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Advancing Health Behavior Research and Scholarship through Mentorship of First Generation, Underrepresented Undergraduate Students

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Keywords

Hispanic-Serving Institution, Asian-American and Native Pacific Islander-Serving Institution, undergraduate mentorship, formal mentoring programs, diversity

Acknowledgements/Disclaimers/Disclosures

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Advancing Health Behavior Research and Scholarship through Mentorship of First Generation, Underrepresented Undergraduate Students

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Abstract

This article provides perspectives about mentorship of undergraduate mentees from directors of formal, externally funded training programs within the context of one of the most ethnically diverse national universities. The authors reflect about their mentorship of first generation and underrepresented undergraduate students and offer recommendations for others training similar students.

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While the literature lacks a formal and consistent definition of mentorship (Crisp & Cruz, 2009), for the purposes of this work, we define mentorship as learning that is set up as an apprenticeship model that occurs one-on-one but also in group settings. This type of learning may or may not include engaging students within formal training programs. This definition does not consider academic advising (e.g., establishing a degree plan; enrollment assistance) alone as sufficient criteria for mentorship. Instead, we reflect on mentorship that entails exposing and engaging mentees in meaningful learning opportunities through research, community service/service learning, and professional development. We believe that these diverse experiences assist students with academic retention, graduation, and career advancement, including acceptance into graduate school and preparing them with the skills to be “job ready.” Ultimately, through mentorship, goal-oriented outcomes are achieved.

As first-generation college graduates, we (first and second authors) developed mentorship styles through a reliance on our own experience of what worked well and not-so-well in the context of our relationships with our own mentors. Neither of us were provided with explicit, evidence-based information or a “manual” on mentorship prior to becoming a mentor. Thus, our road to becoming successful mentors has been a process of trial and error with our mentees. Currently, we both individually lead formal, externally-funded training programs for undergraduate students. Knowing how much our careers have benefited from engaging in research as undergraduates and professional development opportunities, we facilitate both. We engage undergraduates in varied research experiences that translate into professional presentations and peer-reviewed publications. We also include professional development activities (e.g., creating a CV; ethics of authorship) as a regular part of laboratory team meetings. Some professional development activities are more “emotionally heavy” than others – such as challenges faced in academia based on sex and race/ethnicity – but our end goal to these more difficult conversations is to build resiliency along the way. We also support mentees’ travel expenses to present at professional conferences and introduce them to colleagues. Last, we encourage their application to scholarships/fellowships/academic competitions (e.g., elevator speech contest).

Here, we reflect on our mentorship of undergraduate mentees, and how we have facilitated the mentorship process at the University of Houston, a U.S. Department of Education of Postsecondary Education-designated Hispanic- and Asian-American/Native American Pacific Islander-Serving Institution. In preparation for this reflection piece, we surveyed our former and current mentees to better understand from their perspectives what goes into selecting a mentor, what they value in their mentorship experiences, and the characteristics of a good mentor. We conclude this piece by offering practical recommendations about forming and maintaining mentorship relationships, and the benefits of mentorship collaborations for others training first-generation and underrepresented undergraduate students.

Data Collection and Analysis

Data were collected through an online survey delivery platform (Qualtrics). Purposive, or non-probability, sampling (Morse, 1991) was used to select 27 applicable former/current undergraduate mentees (10 for DCH; 15 for LRR; 2 shared mentees). The survey was sent to mentees via a link embedded in a message where potential respondents were blind carbon copied. The purpose of the inquiry and the voluntary nature of participation was explicated in accompanying email text. Mentees were informed that responses could be provided without any identifying information. Further, permission was obtained to use quotations and descriptors of the contributing students. This work does not meet the definition of research per 45 CFR 46.102 and no IRB review or approval was required (per our institution's compliance office).

Of those surveyed, 22 (81.5%) provided responses. Respondents were largely women (16/21 responding to item; 76.2%), with 8 (40%) identifying as Asian American/Asian (including Asian Indian), 7 (35%) as Hispanic/Latinx, 3 (15%) as African American/black and 2 (10%) as non-Hispanic white. Overall, 63.2% (12/19 responding to item) identified as first-generation college enrollees/graduates.

The third author (IML) conducted qualitative data analysis of written responses to the open-ended survey questions using thematic content analysis and constant comparison to systematically identify, code, and categorize the primary patterns or themes in the data (Braun & Clarke, 2006). Data saturation, or informational redundancy, was reached at 22 participants (Guest, Bunce, & Johnson, 2006). Ideas and issues expressed by respondents were compared within and across individual survey narratives to delineate common themes. Inductive coding methods were used, in which final themes are empirically drawn from the data rather than being theoretically predetermined. We provide a summarization of the main themes along with participant quotes as evidence of theme prevalence and of how the data build the interpretation.

