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UNIVERSITY OF CENTRAL FLORIDA

Mentoring Female & Minoritized Doctoral Students: Results & Lessons Learned

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Pre-Academia Mentoring Pod

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Acknowledgements

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Executive Summary

"It cannot be left to those currently underrepresented to change the status quo."
Veronika Wirtz, Professor of Global Health, Boston University School of Public Health

"I've never had a teacher that looked like me, especially not in higher education, so this feels important. Our mentors in this fellowship often reminded us that our voices were important as females and minoritized groups, and while I'm not always confident in expressing my voice yet, I better understand the value it has now."
UCF Pre-Academia Mentoring Pod, Mentee 5

Background

Academic mentorship is critical for doctoral student success. Unfortunately, **mentorship opportunities for female doctoral students and academics are limited**, exacerbated by the ongoing lack of representation of women in senior positions in academia[1,2]. The importance of mentoring cannot be understated, particularly for underrepresented groups. Although much attention is paid to the mentoring of junior faculty, doctoral student mentoring is critical, especially mentoring beyond classwork and the dissertation. **Addressing the underrepresentation of women and minoritized populations in academia requires a multi-faceted approach. Doctoral students are an integral piece of the pipeline to academia and research positions**. Targeted mentoring is necessary for recruitment, retention, and long-term professional support of female and minoritized PhD students seeking careers in academia or research, who themselves will one day serve as mentors.

According to the **UCF Graduate Guide[3]**, **the intellectual atmosphere of a program is an often neglected, but nonetheless important component of graduate training, mentoring, and retention**. Creating an intellectual atmosphere requires opportunities for student and faculty interaction outside the classroom, such as seminars, symposia, and journal clubs. Moreover, inviting outside speakers to interact with graduate students is highly recommended. This type of environment fosters a culture where doctoral students are seen as junior colleagues, which promotes student success and prepares them for a career as researchers. **Creating this type of intellectual atmosphere is not necessarily costly; however, it requires a substantial commitment on behalf of faculty to engender this environment.**

*To this end, the **goal** of the UCF pre-academia mentoring pod is to create an intellectual atmosphere that **supports the success of female and minoritized students in the public health and public affairs** by providing targeted mentoring support beyond the typical mentoring available in coursework and dissertations.*

Funded by a $5,000 grant by the College of Community Innovation and Education, we created a pre-academia mentoring pod for female and minoritized doctoral students preparing for research careers related to public health or public affairs. The mentoring pod covered topics such as research management, work-life integration, special challenges and opportunities for female researchers, and career options for researchers. Meeting weekly for one semester, we used written assignments, internal mentoring meetings, and networking events with prominent female guest speakers from universities, think tanks, and governmental organizations across the nation in various stages of their academic and professional careers.

This report will:

- Describe the structure, topics, and pedagogical methods of the Pre-Academia Program during Spring 2021.
- Present themes from mentees' interview data collected at the end of Spring 2021 and present survey data comparing pre-program and post-program goals, knowledge, and self-confidence among mentees.
- Propose steps for continuing and improving this pre-academia mentoring pod experience.

Key Findings

- Mentees reported joining the mentoring pod due to **a need for mentoring and a lack of mentoring opportunities in the UCF Public Affairs PhD program**.
- **Mentees' self-reported confidence increased** in multiple areas including preparation, expertise, and knowing the value of their own voice in academia.
- **Mentees praised the quality of the guest speakers**, and each mentee followed up with at least one of the guest speakers, and one is now **collaborating** with the guest speaker on research.
- Students listed **relationships with mentors, networking with guest speakers, and empowerment** as the greatest benefits of the pod.
- Through the interviews and survey data, we have **identified several ways to improve** the content and the approach to the mentoring pod.

Next Steps

- **Fall 2021:** <u>Continue this cohort's mentoring in a formal mentoring pod structure in the Fall of 2021</u>, during which time the focus would be on the following: addressing any gaps in information identified by mentees during May 2021; applying lessons learned during the Spring; writing the CV, teaching, and research statements for academia positions; obtaining internal and external reviews of CV, teaching, and research statements; and preparing and delivering a mock-job talk with internal and external feedback.
- **Spring 2022:** <u>Apply for external funding to the NIH for an interinstitutional training grant</u> to develop a permanent mentoring program for female PhD students who are planning a career in public health-related research in academic settings.
- **Long-term sustainment and expansion of the program:** With external funding (ideally!) or internal funding (if external funding is not attainable), offer the Pre-Academia Mentoring Pod opportunity as a *one-year program to all UCF female PhD students interested in pursuing a research position in academia with an interest in public health (with public health broadly defined).*

Request for Continued Funding

One goal of the UCF Office of Diversity and Inclusion (ODI) is to sponsor, support, and assess university programs and activities that promote the goal to make the university community more inclusive and diverse[4]. To achieve this goal, the ODI created several development programs including the Leadership Empowerment Program and the Legacy Leadership and Mentoring Program, both of which are mentoring programs for undergraduate students. Although the College of Graduate Studies offers several fellowships for underrepresented students, we are aware of no formalized mentoring programs aimed at promoting diversity and inclusion for doctoral students in public health-related research.

Given the lack of dedicated mentoring programs for underrepresented doctoral students and the demonstrated success of the mentoring pod in meeting the needs of the student participants, **we kindly request continued funding for this program**. We plan to use the pilot data collected from the mentoring pod to <u>apply for a Training, Workforce Development, and Diversity grant sponsored by the National Institute of General Medical Sciences in Spring 2022, in collaboration with the University of Nevada-Reno. Continued data collection during Fall 2021 is necessary for creation and submission of a robust proposal the following Spring.</u>

We hope that you are convinced of the value of the mentor pod program, and that as leaders, you will continue to contribute to the development of an intellectual and supportive environment for our female and minoritized doctoral students seeking public health-related research careers.

1 Introduction

1.1 Background

Drs. Andraka-Christou, Atkins, and Asi (i.e., "the mentors") have informally mentored several PhD students at UCF in recent years, primarily through engaging these students in the mentors' research projects. Over time, some of these students have expressed an interest in pursuing a research career post-graduation. These **students also voiced a need for mentoring and lack of knowledge about the landscape of research-focused jobs in academia**. The students, all of whom were female and some of whom were persons of color (POC), described trepidation about entering a field where they felt their voices would be ignored and work-life balance appeared unattainable. These concerns were particularly evident among students who were first-generation college students or first-generation graduate school students. In brief, the mentors felt that the primary hindrance to a future research-focused career in academia for these students might not be methodological training but rather self-confidence and knowledge of how to navigate the academic job application process.

As a result, the mentors applied for internal funding through the College of Community Innovation and Education (CCIE) to **develop a semester-long mentoring program for female and otherwise minoritized students (particularly POC), who were in the middle of the PhD program in Public Affairs and interested in a research-focused academic career**. The mentors met with the five participating students at the beginning of the semester to identify their needs. The mentors also created and disseminated a pre-mentoring survey to the mentees. The mentors then created a non-credit Webcourse divided into multiple topics, weekly readings, weekly assignments, and either planned weekly guest speaker panels or internal meetings (i.e., with the mentees and the mentors only). Each week was focused on a specific topic that had been identified as a priority need, with readings, assignments, and meetings aligned with that topic. At the conclusion of the semester, mentees were required to write a reflection paper and complete a post-mentoring survey. Additionally, after the mentors received Institutional Review Board approval, the mentees were invited to participate in interviews regarding their experiences in the Pre-Academia program and their suggestions for improvements for the future.

1.2 Objectives

The objectives of this internal report are to:

- Describe the structure and topics of the Pre-Academia Mentoring Pod during Spring 2021.
- Present themes from mentees' interview data collected at the end of Spring 2021 and present survey data comparing pre-program and post-program self-confidence, knowledge, and goals.
- Propose steps for continuing and improving this mentoring experience.

2 Overview of the pre-academia mentoring pod goals, structure, topics covered, and pedagogical approaches

2.1 Goals

The goals of the mentoring pod were to 1) increase self-confidence among the mentees, 2) empower the mentees to pursue a career in research post-graduation, particularly in academic settings, 3) describe the landscape of research positions within academia, as well as research positions outside of academia, 4) provide practical advice regarding the job application process, and 5) create networking experiences for mentees with female researchers with similar research interests from other academic institutions across the nation.

2.2 Structure

The mentoring pod officially began in February of 2021 and continued until the first week of May 2021. Upon joining, mentees were required to sign a document indicating that they intended to fully participate in all the readings, assignments, and meetings associated with the mentoring pod. Mentees were also provided with a $300 stipend to purchase professional association memberships, books or webinars related to career development or methodological training, or other research expenses – after review by the mentors.

