



## **Development of a Research Mentorship Program for Minority Students at a Southeastern Predominately White Institution**

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### **ABSTRACT**

*Mentorship is an underestimated asset that focuses on growth and accomplishments and offers broad forms of support to students from marginalized populations, including intersectional and overlapping identities. This article aims to identify the gaps in current literature regarding mentorship, propose an adaptive mentorship model and identify the model's strengths in practice. Traditional mentorship models focus on one specific aspect of student identity, and this gap marginalizes an individual's identity's duplicity or multi-faceted complexity. Such models often offer great educational support but dismiss the value of high-impact research. High-impact research has been shown to positively impact marginalized communities because it allows the unique opportunity to engage in all stages of research. The model described in this paper is grounded in principles of collaboration and cooperation across an interdisciplinary team. Each faculty mentor and mentee possess intersectional and overlapping identities adding unique perspectives and resilience to the work they engage in. This resilience is united with various intersectional study complexities in behavioral sciences, medicine, social studies, and humanities. Thus, it offers a strengths-based experience that widens student opportunities and challenges unitary models of peer-peer/peer-to-adult mentorship patterns.*

**Keywords:** intersectionality, mentorship; research mentorship; mentorship models; minority students

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## INTRODUCTION

Though long touted as an effective practice in improving academic success, the key characteristics and conceptualization of mentorship have been, and still are, severely underdeveloped for minority students on college campuses. While research highlights the importance of mentorship for various marginalized and minority students in higher educational settings, such as black women (Chang et al., 2014), LGBTQIA+ students (Linley, 2016; Nguyen et al., 2016), disabled people/people with disabilities (Patrick & Wessel, 2016), and military veterans (Finney, 2015), mentorship for minority students often emphasizes identity-based, discipline-based, or relationship-based mentorship programs. That is, research on mentorship of minority students often focuses on their identity as minority students, *or* as a minority in a specific discipline, *or* mentorship by an adult or established peer. Despite the arguments that successful mentorship programs emphasize multiplicity in activities, interactions, domains of experience, and reciprocity across types of relationships (Crisp & Cruz, 2009), minority mentoring scholarship emphasizes singularity, highlighting either students' identity, discipline, *or* type of relationship with mentors

This paper focuses on the need for and development of a new model of research mentorship for minoritized students that centralizes the intersectionality, multiplicity, and complexity of minority student experiences in higher educational settings. Focused on the high-impact practice of research and scholarship (Kuh, 2008) – central to students across all majors, departments, programs, and colleges – we outline our model of the Interdisciplinary Minority Student Research Group (IMSRG), a collective of faculty research mentors and student mentees. The group was founded in Fall 2018 and initially funded via an internal grant mechanism through the Office of Applied Learning. IMSRG provides an interdisciplinary, interprofessional, collaborative, and intersectional model of mentorship for minoritized tertiary students, grounded in critical theories, trauma-informed approaches (SAMHSA, 2014), and adaptive mentorship models (Ralph & Walker, 2013), that incorporates various aspects of formal and informal mentorship (Jacobi, 1991) through attention on development of students' research potentials. After reviewing the literature and detailing our academic setting and model, we present preliminary data to support the efficacy of the IMSRG program. We ultimately argue that by incorporating theoretical frameworks that attend to marginalization and its effects, utilizing a cross-disciplinary team of peer-peer and peer-adult relationships in various iterations, and centralizing the key practice of research, IMRSG

may serve as a preliminary model in order to develop more inclusive mentorship practices and programs for minority college students.

## **Mentorship and Minority Students**

Early definitions describe mentoring as the relationship between a younger adult and an older adult who holds more experience. This “traditional” vision of mentorship involves the older adult assisting a younger individual in navigating the adult world and the world of work (Kram, 1985). Traditional models eventually evolved to include the nuances of formal and informal mentoring, and ways in which such strategies contribute to academic success, despite continued discrepancies about what practices specifically define mentorship (Jacobi, 1991).

