate students (n=12) in a combined Master’s of Food & Nutrition and Internship Program in Nutrition & Dietetics:
  - Trained students on equipment use and communication skills
  - Supervised data collection
  - Delegated tasks

Research In Action

<table>
<thead>
<tr>
<th>Waist Circumference</th>
<th>Air-Displacement Plethysmography</th>
<th>Blood Pressure</th>
<th>Taste &amp; Smell Sensitivity</th>
</tr>
</thead>
</table>

Results and Discussion

Undergraduate Student Reactions

"The greatest benefit is the opportunity to be exposed to real-life research projects as an undergraduate student. So often, we learn about methodologies or how to properly conduct research, but never actually have the opportunity to use such skills during our time as an undergraduate student. Before becoming an undergraduate research assistant, I did not have any real-world experience in performing research and was under the impression that it was a task only for graduate students.

Graduate Student Reactions

"I have received incredibly valuable experiences that I know for a fact will be transferrable." "I have gained a lot more supervising skills than I ever had. I have never been the head of any research project or bigger group of people, so this experience has helped me learn more about being a leader and supervisor." 

"I am now more confident in leading research projects/teams/workers than I ever have because of this opportunity. My hope is in the future when pursuing my thesis and PhD, I will be more confident in my abilities to conduct research and teach others to do the same. Conducting and participating in research are the core of nutrition, so I know I will be ready to tackle more opportunities that come my way."

Conclusions

• Involving graduate students in the mentorship of undergraduate research assistants presents an opportunity for:
  - Engaging future RDNs in the research process
  - Empowering graduate students to serve as preceptors.

References

Dougherty CM, Guarnieri A, Burrowes JD, Hand RK. Why Registered Dietitian Nutritionists are not doing research—perceptions, barriers, and participation in research from the Academy’s Dietetics Practice-Based Research Network Needs Assessment Survey. J Acad Nutr Diet 2012;112(9):A53.


Crayton J, Young CA. Nutrition, so I know I will be ready to tackle more opportunities that come my way."