Themes Regarding Mentees' Approach to Finding a Mentor

Identifying with Mentors through Shared Values, Ethnicity, and Profession

While there is an application process by which students apply to be in the first and second authors' respective mentoring programs, students reported being drawn to mentors based upon shared characteristics/traits or perceived personal connections. The characteristics that our mentees indicated as particularly important included finding mentors who "looked like them" (i.e. race/ethnic minority, first-generation college graduates). The mentees specifically remarked

that they felt that they aligned with their mentor with regard to similarities in interests (“embodiment of a profession”; Reilly & D’Amico, 2011), values, and ethnicity:

Clinical psychology has been an interest of mine and it was interesting to see how this plays a role in the type of research she does. I also have a big interest in tobacco cessation which made me feel very engaged in my work with her. – *Sheila, Asian American/Asian mentee, female*

I think the fact Dr. Hernandez is from Costa Rica and I am half of Costa Rican decent helped spur a feeling of camaraderie. To add on to that we’re both Hispanic so I had a greater sense of security or safety that I wouldn’t be ostracized if I didn’t know how to do X or Y thing. – *Steven, Hispanic/Latinx mentee, male*

I just felt she was very open to anyone and less bias/prejudice to minority students. – *Hiroe, Asian American/Asian mentee, female*

Daphne had an eye for community wellness and it was in line with my interest in improving my own Vietnamese culture’s community here in Houston. – *Denny Dao, Asian American/Asian mentee, male*

Being from a similar background with Hispanic ethnicity and being first generation college students. – *Victoria, Hispanic/Latinx mentee, female*

Themes Regarding Mentors’ Approach to Student Engagement

Engaging in a Positive and Non-judgmental Mentoring Environment

A critical component to creating and maintaining positive goal-oriented outcomes with mentees is setting up a non-judgmental mentoring environment. In this environment, students are valued and respected as equal contributors to a project. In general, it is our experience that students fear asking questions because they do not want to be perceived as “dumb” in front of their peers and/or their professor who is perceived to be a leader in the field. The creation of a welcoming laboratory/team environment can enhance students’ comfort with asking questions or bringing up concerns. Our mentees described feelings of safety and trust that came along with a mentoring style and environment where they were treated with respect and valued as an equal contributor to the team:

First thing for me was acceptance. I never thought I could be accepted after so many rejections in school. Dr. Daphne [Hernandez] saw my potential and brought me in. For that I will be forever grateful! – *Ola, African American/black mentee, female*

Most of the time I felt comfortable enough to approach Dr. Reitzel with any problems or concerns I had. In the few times that I may have had to bring something up that I wasn’t too comfortable with, the conversation would always end with us smiling and having a solution. She excels at making students feel safe under her guidance, expresses genuine

care, and never makes anyone feel inadequate. – *Sarah Childress, non-Hispanic white mentee, female*

Dr. Reitzel genuinely wants you to be able to learn and acquire the skills that are important to your future career. Whenever you make a mistake, she doesn't bring any negativity but she [would] rather focus on helping you to learn from your mistake and grow from it. – *Anonymous, Asian American/Asian mentee, male*

[...] what made the relationship work well was the fact that I always felt valued. There was every reason to initially be apprehensive to let me assist even in the slightest, but from the beginning, there was always a level of trust placed in me that I still appreciate now. – *Jorge Garza, Hispanic/Latinx mentee, male*

Being Accessible and Always Willing to Make Time

Guided by theories of Vygotsky (1978) and Wood et al., (1976), we provide the necessary social interaction and guidance that is needed for mentees to gain the knowledge and skills necessary to achieve autonomy and solve problems independently. In order to do this, the authors apply various scaffolding methods (e.g., interactive writing techniques that include tracking changes electronically; providing examples of student-led poster presentations) to guide mentees to reach goal-oriented outcomes. By directly working with the mentees on a weekly basis, we can quickly assess gaps in knowledge and provide appropriate feedback in a timely manner. Our mentees commented on how important it was for them that their mentor was readily accessible, in terms of making the time for them. This made them feel supported and cared for. They also expressed how much they appreciated that their mentor was approachable and not stand-offish, and that the mentor did not stress the status difference between mentor and mentee:

My undergraduate mentorship experience was great. My mentor's ability to make herself available at all times for anything was really what helped our relationship be so successful. She took the time to explain everything in many ways and provided me all the information needed to move forward with whatever tasks I was handling. Her guidance is incomparable, she truly cared about her students and made sure we were constantly learning. – *Edna, Hispanic/Latinx mentee, female*

Someone who makes themselves available and accessible for all questions that may arise. A good mentor should be a good listener, encouraging, and approachable. Dr. Hernandez was always just an email away, ready to answer any question I had. – *Jerika Ruiz, Hispanic/Latinx mentee, female*

I think the willingness to want to help her students succeed is incredible. The time commitment and how accessible she is to all her students should not be overlooked. – *Valentina Maza, Hispanic/Latinx mentee, female*

A mentor who does not fall prey to their status engages in a way that shows kindness and a genuine concern and desire to help the mentee succeed in their own life. – *Jorge Garza, Hispanic/Latinx mentee, male*