Crisp and Cruz (2009) systematically reviewed research in the specific context of mentoring college students, and highlighted characteristics of successful mentorship models. They found the following characteristics across the literature, demonstrating that: 1) mentorship relationships focus on the growth and accomplishment of an individual; 2) mentorship includes broad forms of support, such as professional and career development, role modeling, psychological support, planned activities with a mentor, participation in undergraduate research, and participation in peer mentoring and discussions; and 3) mentoring relationships being personal and reciprocal (Crisp & Cruz, 2009). However, they argued that the field of mentorship still remains largely atheoretical, with *discipline-specific* needs of both the mentor and the mentee/protégé contributing to this ambiguity (Crisp & Cruz, 2009). Additionally, their critical review highlighted the resounding lack of targeted focus on mentorship for marginalized groups and demonstrated a need for the development of models and assessment of outcomes on mentorship for such specific groups (Lunsford, 2017). Therefore, mentorship models focused on marginalized student populations and with theoretical frameworks remains underexplored.

Minority students on college campuses do report that mentoring has a significant effect on personal growth, academic experiences, and career advancement (Kosoko-Lasaki et al., 2006; Tillman, 2001; Wilson, 2010). Mentoring increases minority student academic achievement, enrollment, and retention (Kendricks et al., 2013; Wilson et al., 2010). Additionally, mentorship impacts women of color who are challenged with double marginality grounded in racism and sexism. Further, Davis (2009), Evans and Cokley (2008), and Kosoko-Lasaki et al. (2006) argued that mentoring could provide the necessary knowledge and skill development, socialization, career advancement opportunities, and psychosocial support to allow

women of color to survive and thrive in higher education (Chang et al., 2014). Students with disabilities benefit from mentoring because of the assistance it can provide moving from high school to college (Patrick & Wessel, 2013). Research has shown that students living with mental and physical disabilities benefitted from having faculty mentors. In the study, they explored the students' experiences, and all twelve students in the study expressed positive relationships with their mentors, explaining how they assisted them in transitioning academically to their new settings while helping them find necessary services on campus that would better benefit them. In the limited research on lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual and others (LGBTQIA+) students, it was found that there is a need for students reported a desire for their community and faculty that would understand the needs of this group. Craig et al. (2017) conducted a study in a social work program and found that a majority of the students who identified as LGBTQIA expressed a lack of representation in the workplace. These findings were congruent with those from Linley's (2016) work. Nguyen et al.'s (2016) qualitative semi-structured research on support systems for LGBTQ college students found that having representation and mentorship from LGBTQ faculty was paramount to seeing themselves as a fit in their field. First-generation students often identify with multiple-marginalized identities on campus and when being mentored. For military veteran students, there is more exploration needed related to their support and mentorship needs on college campuses. Finney's (2015) needs assessment demonstrated four key needs for military veterans in higher education: physical wellness, mental wellness, support operations, and mentorship. We wish to contribute to the literature for and with students who are military-affiliated and contribute to this group's recognition of being marginalized in academic settings.

The authors here present an argument for developing an adaptive mentorship model that accommodates the needs of minority students on college campuses and addresses evidence of discipline-specific needs by incorporating principles of interdisciplinary education. We seek to describe the initial development of a minority research mentorship program and our future efforts towards building a minority mentorship model that can be adapted in other higher education settings. We aim to cultivate an inclusive model that considers the needs and growth of several minority student identities on college campuses, specifically racial/ethnic minorities, those with disabilities, those who identify as LGBTQIA+, first-generation, and military veterans. We recognize that student mentees may have intersecting minoritized identities and address this by integrating critical [race]

mentorship into the evolution of our overall mentorship model, as well as collaborating with university groups that engage in education and discussions related to race consciousness and intersectionality (Longmire-Avital, 2020). Further, in the assessment that we discuss later in this paper, we intend to learn more about our student's intersecting identities and needs by way of evaluating their experience each year, and the way in which our mentorship strategies support those identities. Our overarching goal in mentoring minoritized students through research is to support minority communities both locally and more broadly by way of ethical, student involved, community engaged impactful research.