During the Spring semester, each week a different topic was covered, with topics based on needs identified during our needs assessment at the beginning of the semester. Each week mentees were provided readings associated with the topic in Webcourses, and most weeks mentees were also required to complete written assignments submitted via Webcourses. Additionally, **during the majority of weeks, mentees were required to participate in an internal meeting with the other mentees and the mentors or were required to prepare for and attend a panel with guest speakers.** Guest speakers were offered a $200 incentive for their time. At the end of the semester, mentees were provided with books regarding topics that mentors felt needed further discussion. To motivate reading the books, **the mentors created a voluntary summer 2021 "book club", with one book per month to be discussed.** At the conclusion of the Spring semester, all mentees expressed strong interest in continuing engagement with the mentoring pod during Fall 2021.

2.3 Topics covered during Spring 2021

- The academia landscape: types of university institutions (e.g., research-focused institutions versus small liberal arts colleges); types of university positions (e.g., tenure-track faculty versus lecturer); and the academic job market
- Research organization skills: goal setting and tracking; reference management; and research task management
- Setting a research agenda: managing the research pipeline; developing a focused portfolio of research; enhancing research productivity; and tackling imposter syndrome
- Writing a peer-reviewed scientific article: the basic "formula" of a research article; the "formula" adjusted for quantitative, qualitative, and mixed method work; authorship rules; disclosure; and research misconduct
- Revising peer-reviewed scientific articles: the revision process; tips for responding to reviewers; identifying target journals for publication; and serving as a reviewer

- <u>Applying for grants</u>: types of funders; types of NIH grants; parts of an NIH application; anatomy of a specific aims page; and talking to program officers
- <u>Collaborating and leading a research team</u>: reasons for collaboration; characteristics of good collaborators; and project management for team-based research projects
- <u>Overview of the academic job application process</u>:
  - Writing the cover letter and CV: purpose, organization, and style
  - Writing the teaching philosophy or teaching statement: purpose, organization, and style
  - The job talk and dean interview, including presentation styles
  - Writing the research statement: purpose, organization, and style
- <u>Plan B</u>: alternatives to research careers in academia, including think tanks, state government, and federal government careers
- <u>Work-life balance</u>: identifying one's priorities, saying "no," and practical minimalism
- <u>Disseminating research</u>: social media challenges and opportunities; building a professional website; anatomy of an academic conference; giving an effective oral presentation; giving an effective poster presentation; and identifying top conferences in one's field
- <u>Teaching skills</u>: active learning and Bloom's taxonomy; teaching evaluations; and mentoring others

2.4 Pedagogical methods

The mentors intentionally used a variety of pedagogical approaches. **Readings** were selected to provide basic information about the topic and included peer-reviewed papers, websites, and white papers. **Written assignments** were designed to allow students to reflect on the application of the topic of the week to their own lives, to recognize any knowledge or professional development gaps they had with respect to the topics, and to plan how to address any such gaps.

Guest speaker panels were intended to provide perspectives on the topics beyond those of the mentors and to forge networking connections with female academics at other universities in similar fields to those of the mentees. The **internal meetings** were intended as a space for mentees to debrief, to reflect on lessons learned that week, to voice questions that they might feel uncomfortable raising with guest speakers, and to share and obtain feedback on written assignments.

A final reflection paper was required of each mentee for personal assessment of needs to be met in the future, lessons learned, and personal changes experienced since joining the mentoring pod. **During the summer, mentees have opted to participate in a monthly "book club" with the mentors**, during which we are discussing books purchased during the fellowship, including books on grant writing, negotiation, and college-level teaching skills.

3 Methodology

3.1 Research Questions

The research questions to be answered by this study are:

1. Why did mentees join the mentoring pod?
2. How have mentees' career plans changed since joining the mentoring pod?
3. To what extent have mentees' self-confidence changed since joining the mentoring pod?
4. How did mentees feel about specific topics covered?
5. How did mentees feel about the pedagogical methods used?
6. How did mentees feel about the composition of the mentees?
7. How has the mentees' knowledge about the research process changed?
8. What did the mentees perceive as being the greatest benefit of the mentoring pod?

3.2 Research Design

The mentors used a mixed method approach to answer the research questions. The following table summarizes the methods used to answer each question:

Table 1 Methods used to answer research questions

Research Question	Method Used to Answer Question
Why did mentees join the mentoring pod?	Interview, Reflection paper
How have mentees' career plans changed since joining the mentoring pod?	Survey, Interview, Reflection paper
To what extent has mentees' self-confidence changed?	Interview, Reflection paper
How did mentees feel about specific topics covered?	Interview, Reflection paper
How did mentees feel about the pedagogical methods used?	Interview, Reflection paper
How did mentees feel about the composition of the mentees?	Interview, Reflection paper
How has the mentees' knowledge about the research process and teaching changed?	Survey
What did the mentees perceive as being the greatest benefit of the mentoring pod?	Interviews
What are the next steps that mentees are taking in preparation for entering the job market in academia?	Reflection paper

3.3 Ethics

Institutional review board approval was obtained for this research from the University of Central Florida. Research participants (i.e., the mentees) were provided an explanation of research. While mentees were required to complete the pre- and post-survey, as well as the reflection paper, as part of their mentoring pod experience, inclusion of their data from the survey and reflection paper for research analysis was optional. Interviews were optional. All mentees opted into the research process.

3.4 Instruments

Interview instrument: The mentors jointly created the end-of-semester interview instrument with the goals of answering our research questions. Topics included the following: 1) overall perceptions of the Pre-Academia Mentoring Pod, 2) changes in career plans pre-post participation, 3) perceptions of specific topics covered, including any topics that felt to advanced or superfluous, 4) perceptions of specific pedagogical

approaches (e.g., reading materials, guest speakers, internal meetings, written assignments), 5) perceptions of the mentee composition of the program, including genders, race/ethnicities, and disciplinary backgrounds of the mentees, and 6) other areas for improvement.

Survey instrument: The mentors jointly created a pre- and post- survey instrument. The instrument used categorical and Likert scale questions to identify mentees career goals, including the type of institution in which they would like to work and the type of position they would like to have, as well as their knowledge and confidence with respect to basic research tasks, such as writing publications for peer review and developing/giving conference presentations.

Reflection paper: At the end of the semester, mentees were required to write a two- to three-page reflection paper regarding their goals, next steps they are taking toward their academic research career, perceptions about working in academia, and what they learned about themselves during the mentoring pod.

See *Appendix A* for the end-of-semester interview instrument.

See *Appendix B* for the pre- and post- survey instrument.

3.5 Sample

The Spring 2021 mentoring pod included **five mentees**, whose demographic data were as follows:

- 100% (n=5) were female
- 60% (n=3) identified as a person of color
- 100% (n=5) were enrolled in a PhD program; 60% (n=3) had completed their prospectus defense, while 40% (n=2) had not yet completed their prospectus defense
- 80% (n=4) were current UCF PhD students; 20% (n=1) was a former UCF MHA student currently pursuing a PhD elsewhere while participating on UCF-based research teams
- Of the UCF PhD students, 100% were in the Public Affairs program (n=4), with three focused on health services/policy research and one focused on social work/education research related to public health

3.6 Data Collection

Dr. Andraka-Christou conducted individual semi-structured interviews with each of the mentees via Zoom in May 2021. Interviews lasted approximately one hour, were audio recorded, and then transcribed. The pre- and post- survey link was embedded in Webcourses as an assignment at the beginning and end of the semester (February and May 2021). Reflection papers were collected via Webcourses in May 2021.

3.7 Data Analysis

Dr. Andraka-Christou conducted thematic analysis of interview data in Dedoose software. The thematic analysis process used a mixed deductive/inductive approach to coding. The interview questions served as first-level codes for a preliminary codebook. As each interview was coded, second-level and third-level codes were created iteratively, with second-level or third-level codes sometimes being merged overtime. New codes were applied to previously coded transcripts as needed. For each interview question, themes were identified by examining both codes and coded excepts related to that interview question. While not examined for purposes of this report, our research team will next be evaluating: 1) areas of agreement and disagreement

between mentees, and 2) overarching themes across all interview and research questions. Those results will be included in a forthcoming peer-reviewed publication.

Dr. Atkins created graphs to describe the survey data in Excel to show changes to questions in the pre- and post- survey, with pre- and post- responses linked at the individual level.

We used a complementarity approach to mixed method integration, through which we believe different methods (i.e., survey, interview, reflection paper) provide different perspectives of the same phenomenon [5].

3.8 Limitations

Interview data were collected by one of the mentors, Dr. Andraka-Christou, which could have influenced some responses to the questions. To help combat potential bias, Dr. Andraka-Christou began each interview expressing her desire for open and honest answers and the mentors' goals for identifying areas for improvement. Only five mentees participated this semester, limiting inferences that can be drawn from quantitative data.