Scholarship of mentorship for marginalized populations in tertiary education indicates several research gaps. First, mentoring programs often target one specific aspect of student identity, like race, *or* gender and sexuality, *or* veteran status, despite the more complex and intersectional identities of compounded marginalization, such as marginalization due to both race and gender, or as a first-generation and disabled student (Chang et al., 2014; Craig et al., 2017). Second, mentoring programs emphasize a wide range of important educational supports, but few specifically address the high-impact practice of research, despite the positive impact specifically for students in marginalized communities (Kuh, 2008). Finally, despite the expansion of mentorship from an older adult to younger adult pairings to other types of relationships (Davis et al., 2011), mentorship in higher education still often is siloed, emphasizing student identity as a basis for mentorship, a given discipline (such as Science, Technology, Engineering, Math, or STEM), or relationship type, such as peer-adult or peer-peer mentoring.

Our project attends to all three of these gaps. First, we operationalize marginalization to include a wide range of identities, including intersectional and overlapping identifications. We developed these distinctions by considering minority status in our local university context of a Predominantly White Institution (PWI) in the American South in a majority student context of middle-class, able-bodied, non-veteran affiliated students. Therefore, we intentionally invite students who identify as one or more of the following categories: racial and/or ethnic minorities, LGBTQIA+ students, veterans, first-generation, and students with disabilities. As faculty mentors, we either identify as one or more of the same categories, and/or focus our research and practice on such communities.

Next, we expand mentorship in two directions: we formed an interdisciplinary team with affiliations across two colleges, the College of Health and Human Services (CHHS) and the College of Arts and Sciences

(CAS), and originally spanning four disciplines (Social Work, Nursing, Public Health, and English/Linguistics), with inclusion of Sociology/Criminology and English/Literary Studies in our second year. We unite perspectives from behavioral sciences, medicine, social sciences, and humanities; we mirror the intersectional complexities of students' identities with cross-disciplinary and intersecting perspectives on research and mentoring. Students then experience research differences across disciplines rather than simply reading about them in methods class, including the ontological, epistemological, and methodological challenges and distinctions of conventional disciplinary paradigms.

Additionally, our team-based approach widens opportunities for our students and challenges the unitary models of peer-peer and/or peer-adult mentorship patterns. Our students work with faculty and student mentors, and we pair students within and across levels (i.e., undergraduate, and graduate level-students). We developed an iterative model whereby mentees become mentors, with a third-year goal of students leading other students in mentoring practices in consultation with faculty mentors. We also aspire to engage alum mentees to contribute to the development of research alongside current mentees.

Finally, we ground our mentorship in the high impact practice of research (Kuh, 2008). We include students in all aspects of research, from initial development and ethics trainings to data collection, coding, and analysis, to data presentation, academic writing, and dissemination of data results, as well as applying findings in practical and useful ways.

## **Academic Setting**

The University of North Carolina Wilmington (UNCW) is a part of the University of North Carolina system and has a total enrollment of a little under 18,000 students – 14.6K undergraduate students and approximately 3.2K graduate students (UNCW At a Glance). As it relates to diversity, 66% identify as female and 76% of university students identify as white (UNCW Data Dashboard). More data is needed on the demographics of other minority statuses such as military veteran enrollment; as well as those who identify as LGBTQIA+ and students who identify living with disabilities.