4 Results

4.1 Why did the mentees join the mentoring pod?

Mentees described one or more of the following as general reasons for joining the mentoring pod:

- The world of academia is a "black box" that she needed to unpack
- General interest in pursuing a research career in academia
- Enjoyment of professional development opportunities
- Mentor or fellow mentee invited her
- Wanted to understand research career options after a PhD, both inside and outside of academia
- Was feeling overwhelmed about the academia researcher job application process
  - *"Academia sounds daunting, academia sounds as if there is no opportunity for work life balance or there's no time to build an eventual family, which I desire… It felt very scary to want to even navigate that route. And that was my initial thought and feeling as of January, February when we began." – Mentee 3*
- Wanted to hear experiences about academia from people other than just the mentors (i.e., wanted a larger "sample" of experiences)
- Mentoring is lacking in the Public Affairs PhD program at UCF
  - *"It's a mentoring group, I can use mentorship. I think a lot of times that is lacking in our doctoral program." – Mentee 3*
- Mentoring for pre-Academia PhD students is limited at professional/academic conferences
  - *"I might have those questions when I go to those conferences, but it's a weekend conference, you're not going to have all of these questions answered in a weekend span." – Mentee 3*

Mentees also had specific objectives they wanted the mentoring pod to meet. One or more of the following objectives were mentioned by each mentee:

- Understanding how to create job application materials, like teaching statements and research statements
- Knowing the difference between work in research-focused universities and teaching-focused universities, as well as differences between positions (e.g., tenure-track academic, lecturer)
- Describing the daily life of a tenure-track academic at a research institution
- Learning how to talk about one's research (e.g., in networking situations) and developing a way to "stand out" as a researcher among other researchers exploring similar topics
  - *"My background is predominantly in health administration, so that's where I really felt ... That's the last time I felt very comfortable in a field. I knew how to introduce myself there. But as a researcher, do you just jump straight into research? Like, what do you do or how do you find commonality?" – Mentee 4*
- Understanding life in academia for female POC, as well as strategies for navigating difficulties related to being minoritized
  - *"And I think the biggest thing that I wanted to learn was, what was it like for individuals who A were female and B people of color who had to navigate this world." – Mentee 4*
- Understanding the general process of job applications for academia positions (i.e., steps to take)
- Learning whether work-life balance in academia is possible and identifying strategies for achieving work-life balance, particularly as a female who wants to have a family
- Knowing the "good sides" and the "bad sides" of work in academia (i.e., the pros and the cons) to inform career plans

4.2 How did the mentees' career plans change, if at all, after participating in the mentoring pod?

Based on the survey data, at the beginning of the fellowship four out of five mentees in the survey indicated that a tenure-track job at a research focused university was their primary career goal. In May 2021, all mentees (5/5) indicated that a tenure-track job at a research-focused university was their primary career goal.

The qualitative data provided some more nuance to the survey data, indicating that even though a tenure-track job at a research-focused university was the primary goal, some mentees had not yet completely made up their mind or were open to other possibilities (e.g., think tanks) – either before a tenure-track position or if a tenure-track position is not obtained. All participants indicated that from the beginning of the mentoring pod they have wanted a research-focused position – however, their decision regarding the type of setting in which to conduct the research has become more oriented toward academia.

- *"Throughout this fellowship and the past year of my dissertation I have been trying to figure out what I want to do after I graduate. While I haven't come to a concrete conclusion, I think I am in a better position than I was last year – and academia is definitely a front runner now." – Mentee 5*
- *"The fear that I initially had back in January has definitely diminished a bit. I'll say significantly more actually than the level I was at in January. So those pathways are still the same in terms of my openness, but I'm a lot more open to academia because I can see that there's a tactical way I can go about preparing for being on that market." – Mentee 3*
- *"The mentoring program was especially helpful for planning a career in academia and helping to solidify that that was indeed the plan I wanted to take. Prior to the mentoring program I planned this same route, but better understanding the ability to have a work life balance, organize my time and research agenda, and get an idea of how to develop my own identity as a researcher and future academic." – Mentee 2*

Several mentees described their desire for a job in academia as being related to academic freedom and the ability to pursue research topics of one's choosing – a perk of research in academia about which they felt even more excited after participating in the mentoring pod.

- *"This is a large part of why I want to be an academic: to choose where to focus my research agenda. Hearing that others value this as part of being an academic made me more confident about my decision and life plan." – Mentee 2*
- *"I was thrilled to learn that all of the reasons I love working as a graduate assistant are the same reasons that I will love working in academia, as it has flexible work hours, ability to allot time toward family (as opposed to working a 9 to 5, where I'd have to take time off regularly during the week instead of modifying my schedule around an event), and the freedom to conduct research on whatever I want. This last point is perhaps the largest incentive for me to continue my work in academia." – Mentee 4*

4.3 To what extent has mentees' self-confidence changed since joining the mentoring pod?

Mentees described an increase in self-confidence with respect to seeking a research-focused job in academia.

"More than anything, I have learned that I am cut out for academia…I can't tell you, it's just a night and day difference. It is 110% difference in how much more prepared I am and how well I feel like I fit into it now. And how well I feel, or how able I feel to traverse the world of academia even still having not defended my prospectus." – Mentee 4

"While a significant reason for this is because now I know what to expect and what is expected of me, it is also because there has been a lot of confidence building that is woven into this fellowship that I personally find invaluable. Unfortunately, as we've discussed numerous times, women face unique challenges in life and work – self-confidence being one of them." – Mentee 5

"Coming into this group, I was filled with fear in regards to academia … And I don't want to say that it no longer sounds daunting, but it's less daunting. And so for me, I felt empowered from the mentors, from the speakers and even from my peers, that this is something that can be tackled."– Mentee 3

The increased confidence was particularly evident among POC.

"I've never had a teacher that looked like me, especially not in higher education, so this feels important. Our mentors in this fellowship often reminded us that our voices were important as females and minoritized groups, and while I'm not always confident in expressing my voice yet, I better understand the value it has now." – Mentee 5

4.4 How did mentees feel about specific topics covered?

See section 2.3 for a list of the specific topics covered during the Spring 2021 mentoring pod.

Most useful topics: During the interviews, mentees were asked to identify the topics discussed during the mentoring pod they found most useful or relevant to their needs. Each mentee identified 1-3 topics. The following topics were identified:

- Work-life balance
- Setting a research agenda
  - *"I had a hard time keeping track of all the research projects I was participating in. And then that there was a word document with the chart of prioritizing. And that's been helpful if, keeping track of everything." – Mentee 2*
- Writing a peer-reviewed article
- The landscape of academia
- Research organization
  - *"It's not like I was an undergrad, right? I can't just work anywhere 2:00 in the morning. It's also getting to know myself as a person as to what worked best for me, instead of just jumping around and making sure things get done. It's two totally different spheres and those are the two things that really hit home for me. I think maybe because there were earlier on, I'm not sure, but those were the things that really shaped the rest of the semester for me, and really transformed a few of my work habits." – Mentee 4*
- Job talk and dean interview
  - *"I think I really liked the job talk and dean interview one because that's something that I'm generally nervous about." – Mentee 5*
- Grant applications
- CV development

Topics needing more depth: Mentees were also asked about topics needing more depth or time than was provided during Spring 2021:

- Grant writing, including the differences between grant writing for the NSF versus the NIH
- Feedback on job application materials written by the mentees, including cover letters, CVs, teaching statements, and research statements
- Plan B (i.e., finding and applying to research jobs outside of academia)
  - *"I still felt like I didn't know what I would do in the middle…Am I applying to these [academic and non-academic jobs] at the same time? Am I just doing this and then waiting to be rejected and then doing this, I wanted a little more guidance maybe and then also maybe more options." – Mentee 5*
- Talking about one's research topic in more depth during networking
  - *"I feel like my research, I can verbalize it in the elevator speech because that's very short, but when someone asks me to describe it into more and more depth, my personal chair tells me this. I understand my research in my head, complete sense in my head. I know what I'm passionate about, I know what I'm interested in. But then relaying it in verbal terms beyond the elevator speech, sometimes I seem, in my opinion, all over the place." – Mentee 3*
- Developing university courses

One mentee found that the collaboration topic was not very relevant to her, as she has significant experience collaborating on research projects. Three mentees found that the research organization topic was not very relevant to them, because they had already developed a system that worked for them; however, the other two mentees described the research organization topic as being among the most important ones covered – as they had not yet developed a research organization system for themselves.