As previously stated, our program mentors minority students across educational levels. *Undergraduate research*, in addition to opportunities such as study abroad, community engagement, and internships, is identified as a high-impact practice (Kuh, 2008). High impact practices (HIPs), according to the National Survey on Student Engagement, explains that students must be actively engaged in deep learning (Kuh & O'Donnell,

2013). Further, the authority on high impact practice, the American Association of Colleges and Universities, has noted that there is a “positive differential impact” (people of particular characteristics are affected in differently than other groups) on students who have been historically underserved and under-represented (Kuh, 2008). We believe that IMSRG serves as a tremendous resource for combining an intentional focus on minority student achievement and the importance of research on academic and career trajectory. In Fall 2020, the University of North Carolina Wilmington (UNCW) developed a High Impact Practices Council to broaden the scope of focused student development via applied learning experiences. To this end, we believe it is timely to have developed IMSRG in this university setting and necessary that we expand our work to inform minority engagement in research as a high impact practice.

## **METHODS**

In our work, we’ve achieved three primary goals: 1) explored the literature and existing knowledge related to minority mentorship in higher education settings, 2) applied the aforementioned knowledge to developing program goals focused on mentoring minority students to engage in impactful community research; 3) assessed its impact, 4) developed and honed a minority research mentorship model infused with adaptive principles relevant to minority student needs; and 5) demonstrated and disseminated its impact on the development of research skills and academic success of minority students.

Given the focus of this paper on the development of this new initiative and preliminary findings outlining success in meeting our goals, we present the following: 1) accomplishments related to pedagogy and research towards diversity and inclusion; and 2) pilot data on a post-test only survey administered at the end of Year II. This survey will be administered as a pre- and post-test survey for new IMSRG mentees in the future and the findings presented hereafter will inform its’ adaptation and use, as well as inform the development of our minority mentorship model in Year 3.

The IMSRG post-test only survey that will be described in this paper was developed as a part of a larger effort to capture outcomes related to high impact practices on the campus of UNCW. The survey was originally developed by the UNCW Office of Applied Learning Assessment team in collaboration with IMSRG. The survey was administered in May/June of 2021 and includes several measures that evaluate student

mentees' research skills, self-efficacy in research, mentorship experiences, as well as collects demographic data related to minority identity.

The *Self-Efficacy in Research* scale is a 14-item measure that evaluates self-confidence across several specific research skills, such as “formulate a research hypothesis,” “collect data,” and “discuss research at a professional meeting or conference” (Rorrer, 2018). The response options include Likert scale options that range from “1-Strongly Disagree” to “5-Strongly Agree.”

The *Intentions to Attend Graduate School* (participants excluded who were already attending graduate school) scale is a 9-item measure that evaluates whether students plan to apply or attend graduate school by asking about intentions, their peers' point of view about graduate schools' importance, and expectations of them to go to graduate school (Rorrer, 2008). The response options include Likert scale options that range from “1-Strongly Disagree” to “5-Strongly Agree.”

The *GRIT* scale was an 8-item measure that evaluates students' ambition and relevant to students' ‘grit’ and persistence while participating in the IMSRG program and/or on several related research projects (Duckworth, 2009). Some items on this scale include, “I often set a goal but later choose to pursue a different one” and “Setbacks don't discourage me.” The response options include Likert scale options that range from “1-Not like me at all” to “5-Very much like me.”

The 24-item measure on *Research Skills* also evaluates students' self-assessment of completing a number of research-related tasks (Chemers, 2011). These include skills such as “understanding a summarizing journal articles,” “explaining my project to people outside of my field,” and “analyzing data with statistics or other tools.” The response options include Likert scale options that range from “1-Not at All” to “5-A great deal.”

The *Scientific Leadership* scale consists of 9 items and evaluates students' ability to engage in teamwork, collaborate, and lead (Chemers, 2011). This scale includes items like “I know how to cooperate effectively as a member of a team” and “I know a lot about what it takes to be a good leader”. The response options include Likert scale options that range from “1- Strongly Disagree” to “5-Strongly Agree.”

The *Professional/Scientific Identity* measure is 6 items and assesses how much research is engrained with a students' identity (Chemers, 2011). This measure and the previously aforementioned scale were specifically designed for underrepresented minority students pursuing careers in science and/or research. Two example items from this scale are, “Being a researcher is an important reflection of who I am” and “I am a researcher”. Response



items ranged on a Likert scale from “1-Strongly Disagree” to “5-Strongly Agree.”