Importantly, rather than a consensus existing that one particular topic was most useful or least useful, perceptions differed based on the individual needs of each mentee. For example, one of the most introverted members of the mentoring pod found the job talk/dean interview topic particularly useful, because of her apprehensions regarding public speaking; and those who had already developed a research organization system for themselves found the research organization topic less useful than did those who had not yet developed a research organization system. All mentees appreciated the variety of topics covered.
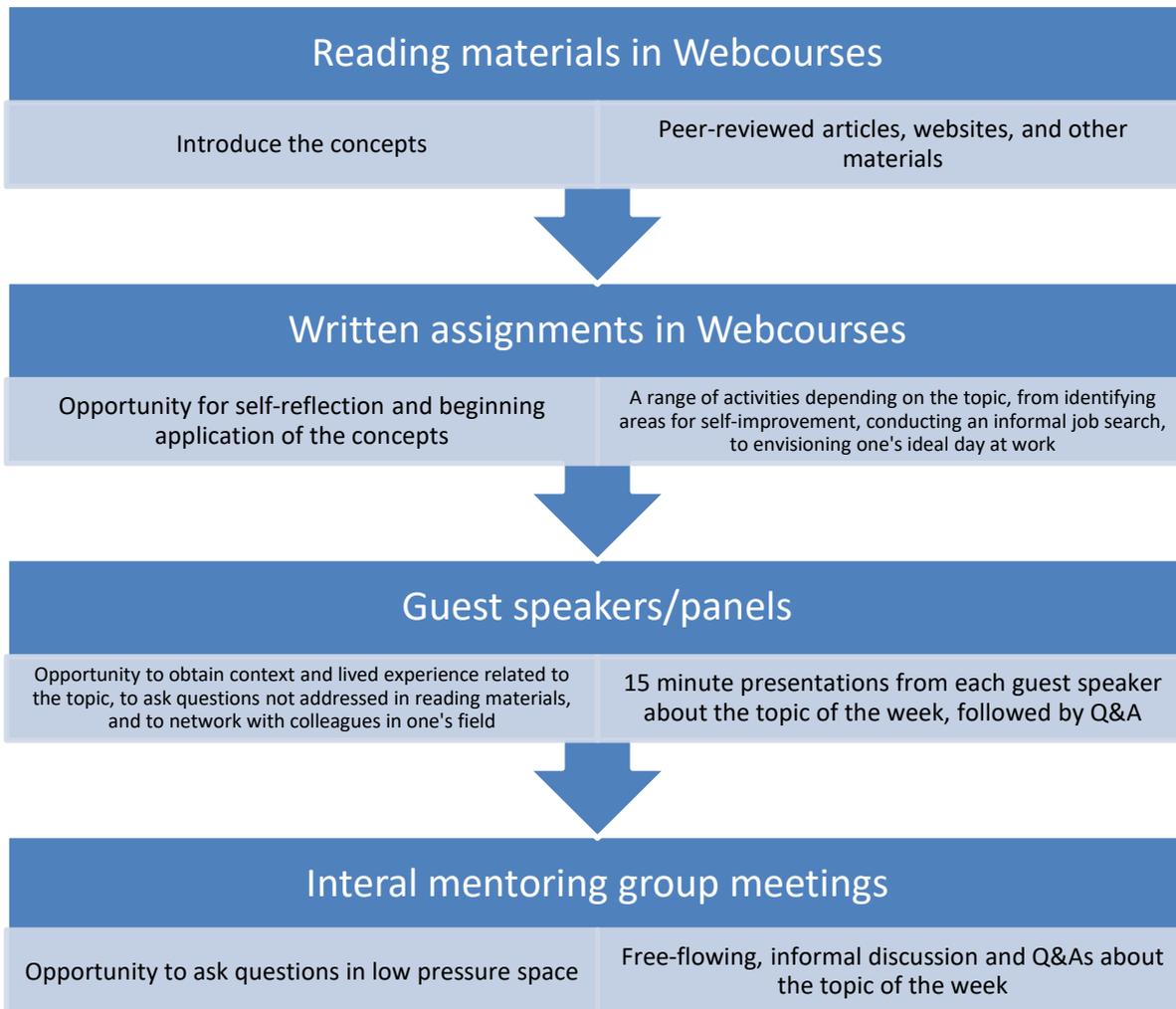
Order of topics: Mentees generally felt the order of topics was logical, but one mentee suggested creating headers in Webcourses to further group topics that were similar (e.g., grouping the CV, cover letter, teaching statement, research statement, and job talk/dean interview under a heading called "job application.")

4.5 How did mentees feel about the pedagogical approaches used?

Mentees were asked to describe how they felt about each of the pedagogical approaches used, including what they liked and areas for improvement.

Variety of pedagogical approaches used: All mentees appreciated the variety of pedagogical approaches used. They felt that these pedagogical approaches built on each other: 1) the reading materials in Webcourses introduced the concept; 2) the written assignments prompted self-reflection and internalization of the reading materials; 3) the guest speaker panels provided opportunities to ask questions not addressed in the reading materials, to obtain more context for the reading materials, and to network with scholars in their field; and 4) the internal mentoring pod meetings offered an opportunity to "debrief" and ask questions that mentees did not feel comfortable asking of guest speakers. Several mentees suggested that in subsequent mentoring pods, we order these pedagogical approaches as a repeating pattern, as shown in

the figure below; whereas during the Spring 2021 semester, sometimes multiple guest speakers/panels occurred back-to-back due to scheduling restrictions with guest speakers.

Reading materials in Webcourses

Introduce the concepts	Peer-reviewed articles, websites, and other materials

Written assignments in Webcourses

Opportunity for self-reflection and beginning application of the concepts	A range of activities depending on the topic, from identifying areas for self-improvement, conducting an informal job search, to envisioning one's ideal day at work

Guest speakers/panels

Opportunity to obtain context and lived experience related to the topic, to ask questions not addressed in reading materials, and to network with colleagues in one's field	15 minute presentations from each guest speaker about the topic of the week, followed by Q&A

Interal mentoring group meetings

Opportunity to ask questions in low pressure space	Free-flowing, informal discussion and Q&As about the topic of the week

Reading materials in Webcourses for each topic:

- All mentees mentioned that they planned to reference the reading materials in the future, with some mentioning that they had either bookmarked the materials on their computer or created separate folders of materials
- The process of reading the materials ranged from mentees reading each material line-by-line to first skimming the materials and then only carefully reading the material most relevant to them that day, with plans to read the remainder in the future (see point about referencing materials above)
- Mentees appreciated the variety of reading materials, including the fact that not all materials were peer-reviewed articles
  - *"I appreciated that there was a mix of website links and articles. It wasn't too many articles. Sometimes it becomes too much reading if it's just a lot of articles and a lot of the websites were not dense and difficult, they were very summative type of easy websites." – Mentee 5*
- One mentee suggested adding short videos, podcasts, or other multimedia files

- Mentees appreciated the tips and information summaries written by the mentors, particularly if they provided examples from the mentors' life experiences (e.g., Dr. Andraka-Christou described a process of developing a research organization strategy that works for her needs)
- Mentees felt that there were not too many reading materials
- Mentees appreciated templates for job application materials, as well as examples of job application materials
  - *"Resources that have been the most helpful thus far include templates for writing research and teaching statements and books such as The Professor is In by Karen Kelsky." – Mentee 3*
- Several mentees described already using materials, in particular a "formula" for writing a qualitative paper created by Dr. Andraka-Christou
  - *"I actually used it to write all of my final papers…that was an amazing guide." – Mentee 1*

Written assignments:

- Students did not feel like the written assignments were too intense, and they appreciated that the amount of time required for each ebbed and flowed throughout the semester
- Students valued the opportunity for self-reflection provided by the written assignments
  - *"One of the most important lessons that I learned about myself through the fellowship is how I want (or do not want) my life to look and feel. By engaging in assignments centered around organization skills and work-life balance, I was allowed to really process what those concepts really mean to me. Furthermore, the assignments allowed me to envision what those concepts look like to me in my ideal life. – Mentee 3*
- Writing assignments forced mentees to begin exploring the job application and preparation process, rather than procrastinating or delaying these tasks until later
  - *"{If I] didn't have those questions posed to me … I think I still would have had this big disconnect of where I am and what I want to know, and not realizing that in between … you actually have to process these things." – Mentee 3*
  - *"Without the fellowship, I would never be able to carve out so much time for these topics." – Mentee 1*
  - *"While I think I still have more self-reflection to do in terms of how I will define myself as a researcher, I don't think I would have taken the time, or known how to initiate some of the self-reflection needed without this fellowship." – Mentee 5*
- Students suggested that in the future all written assignment instructions and deadlines be available at the beginning of the semester, particularly as mentees tended to approach the mentoring pod as a non-credit course
- Students appreciated the "hands on" learning experience offered through written assignments
  - *"I'm really a learner who learns best by actually getting in and doing these hands-on assignments. I just don't absorb things when people are talking to me really, I have to do it on my own. So the assignment where we looked up all these different positions and job openings, I feel like I learned so much from that assignment." – Mentee 1*
- Students were asked which written assignments were most valuable. The following were selected:
  - Creating a Venn diagram of one's research interests and creating a related table with the projects, manuscripts, conference presentations, and other research activities related to each part of the Venn diagram
  - Identifying gaps related to teaching in their CV and creating a plan to address these gaps
  - Identifying gaps related to research methods and theories relevant to their interests and identifying trainings to address these gaps
  - Identifying departments at other universities that seem like a good "fit" based on research interests

- o Exploring job openings for positions and universities of interest, followed by reflecting on the availability/landscape of job openings
  - o Creating personal research organization "rules"
  - o Creating personal work-life balance "rules"
- While mentees overwhelmingly felt that the assignments were valuable, a few mentees mentioned that creating personal research organization rules and personal work-life balance rules was not useful, as they had either already done so prior to the semester or they did not want to feel "constrained" by rules
- Several mentees also suggested additional types of assignments for future cohorts, including the following:
  - o Writing and posting a twitter post related to one's own research or the publication of another scholar's research
  - o Writing and sending "cold call" email messages to a few research experts in their field
- Some mentees wanted more feedback from the mentors on the written assignments, including in the form of one-on-one meetings with mentors
  - o *"On a scale from one to 10, yeah, I think an eight would be my rating [for the mentoring pod]. It significantly helped me understand these areas where I wanted more understanding. And the only reason I say eight is because some of the assignments I would love genuine, honest feedback so I can know if I'm moving in the right direction." – Mentee 3*

Internal mentoring pod meetings (i.e., the group of mentees and mentors only):

- Mentees greatly appreciated the ability to ask questions in a comfortable, small group setting; they felt that there were some questions they did not want to ask guest speakers whom they did not know well
- Mentees found the mix of mentor personalities and experiences valuable
- One mentee suggested having the internal mentoring pod meetings slightly more structured (e.g., with a meeting agenda of questions to discuss for each topic)
- One mentee felt that the reading materials could be further incorporated by asking the mentees to present their reactions to the materials during the internal mentoring pod
- One mentee asked that mentees have more time speaking and mentors have less time speaking during the internal group meetings
- Mentees felt the internal mentoring pod meetings allowed them to form close, comfortable, collegial, and professional relationships with all mentors and mentees in the cohort
  - o *"I also learned the importance of having a supportive fellowship of colleagues/friends! The really unique added-value of this fellowship for me was socializing with other Ph.D. students with similar struggles – and not just socializing about research projects! I enjoyed talking about life and big-picture career goals, rather than the nitty gritty of research projects." – Mentee 4*
- One mentee appreciated that the mentors had gone through the job application processes themselves fairly recently and thus would have a more accurate understanding of the job landscape than more senior faculty
- Mentees felt that the mentors are passionate about and have a "heart" for mentoring

External guest speakers/panels:

- Mentees uniformly praised the quality of the guest speaker presentations and answers to questions, with several mentees describing "hanging onto every word" of the speakers
  - o *"I usually will message someone mid chat or something. If something comes up in my head and I don't think I've done that while the guest speakers were talking. One, because I was*

> *hanging onto their words. And two, it made me feel like, what they were saying was so important." – Mentee 4*

- Despite having no requirement to do so, every mentee mentioned having reached out to at least some of the guest speakers from the guest speaker events. Several of these mentees have already had meetings with the guest speakers outside of the mentoring pod, with one mentee beginning a research collaboration with a guest speaker. **The experience of reaching out to the guest speakers has increased the self-confidence of the mentees.**
  - o *"I also feel more confident in my ability to network! Every time I reached out to a guest speaker after their panel presentation, they always responded in a friendly way. I'll definitely be more willing to reach out to academics I admire in the future because of this experience!" – Mentee 2*
- Mentees greatly appreciated that the guest speakers were women, but one mentioned wanting more Black women as speakers to further explore the intersection of experiences between being female and Black in academia
- Mentees strongly appreciated the mentors focusing the guest speaker panels on the students, as evident by such activities as having the students introduce themselves first and ask questions during the Q&A session first
  - o *"I think that it also showed a lot of respect that the mentors had for their students and the student cohort to have the students introduce themselves first and then the professors, right? The mentors would go and then they would do it. It almost really reiterated that we were at the forefront and we were the direct recipients of it. I think that it's a small thing, but if the mentors would have gone first, it would have been fine. But I think it speaks a lot more to say like, you put us on equal footing with the guest speakers. And that felt really, really significant to me at least." – Mentee 4*
- One mentee noted feeling in awe of the mentors asking the guest speakers questions – making it clear to the students that the mentors do not feel they know everything and are willing to reach out to others, despite being tenured or tenure-track faculty
- Mentees suggested that guest speakers provide a brief biosketch in advance in the future, so that mentees could better prepare questions in advance
- Mentees enjoyed the format of guest speaker panels (i.e., 15 minutes each followed by Q&A) but one mentee suggested more time for Q&A in the future
- Mentees felt that many guest speakers appeared willing to serve as mentors, despite being from other universities
  - o *"The fact that each guest speaker was so willing to be a resource for us and continue to support us made me realize that I can and should reach out to more people." – Mentee 5*
- Mentees felt the "elevator pitches" about their research interests when introducing themselves at guest speaker events helped develop their confidence, but one mentee wanted more experience describing her research interests in-depth.

One-on-one meetings with mentors: One-on-one meetings with mentors were not a required component of the mentoring pod, and there was disagreement between mentees regarding whether one-on-one mentoring meetings should be optional or required.

Summer book club: Students uniformly expressed strong interest in the summer book club, particularly as an opportunity to continue discussions on topics that they felt required more depth and to maintain the collegial, professional relationships they had formed with the mentors and fellow mentees during the semester.

- *"And then this special layer of now adding the book club. This has been an experience that I did not realize I needed and I needed it. I told [other mentee] this the other day, "I'm so glad you reached out*

to me at the beginning of the semester about joining the mentoring group. I had no idea what to expect but it's been a blessing." – Mentee 3

Plans for the Fall: Students unanimously expressed a desire for continuing in the mentoring pod during Fall 2021. All expressed the desire to practice applying the lessons learned during the Spring 2021 semester by beginning to write application materials, develop job talks, and practice interviews, ideally with external and internal reviewers.

- *"I read through [the research statement materials] and I thought they were really helpful that when I get to the point of writing mine. But I wanted to spend more time on that one because I actually wanted to get to write mine and get feedback at some point." – Mentee 5*
- *"I think I still need help, specifically reviewing the documents that we're going to have to submit, like your teaching statement, your CV, I have drafts of them, but I know that they need help and I know that they can be improved because I just kind of wrote them, but I don't, haven't had external people look at them yet, so they could be totally wrong, but I definitely know that I need help in those areas." – Mentee 2*

4.6 How did mentees feel about composition of the group?

Women only: The mentees unanimously emphasized the importance of having the group focus on women, including the fact that mentees, mentors, and guest speakers were all women. Mentees noted that they felt more comfortable asking vulnerable questions with only women present. For example, they felt they had opportunities to discuss concerns about sexism or harassment, and they repeatedly asked questions about work-life balance – an issue they felt was particularly relevant to women given unbalanced childcare burdens in the U.S. The desire for a women-only group was particularly pronounced among the three students of color.

- *"Having a female-only space where we can share unique experiences and obstacles was incredible...I would definitely keep it all women." – Mentee 5*
- *"I love not having to combat [males] for time to speak…I loved the fact that we were all female. I think there was a level of respect and that you would not find in other circles. And I've been in male mentor pods too and it's almost like, they feel like they speak for the entire group." – Mentee 4*
- *"I liked that there was a lot more discussions of family and family planning type issues and just issues that uniquely impact women in academia." – Mentee 1 (regarding why she like a female-only atmosphere)*

Diverse students: Mentees who were POC each appreciated the diversity of the mentoring pod students, which made them feel more comfortable asking questions about the intersection of being a female and POC in academia.

- *"I am very happy not to be the token minority." – Mentee 4*

PhD students only: The mentees unanimously felt the mentoring pod should only be offered to PhD students with an interest in academic careers, rather than Masters' students, with most mentees emphasising that the mentoring pod should be offered around the time of qualifying exams. Multiple mentees mentioned that they wished they had started participating in the mentoring pod earlier – meaning during the second or third year of their PhD program and prior to defending their prospectus.

- *"I would say, second and third-year students in particular in the doctoral program … And the reason why I say second year is because to begin thinking about these things a bit earlier, I think would help set them up a little bit better, if that makes sense." – Mentee 3*
- *"I think if you go for people in their second year, that might be better. Give them a little more time to mull over the topics before they have to apply them." – Mentee 2*
- *"I would suggest starting with second years being an option for them to join this as well, because I think some of the topics that we covered, I would have liked to have known a year ago and that would have helped me change some things in my third year. I could have started doing more teaching things in my third year, rather than waiting till my fourth year to do teaching experience and working on your research statements, your CV and all that stuff." – Mentee 5*

Public health or public affairs students only: Mentees uniformly want the mentoring pod to focus on students and mentors from the social sciences, primarily public health or public affairs. When asked whether the program should be expanded to students and mentors in the physical sciences or the humanities, mentees generally found the idea problematic due to perceived lack of commonality in research interests and experiences. *Additionally, the mentees felt that expanding the mentoring pod to disciplines too far removed from public health or public affairs would weaken the networking opportunities offered via the guest speakers.* Specifically, the guest speakers served both as an information source about their own field and an opportunity to network with female academics in their field.