The *Mentoring Experience and Effectiveness* measure consists of 10 items evaluating the effectiveness of faculty mentoring relationships (Berk, 2005). The *Mentoring Experience* measure includes items such as, [my mentor was] “Helpful in providing direction and guidance on research project issues” and “Challenged me to extend my abilities.” Response options range from “1-Strongly Disagree” to “5-Strongly Agree.”

A measure of *Overall Program Satisfaction* consists of 6 items that were adapted to respond to the overall experience with IMSRG reflecting on, “What are your overall feelings about your experience in [this] Applied Learning course or experience?” with prompts such as about “Your research experience,” “Your interaction with project staff,” and “Your interaction with other students.” Responses range from “1-Highly Dissatisfied” to “5-Highly Satisfied.”

Additionally, students were asked to respond to qualitative questions about involvement in IMSRG as an applied learning experience. The questions included the six criteria uniquely developed by UNCW or the assessment of applied learning/high impact practices and influenced by Association of American College & Universities (AAC&U): *learning outcomes, intention, reflection, acquisition of knowledge, application of knowledge, and summative conclusion.*

## RESULTS

### *Annual Goals*

IMSRG was funded by an Office of Applied Learning 3-year Strategic Initiative Award at UNCW. As a central part of this initiative, our research team strategically outlined goals for years one through three of the grant. We will focus on years 1 and 2 in this paper as we are currently in year 3 of the initiative. We were pleased to not only meet, but to exceed, many of our goals. Accomplishments related to Year I and Year II goals can be found in Table 1.

### *Pilot Post-Test Data*

As a part of a larger assessment initiative in the Office of Applied Learning, the IMSRG team developed a survey to be used each academic year to assess the success of our programming. In Spring 2021, we piloted the survey in hopes of assessing the use of the individualized measures utilized, potential data hang-ups and/or discrepancies, and its utility for future use. Beginning in Fall 2021, the survey is being used in a pre-

test/post-test format to evaluate change over time in alignment with IMSRG's mission and expected evidence-based outcomes. Here we share the findings from our original pilot post-test only survey.

It should be noted that some scales were altered (i.e., removal/addition of items) as a means of improving the applicability to our specific study sample. For example, the *Intentions to Attend Graduate School* scale was adapted to include only four questions from this scale that did not overlap with demographics and other items asked on the survey and considered the context of mostly graduate-level students (all but 1) who answered the pilot survey and were skipped out of this scale. Additionally, we adapted the *Research Skills* measure to meet the specific needs of our sample by modifying items that read for example, "Research proposal write-up" to "Writing a proposal or abstract" and "Research Presentation Preparation" to "Preparing a research presentation" and removed the item referencing "Project Management" as this is not a skill we have intentionally identified for IMSRG as we work alongside mentees. We plan to include the additional measure described, *Mentoring Experience and Effectiveness* scale, with questions about a students' experience with his/her faculty mentor, on the post-test survey that will be provided at the end of each academic year. These modifications did not result in poor reliability, as evidenced by the Cronbach alphas reported below. We anticipate even better reliability in the future with a larger sample size of mentees and will continue to give intentional consideration to our assessments based on the unique needs of our focus population.

Of the participants who completed the IMSRG student mentee survey, one was a fourth-year undergraduate, three were masters graduate students, and one was a PhD graduate student.

One participant indicated that they had applied to a graduate or master's degree program, and no participants indicated that they had applied to a doctoral program. Three were majoring in social work, one was a public health major, and one was a sociology major. In the sample, one was a transfer student, and two were the first person in their family to attend a four-year college or university. Two identified as male and three identified as female, and all participants identified as cisgender. The average age of the sample was 25 years old ( $SD = 1.41$ ). Four participants were white, one was black or African, and none of the participants identified as Latinx. Four participants were single/never married, and one was married. With regards to living arrangements, one participant indicated that they were renting alone, three indicated that they were renting with others, and one indicated that they own their residence. One participant had served in the US Armed

Forces, Reserves, or National Guard, but no participants were currently serving. One participant identified as having a disability. All five participants indicated that English was their first language. Three indicated that they were currently working, with two working full-time and one working part-time. Three participants were currently receiving a Pell Grant or another source of needs-based federal funding. No participants indicated that they were student athletes.

Self-efficacy around research was evaluated using 14 items measured on a five-point scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). The average score on this scale was 4.5 (SD = 0.37). Intentions to attend graduate school ( $\alpha = .667$ ) were evaluated using four items measured on a five-point scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). The average score on this scale was 4.88 (SD = 0.25). Grit was evaluated using eight items measured on a five-point scale, ranging from 1 (*Not at all like me*) to 5 (*Very much like me*). The average score on this scale was 3.53 (SD = 0.45). Research skills ( $\alpha = .946$ ) were evaluated using 22 items measured on a five-point scale, ranging from 1 (*Not at all*) to 5 (*A great*). The average score on this scale was 4.55 (SD = 0.52). Scientific leadership was evaluated using nine items measured on a five-point scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). The average score on this scale was 4.53 (SD = 0.56). Professional/scientific identity was evaluated using six items measured on a five-point scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). The average score on this scale was 3.88 (SD = 1.27).

Mentoring effectiveness ( $\alpha = .97$ ) was evaluated using 10 items measured on a five-point scale, ranging from 1 (*Strongly disagree*) to 5 (*strongly agree*). The average score on this scale was 4.6 (SD = 0.8). Looking at the items individually, the average scores for “Was accessible,” “Was helpful in providing direction and guidance on research project issues,” and “Suggested appropriate resources” were 4.5 (SD = 1). The average scores for “Was approachable” and “Answered my questions satisfactorily (e.g., timely, clear, comprehensive) acknowledged my contributions appropriately” were 4.25 (SD = 1.5). The average scores for “Demonstrated professional integrity,” “Demonstrated content expertise in my area of need,” “Was supportive and encouraging,” and “Provided constructive and useful critiques of my work” were 4.75 (SD = 0.5). The average score for “Challenged me to extend my abilities” was 5 (SD = 0). Additionally, the average scores for “Provided informal mentoring (support through life challenges and academic experience)” and “Provided advice on career and future goals” were 4.75 (SD = 0.5).

Four participants indicated that their faculty mentor was female, and four participants indicated that their faculty mentor had identities that aligned with their own. One participant stated that these intersecting identities were gender, field, and discipline, while another participant indicated that the identities that aligned with their faculty mentors were field, research interests, race, and gender identity.

Overall program satisfaction was evaluated using six items measured on a five-point scale, ranging from 1 (*Highly dissatisfied*) to 5 (*Highly satisfied*). The average score on this scale was 4.67 (SD = 0.47). Looking at the items individually, the average satisfaction scores for “Your housing arrangements (if applicable)” and “Your interaction with other students” were 4.5 (SD = 1). The average satisfaction scores for “Your faculty advisor,” “The program in general,” “Your research experience,” and “Your interaction with project staff” were 4.75 (SD = 0.5).

Looking at student learning outcomes, three participants indicated that they were aware of specific expectations for their learning, and three participants indicated that they believed these expectations were met. Participants also answered three questions related to learning outcomes on a five-point scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). The average scores for “The learning outcomes for this experience (which might be the same or different from a course learning outcome) were clearly stated” and “The learning outcomes for this experience were met” were 4 (SD = 1.15). The average score for “The learning outcomes for this experience are clearly tied to applied learning” was 4.25 (SD = 0.96).