- *"I think that right now you have a group of people that are focused on public health issues. You have people that care, that's what the main interest of the people in the group. Even one of the individuals who's primarily focused in trauma and education. It's not like this is a completely foreign topic to her too. And I think that if you were to do it to chemistry or biology…I find it hard to create commonalities among group members which is really important to the general atmosphere, right?" – Mentee 4*
- *"I would prefer to keep it as focused as possible, but public health I think is still relatively focused." – Mentee 1*

Small cohort: The mentees uniformly emphasized the importance of having a small cohort. Reasons included the more interactive nature of discussions with a small group as opposed to a lecture setting, greater ability to get to know the mentors and mentees one-on-one, and greater comfort asking vulnerable questions. When asked for specific numbers of students who should be in each cohort, the answers from our mentees, two mentees said five students should be the maximum, two mentees said six students should be the maximum, and one mentee said between five and ten students should be the maximum.

- *"I really liked the size that it is now. And I think that it would be detrimental to students [to have a larger group] because at that point it stops becoming interactive and starts becoming a little bit more lecture focused." – Mentee 4*
- *"I liked it small. I wouldn't want it really big. I think keeping it small, allowed us each to be able to speak up and connect." – Mentee 5*

4.7 How has the mentees' knowledge about the research process and teaching changed?

Based on data from the pre- post- survey, students reported increased knowledge and confidence regarding the research process, the job market, teaching, and service. The following graphs present averages from survey questions based on 7-point Likert scale from strongly disagree to strongly agree.

Figure 1 shows the results for the pre- post- survey questions regarding research-related activities. For all research-related activities the participants reported increased knowledge and self-efficacy.
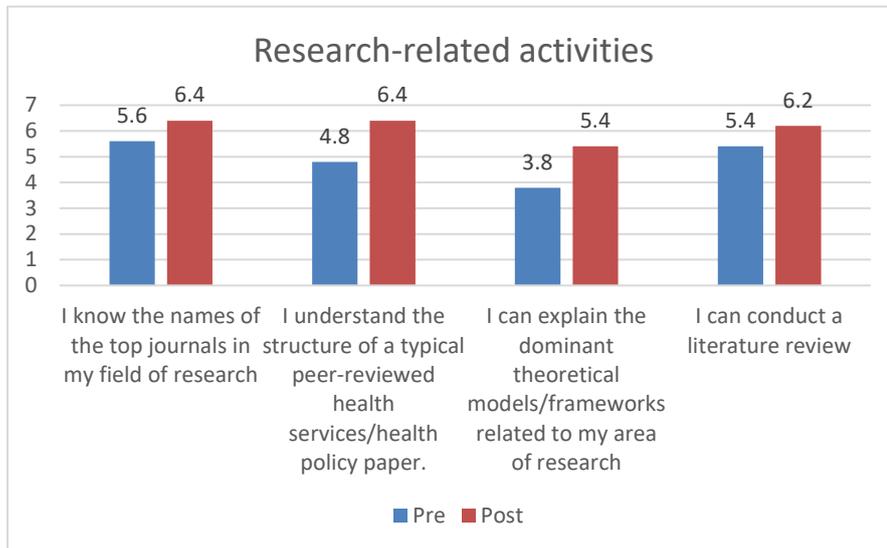
Figure 1

Figure 2 shows the results for the pre- post- survey questions regarding writing sections of a peer-reviewed manuscript. Students reported higher levels of comfort writing sections of a peer-reviewed manuscript after the Spring mentoring pod, particularly the introduction and discussion.
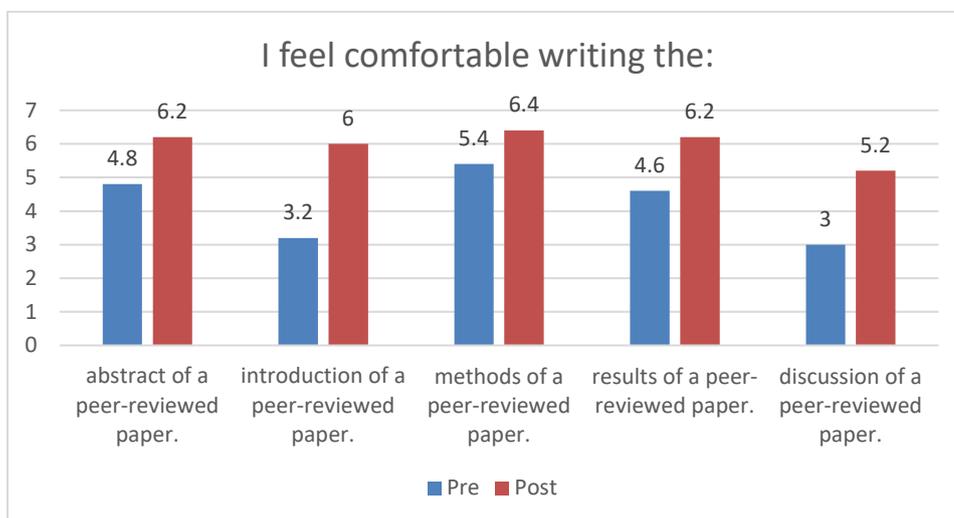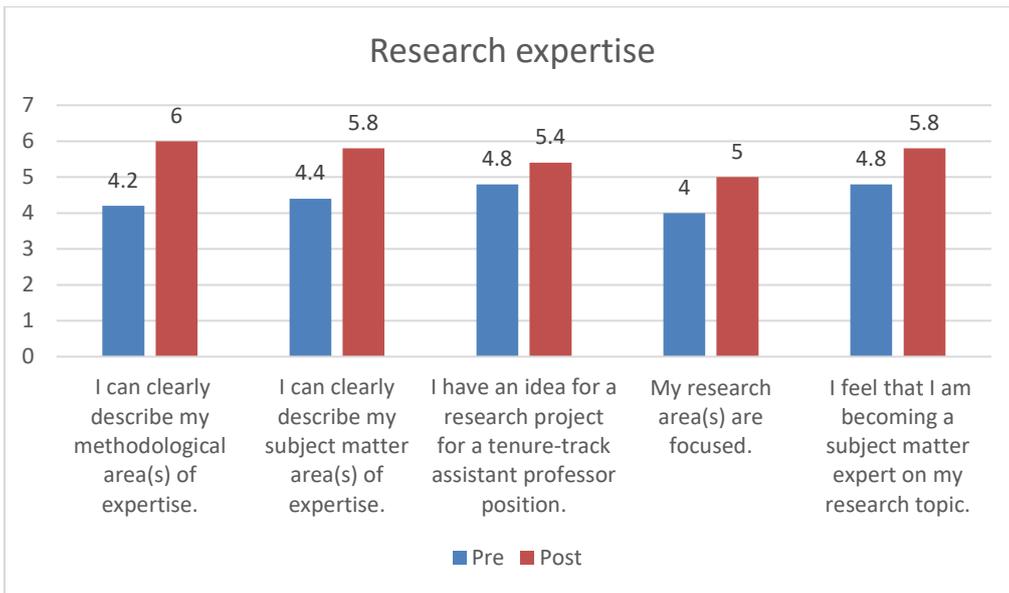
Figure 2

Figure 3 shows the results for the pre- post- survey questions regarding statements about research expertise. Participants reported higher levels of agreement for research expertise, particularly for describing their methodological areas of expertise; however, the increases in agreement were lower for having an idea for a research project to pursue during a tenure-track position.

Figure 3:

Figures 4a and 4b show results for conference-related activities. Overall, students' confidence regarding academic conferences increased. Although confidence increased for developing an oral presentation, confidence in giving an oral presentation lagged a bit behind confidence in giving a poster presentation.
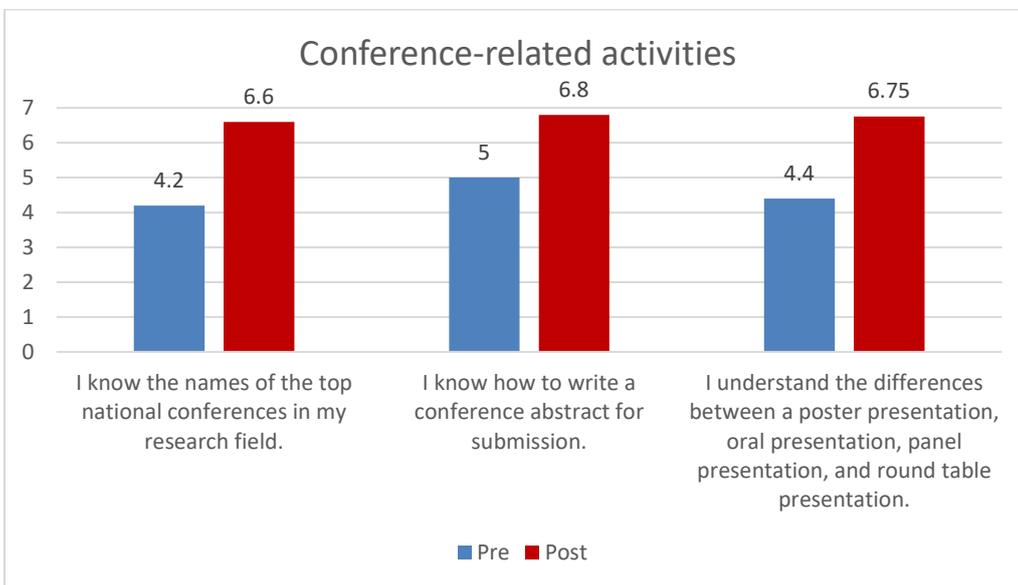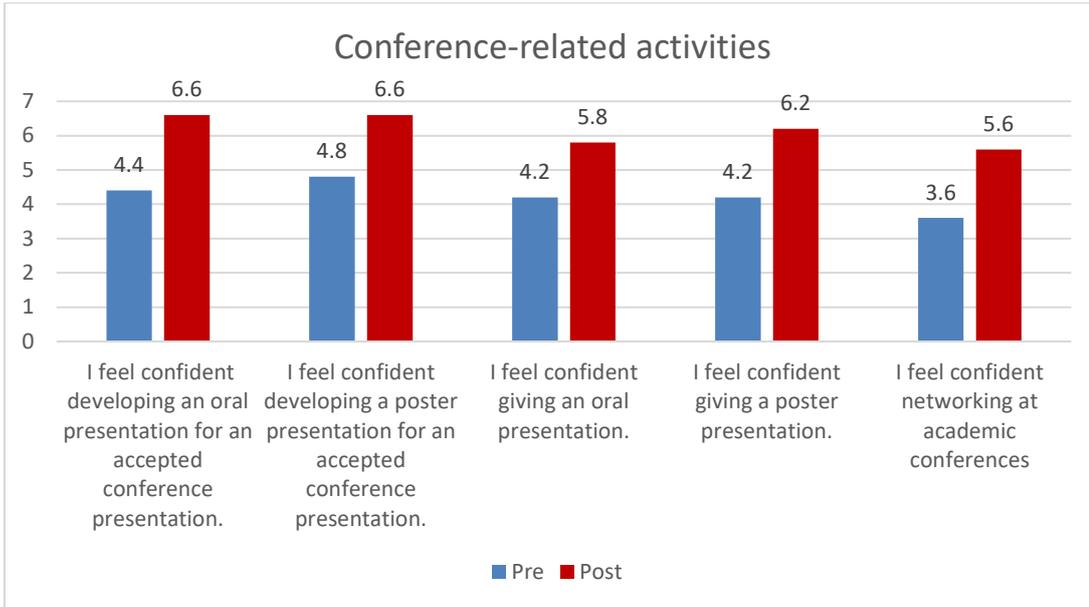
Figure 4a:

Figure 4b:

4.8 What did mentees perceive as being the greatest benefit of participating in the mentoring pod?

Mentees were asked to identify the single greatest benefit of mentoring pod participation in the form of an open-ended question during the interviews. The following were identified as greatest benefits: 1) increased sense of empowerment/self-confidence (60%; n=3); 2) networking opportunities with guest speakers (20%; n=1); and 3) forming a relationship with the mentors (20%; n=1).

"So [empowerment] has been the greatest benefit of leaving every Friday like: I don't leave a meeting stressed, I leave a meeting with will spiralling and spinning about, how can I apply this?. I have two close friends who are on the social work track in our program. And on Fridays, one of them, she and I meet for writing after this group and I always go to our writing group like, "That was so good. We talked about ... ," and I feel like I'm bragging, not intentionally. But I just know that anyone could benefit and so I just keep talking about it." – Mentee 3

Figure 5:
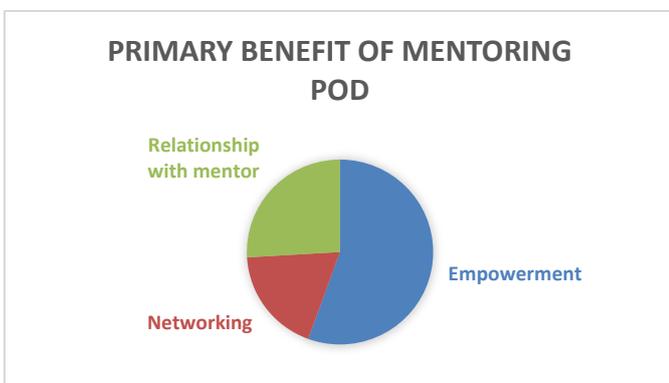
4.9 What are the next steps mentees are taking in preparation for entering the academia job market?

As part of their reflection paper at the end of the Spring 2021 semester, mentees were asked to describe any actions they are currently taking or will be taking soon in preparation for entering the academia job market. The following were described as actions being taken:

- Applying for a dissertation grant (something about which no mentees had knowledge prior to the mentoring pod), both to secure funding for their time/research expenses, as well as to obtain grant-writing experience
- Becoming instructor of record for at least one class to develop and demonstrate teaching skills
- Applying to present at conferences they have identified as important in their field
- Creating a professional website to disseminate their research
- Creating a spreadsheet of open tenure-track faculty positions in research universities and application requirements for each
- Drafting and finalizing peer-reviewed manuscripts for publication
- Reaching out to academics in their field who are based at other universities
- Drafting the cover letter, CV, research statement, and teaching statement
- Scheduling one-on-one meetings with the mentors
- Identifying postdoctoral fellowship opportunities (something none of the mentees had considered prior to joining the mentoring pod)
- Identifying and signing up for trainings/webinars focused on developing teaching skills, including one available at UCF
- Increasing their use of social media (e.g., Twitter) to disseminate research, comment on others' research, and network with researchers in their field

5 Discussion

Mentees reported **joining the mentoring pod** due to a need for mentoring and a lack mentoring opportunities. Specifically, they were interested in understanding the job application process, differences between university types and academic job types, the research process, and academic life, and work-life integration.

After the mentoring pod, all students ranked a tenure-track job at a research university as their primary career goal, compared to 4 in the pre-survey, but many expressed a desire to learn more about other career options.

Of note, **confidence increased in multiple areas** including preparation, expertise, and knowing the value of their own voice in academia. Mentees identified work-life balance, what it is like to be an academic, research skills, job talks, grant applications, and CV development as topics they found most useful. They reported that more depth/time was needed for grant writing, feedback on job application materials, alternatives to an academic career, and going into more depth describing their research. In general, **students were positive regarding the pedagogical approach**, although they requested more detailed feedback on some of the written assignments.

Students **were unanimously in support of the external speakers** and praised their quality, and each mentee followed up with at least one of the guest speakers, and one is now collaborating with the guest speaker.

In sum, the mentoring pod was effective in meeting student needs expressed in the pre-pod survey and interviews. Students listed relationships with mentors, networking, and empowerment as the greatest benefits of the pod. Moreover, through the interviews and survey data, we have identified a number of ways to improve the content and the approach to the mentoring pod.

6 Recommendations

Based on the results from this pilot study, the faculty involved in this mentoring program recommend the following:

- **Fall 2021:**
  - Continue this cohort's mentoring in a formal mentoring pod structure in the Fall of 2021, during which time the focus would be on the following: addressing any gaps in information identified by mentees during May 2021 (e.g., more information about grant applications); applying lessons learned during the Spring; writing the CV, teaching, and research statements; obtaining internal and external reviews of CV, teaching, and research statements; and preparing and delivering a mock-job talk with internal and external feedback. Additionally, given that the mentees in this cohort have formed strong bonds and repeatedly indicated feeling comfortable receiving feedback from fellow mentees and mentors, we would invite them to "workshop" manuscripts, conference submissions, and conference talks with the internal group. Internal UCF funding would be required for time of external reviewers (i.e., for reviewing draft job application materials and attending mock job talks.)
  - Write and submit an article based on the pilot study for publication in a scholarly peer-reviewed journal during Summer 2021.
- **Spring 2022:** Apply for external funding to the NIH for an interinstitutional training grant to develop a permanent mentoring program for female PhD students who are planning a career in public health-related research in academic settings. Expected submission date would be February 2023, with collaboration from faculty at the University of Nevada-Reno.
- **Long-term sustainment and expansion of the program:** With external funding (ideally!) or internal funding (if external funding is not attainable), offer the Pre-Academia Mentoring Pod opportunity as a one-year program to all UCF female PhD students interested in pursuing a research position in academia with an interest in public health (with public health broadly defined). The one-year program would include Spring, Summer, and Fall, with Spring focused on learning basic information and networking with external faculty, Summer having monthly book discussions related to the information learned during the Spring, and Fall focused on applying information learned during the Spring and Summer. During the Spring and Fall, the mentoring pod would meet weekly on Fridays for 1.5 hours. Given the strong appreciation of our mentees for the small size of the cohort, no more than 6 students would be in each cohort, but multiple cohorts could simultaneously be run if extra mentors from UCF were found. We have already identified one other interested UCF mentor. Funding would be used for paying guest speakers and external reviewers for their time, to provide a stipend for PhD mentees who complete the program ($300 was offered in Spring 2021 for mentees to use for research/professional development expenses), and to pay for materials (e.g., books) for the mentees. Additionally, if the program expands and more cohorts are added, the mentors (who are 9-month full-time faculty) would appreciate either a course buyout for their time or some portion of their summer salary covered.