Several questions related to the opportunity to set goals or expectations were also included. Only four participants responded to the question about their expectations and final reflection for the experience. Two participants indicated that they did have the opportunity to set goals or expectations at the start of the experience, while two participants indicated that they did not. Participants also answered two questions on a five-point scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). For both items, “The intention activity/assignment provided an opportunity for you to consider the purpose, expectations, and goals of the applied learning activity” and “The intention activity/assignment helped you to prepare for the upcoming experience in a meaningful way,” the average score was 5 (SD = 0).

With regards to reflection, two participants indicated that they had the opportunity to reflect on their IMSRG experience after it concluded, while two participants indicated that they did not have this opportunity. Participants also answered three questions on a five-point scale, ranging

from 1 (*Strongly disagree*) to 5 (*Strongly agree*). For all three items, “There was an opportunity to make meaning of this applied learning experience through reflection,” “There was an opportunity during and after this applied learning experience to make sense of its’ overall importance for my growth,” and “The reflection was a valuable component of this learning experience,” the average scores were 5 (SD = 0).

In addition, participants answered three items related to knowledge acquisition and four items related to knowledge application. All items were answered on a five-point scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). For all three knowledge acquisition items, “The experience learning gained in/out of the classroom will be useful in my future endeavors,” “My experience in the classroom allowed for growth in my educational skills,” and “I feel like I learned something new from this applied learning experience,” the average scores were 5 (SD = 0). With regards to knowledge application, the average score for “There was an opportunity to practically apply the knowledge I acquired in the applied learning experience” was 4.5 (SD = 0.58), the average score for “The application of knowledge gained contributed to the learning outcomes provided at the beginning of the semester. Applying the knowledge, I gained in this experience helped to meet the goals and expectations set” was 4.75 (SD = 0.5), the average score for “I believe I gained valuable tools and experience from the practical application of knowledge” was 5 (SD = 0), and the average score for “What I learned in this course only applied within this or a limited context” was 4 (SD = 1.41).

Finally, three participants indicated that there was an opportunity to conclude the applied learning experience in a meaningful way.

## DISCUSSION

In considering the findings from this small pilot survey, it seems that with IMSRG’s initial development, there was success in meeting the needs of mentorship and the foundation of building research skills by engaging students in high impact research engaging minoritized communities. We intend to continually consider objectives that consider minoritized students’ needs in similar contexts and assess whether we are meeting these objectives. As we aim to mentor future generations of scientists, clinicians, and researchers from marginalized and underrepresented backgrounds, IMSRG’s mission and vision to formulate a sustainable mentorship program affirming and supporting student’s unique and intersecting identities, while facilitating each student’s personal and professional development was essential. To accomplish this, we drew on

various mentorship models while utilizing an interdisciplinary approach (Seibert et al., 2020) in allowing our student mentees to truly embody the constructs of community engaged research for which IMSRG is recognized. Below we share the theoretical foundations for our preliminary model which we hope to hone in the next academic year, by continuing to evaluate our current practice and evolving based on what we learn moving forward. The underpinnings from the mentorship model constructs presented below will be additionally assessed utilizing a concept mapping methodology engaging mentors, mentees, students, and university and local community.

The adaptive mentorship model begins when a mentor interacts with their mentee for the first time (Ralph & Walker, 2013). Mentors may start by assessing the student's readiness to perform specific tasks, such as a comprehensive literature search and synthesis. As the mentor grows in their understanding of their mentee's ability, the mentor adapts their mentorship according to the abilities and needs of the mentee. IMSRG mentors incorporated aspects of this model as the need to be flexible and responsive to the mentee's competency was held central to this alliance. While this model is useful in helping mentors to start where the mentee is at, we expanded from this model to help us better meet the intersectional experiences and needs of minoritized students conducting research focused on marginalized communities across disciplines.

Critical mentorship is a framework that includes many aspects like those found in the adaptive model and specifically situates the mentor/mentee relationship within an understanding that the student (and potentially the mentor) has and will continue to experience discrimination and a lack of acknowledgement of their personal strengths and cultural capital within academia and the larger socio-cultural environment. Critical mentorship necessitates that mentor and mentee acknowledge and seek to deconstruct the power differentials in traditional mentor/mentee models (Liou et al., 2016). To reduce the power imbalance, the IMSRG mentor and mentee draw on their unique strengths and learn from each other. They also discuss and work together to navigate and challenge educational and professional spaces that have historically limited opportunities for minority students.