7 References

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8 Appendices

8.1 Pre- and Post- Spring Mentoring Pod Survey Instrument

Q1 Based on your current feelings, please order the following potential career settings from most desirable (1) to least desirable (5).

_____ Research university (1)
_____ Small liberal arts college (i.e., teaching, limited research) (2)
_____ Federal, state, or local government agency (3)
_____ Pharmaceutical industry (4)
_____ Healthcare institution (e.g., hospital) (5)
_____ Think tank (6)
_____ Consultant (7)

Q2 Based on your current feelings, please order the following potential career choices within academia from most desirable (1) to least desirable (3).

_____ Tenure-track assistant professor (full time, approx. 50% teaching, 50% research) (1)
_____ Lecturer (full time, approx. 100% teaching) (2)
_____ Research scientist (full time, approx. 100% research) (3)
_____ Adjunct (part time, teaching only) (4)
_____ Lecturer with some research (full time, mostly teaching but some research) (5)

Q3 Please indicate the extent to which you agree with each of the following statements related to peer-reviewed publishing.

Strongly disagree (1) Disagree (2)   Somewhat disagree (3)   Neither agree nor disagree (4)
Somewhat agree (5)   Agree (6)   Strongly agree (7)

I know the names of the top journals in my field of research. (1)
I understand the structure of a typical peer-reviewed health services/health policy paper. (2)
I feel confident writing the abstract of a peer-reviewed paper. (3)
I feel confident writing the introduction of a peer-reviewed paper. (4)
I feel confident writing the methods of a peer-reviewed paper. (5)
I feel confident writing the results of a peer-reviewed paper. (6)
I feel confident writing the discussion of a peer-reviewed paper. (7)
I understand the revision process for peer reviewed journals. (8)
I can explain the dominant theoretical models/frameworks related to my area of research (9)
I can conduct a literature review (10)

Q4 Please indicate the extent to which you agree with each of the following statements related to seeking a faculty job in academia. For purposes of these questions, assume the position is in the US.

Strongly disagree (1) Disagree (2)   Somewhat disagree (3)   Neither agree nor disagree (4)
Somewhat agree (5)   Agree (6)   Strongly agree (7)

I know where to look for academic jobs (e.g., websites, databases.) (1)
I have strict geographical limitations for my job search. (2)
I have personal restrictions (e.g., health, significant other, family requirements) that will limit faculty position options. (3)
I expect to obtain interviews for almost all the positions to which I apply. (4)

I know what should be included in a CV for an academic job application (5)
I know what should be included in a cover letter for an academic job application (6)
I know what should be included in a teaching statement for an academic job application (7)
I know what should be included in a research statement for an academic job application (8)

Q5 If a position for a tenure-track assistant professor position is posted in December 2021, typically what is the earliest date on which the position would start? Use your best guess.

o   January 2022 (1)
o   May 2022 (2)
o   August 2022 (3)
o   January 2023 (4)

Q6 Please indicate the extent to which you agree with each of the following statements related to disseminating research.
        Strongly disagree (1) Disagree (2)   Somewhat disagree (3)   Neither agree nor disagree (4)
        Somewhat agree (5) Agree (6)   Strongly agree (7)

I know the names of the top national conferences in my research field. (1)
I know how to write a conference abstract for submission. (2)
I understand the differences between a poster presentation, oral presentation, panel presentation, and round table presentation. (3)
I feel confident developing an oral presentation for an accepted conference presentation. (4)
I feel confident developing a poster presentation for an accepted conference presentation. (5)
I feel confident giving an oral presentation. (6)
I feel confident giving a poster presentation. (7)
I feel confident networking at academic conferences (8)

Q7 Please indicate the extent to which you agree with each of the following statements related to teaching.
        Strongly disagree (1) Disagree (2)   Somewhat disagree (3)   Neither agree nor disagree (4)
        Somewhat agree (5) Agree (6)   Strongly agree (7)

I feel confident designing an in-person class. (1)
I feel confident designing an online/virtual class. (2)
I feel confident managing classroom discussions. (3)
I understand how teaching is evaluated within tenure track positions. (4)
I would know what to do if a student told me they were experiencing a mental health crisis. (5)

Q8 Please indicate the extent to which you agree with each of the following statements related to tenure-track assistant professor positions in a traditional research university.
        Strongly disagree (1) Disagree (2)   Somewhat disagree (3)   Neither agree nor disagree (4)
        Somewhat agree (5) Agree (6)   Strongly agree (7)

I am worried about having work-life balance. (1)
I understand how research is likely to be evaluated. (2)
I understand how teaching is likely to be evaluated. (3)
I understand how professional service (e.g., university committee membership) is likely to be evaluated. (4)
I would prefer a soft money position over a hard money position. (5)

Q9Please indicate the extent to which you agree with each of the following statements about your research.

Strongly disagree (1) Disagree (2) Somewhat disagree (3) Neither agree nor disagree (4) Somewhat agree (5) Agree (6) Strongly agree (7)

I can clearly describe my methodological area(s) of expertise. (1)
I can clearly describe my subject matter area(s) of expertise. (2)
I have an idea for a research project for a tenure-track assistant professor position. (3)
My research area(s) are focused. (4)
I feel that I am becoming a subject matter expert on my research topic. (5)

Q10 Approximately how many people apply for each tenure-track assistant professor position in health services? Use your best guess.

o   1 (1)
o   10 (2)
o   20 (3)
o   100 (4)
o   200 (5)

Q11 Which of the following individuals at a typical research university in the US has tenure? Use your best guess to mark all that apply.

☐   Assistant professor (1)
☐   Associate professor (2)
☐   Full professor (3)
☐   Lecturer (4)
☐   Instructor (5)
☐   Adjunct professor (6)

Q12 Please indicate your race.

o   White (1)
o   Black or African American (2)
o   American Indian or Alaska Native (3)
o   Asian (4)
o   Native Hawaiian or Pacific Islander (5)
o   Other (6)

Q13 Please indicate your ethnicity.

o   Hispanic (1)
o   Not Hispanic (2)

Q14 Are you an international student?

o   Yes (1)

o   No (2)

8.2 Interview Instrument

1. Background:
   a. What is your gender?
   b. What is your race?
   c. What is your ethnicity?
   d. What is your age?
   e. What is the name, department/school, college, and university of PhD program?
   f. At what stage are you in your doctoral studies?
2. General questions:
   a. Why did you decide to join the Pre-Academia fellowship?
   b. What were your needs when joining the fellowship?
   c. Describe how the fellowship addressed your needs, if at all.
   d. Were there any needs you had that the fellowship did not address? If so, what were they? What do you think could help you address those needs?
   e. To what extent do you feel the mentoring helped prepare you for an academic career?
   f. To what extent, if any, have your plans to pursue a non-academic career changed?
3. Specific questions:
   a. What topic areas were most helpful?
   b. What topic areas do you need more information about?
   c. Did any topics feel superfluous?
   d. Did any topics feel too advanced for your current research stage?
   e. How did you feel about the order of topics?
   f. How did you feel about the reading materials in Webcourses? (prompt: could you give some examples?)
   g. How did you feel about the written assignments in Webcourses? (prompt: could you give some examples?)
   h. How did you feel about the internal speaker panels? (prompt: could you give some examples?)
   i. How did you feel about the guest speaker panels? (prompt: could you give some examples?)
   j. How did you feel about the structure of the fellowship? (prompt: frequency of meetings, timing of events)
   k. How could the fellowship be improved?
   l. To whom would you recommend this fellowship?
   m. How did you feel about the composition of the mentoring pod? (prompt: gender, race, PhD stage, public health focus)
   n. What was the greatest benefit of the mentoring pod for you?