Utilizing a Trauma-Informed Approach in mentoring allows mentors to see mentees through the lens of "what happened to you?" versus "what's wrong with you?". There is a recognition that every student, and every faculty, has experienced at least some trauma. Further, given identities for which IMSRG recruits mentees, these students may be at heightened risk for the experiences of trauma and potentially collective trauma. Any trauma

informed organization should incorporate these 4 R's: 1) realization and understanding of trauma, 2) recognizing signs of trauma, 3) respond by applying to six principles (safety, trustworthiness and transparency; peer support; collaboration and mutuality; empowerment, voice, and choice; cultural, historical, and gender issues), and 4) resist re-traumatization (SAMHSA, 2014).

In considering the importance of having IMSRG mentors engaging in mentoring via a trauma informed lens, it is just as key that each mentor serves as a “buffer” or protective factor for a mentee by “meeting the mentee where he or she is utilizing the adaptive mentoring approach, providing psychosocial support as mentioned in critical mentoring, and finally focusing on strengths to build resilience. The strengths-based approach, necessary for meeting students in a way appropriate for skill level and confidence in an adaptive method, focusing on individual strengths rather than deficits. This focus applied to mentorship allows for a collaborative effort where the mentee sets their goals alongside their mentor.

Guided by the Institute of Medicine’s position on the need to develop the healthcare workforce through the lens of an interdisciplinary approach, as well as UNCW’s strategic vision, IMSRG is grounded in the principles of collaboration and cooperation of an interdisciplinary team (IOM, 2001). As we, six faculty from four differing schools on campus, embark on community engaged research mentoring for our students’ interprofessional education and care (IPE/IPC) practices within our multidisciplinary research activities, we will help to build well-prepared researchers of the future. Additionally, interdisciplinary mentorship carries a sense of communal learning in that various disciplines organically collaborate while conducting community engaged research. This models for mentees the natural state of social constructs. By joining with students using an interdisciplinary team, we fortify the value of collegial partnership in critical decision making. Our strategies in engaging in research mentorship as an interdisciplinary team collaborating amongst each other and other research-engaged partners will continue to grow as we learn alongside one another.

## **CONCLUSION**

This article offered a review of existing mentorship models, identified gaps in the mentorship literature, and discussed the development of IMSRG as an approach to expanding on current mentorship approaches. We use previous literature incorporating adaptive mentorship, one-on-one mentoring, and peer mentoring as a template for continually building a model that is iterative and addresses the needs of minoritized students, in

particular integrating critical [race] mentorship and trauma-informed approaches. As we seek to diversify professions and assist students from marginalized groups to gain the skills that they need to be successful in a range of professional environments, there is a need to develop new mentorship approaches that honor students intersecting identities and experiences and that prepare them to work in and with interdisciplinary teams. We hope that our discussion of the development of IMSRG will serve as an example and catalyst for other institutions interested in pursuing this work.

### **NEXT STEP AND FUTURE DIRECTIONS**

As IMSRG continues forward, we aim to develop and refine this minority-specific mentorship model. The model will be grounded in our mission to mentor students through interdisciplinary methods, and will remain adaptive, responsive, and contextualized to the needs of our students, community, society, and culture.

Mentees, community stakeholders, and mentors will be co-creators and revisors of our minority mentorship model. IMSRG also aims to develop a training process for future mentors and mentees to ensure their experiences are guided through the stages of co-creating the mentor/mentee alliance. Finally, to sustain our efforts across time and stages of students' educational growth, IMSRG will establish a peer-mentorship program. Through peer-to-peer learning, IMSRG believes many barriers minority students encounter can be more easily understood and overcome.

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