Providing Supportive Guidance while Fostering Independence

In addition to providing our mentees with the opportunity to work directly with us, we also provided them access to more experienced peers. Specifically, less experienced/newer mentees are asked to align with more experienced undergraduate and graduate students and postdoctoral scholars. This engenders a reciprocal learning process whereby new mentees learn methods and procedures within the laboratory and more experienced mentees learn how to mentor others, which facilitates career development skills necessary for teaching and communication (Dolan & Johnson, 2009). This team approach provides the students a supportive environment to learn but also fosters independence. Mentees valued being given the support they needed to grow independently:

A great undergraduate mentor knows the balance between guidance and a mentee's independence in going through experiences and learning. This involves a great amount of trust from the mentor as well as precise judgement of a mentee's capabilities. This is the backbone of helping a mentee grow the best that they can. – *Denny Dao, Asian American/Asian mentee, male*

They taught me what I didn't know and gave me the chance to do things independently when certain tasks were assigned. – *Anonymous, Asian American/Asian mentee, female*

She allowed independence and guided as needed. I feel mentors who hand-hold excessively do not allow room for growth. – *Denny Dao, Asian American/Asian mentee, male*

Fostering Hands-on Learning

Through the individual and team mentoring approach, mentees can “learn by doing,” which is the approach that post-secondary education students prefer (Smith, 2008). This mentorship approach purposefully provides the students with varied research and community learning experience opportunities, which maximizes their knowledge and skills, preparing them for the next stage of their educational/career trajectory. This facilitates the growth of the mentees’ self-confidence and perceived competence:

By providing a supportive and encouraging environment, my mentor helped me become the best version of myself. Also by challenging me and helping me think outside the box allowed me to become more confident. – *Victoria, Hispanic/Latinx mentee, female*

A good mentor doesn't just tell you what to do, they show you. [...] Having her as a mentor enabled me to stand out amongst my peers as an undergraduate and prepared me to excel in graduate school as well as my career field. Dr. Reitzel helped me build the confidence in myself that I could achieve anything I put my mind to and without her I know I would not be in the position I'm in today: ... A good undergraduate mentor is someone you can look at and see inspiration for your future, for me that person was Dr. Lorraine Reitzel. – *Quentaxia, African American/black mentee, female*

Providing Honest and Clear Communication, Guidance, and Expectations

In order to achieve goal-oriented outcomes, it is necessary for all laboratory members to understand that everyone is working towards a common goal. Setting expectations for behavior in the laboratory, the quality of work that is expected, and the professionalism that is desired is equivalent to setting up household rules. Expectations need to be clearly defined; otherwise the common goal is not achieved. If the expectations between the mentor and mentees do not align, then the relationship will suffer and could eventually lead to mentee leaving or being asked to leave the laboratory. When differences occur, it provides an opportunity to learn from one another:

She was honest and blunt so I had no grounds for being upset. I took it and learned from that experience to do better. We then laughed about it. – *Alexis Moisiuc, non-Hispanic white mentee, female*

The main thing that made this mentoring relationship effective was good communication. I really appreciated her response to emails and willingness to meet in person. Also, she was very open to reviewing my work and providing feedback, which I know can be very time-consuming. – *Pooja Agrawal, Asian American/Asian mentee, female*

I think that one of things that made our mentoring relationship effective was that I, as a student, had a clear understanding of what was expected of me, and I believe that Dr. Hernandez understood what I was capable of. Having set and clear expectations made the entire experience much more meaningful. – *Steven, Hispanic/Latinx mentee, male*

A reciprocal relationship built on trust and friendship. We both played a role in achieving success and when we both invested, we were twice as likely to succeed. Great communication and clear guidance. – *Alexis Moisiuc, non-Hispanic white mentee, female*

Challenging Students to Grow and Excel

While clear expectations help minimize conflict, it is important to realize that each mentee is unique: each comes with their own set of strengths and skills that are not fully developed, and each individual may not have the same confidence as prior mentees at the same experience level. We believe that expectations should not be lowered to accommodate these differences in skillsets and experience due to the importance of maintaining equity in the laboratory with regard to mentor-mentee relations. However, providing student mentees with opportunities to engage in various different tasks (e.g., data entry, contributing to a manual of procedures, conducting a literature review) and events (e.g., interacting with the community at health fairs, direct data collection, observing an IRB meeting) can help mentors learn how to best guide students. For some students, engaging in different opportunities will be exciting; for others it will be challenging. Our student mentees indicated that they believed a good mentor pushes them past their “comfort zone” by providing opportunities to engage in tasks that they had never attempted before. They perceived this as being instrumental in achieving a level of personal growth that was beyond what they thought they could have achieved:

I believe that a good undergraduate mentor is someone who helps his/her mentee grow and excel through constructive feedback. – *Edna, Hispanic/Latinx mentee, female*

A good undergraduate mentor is someone that prepares you for success in your career field post-graduation. They push you to work hard and often times help you achieve things that you never thought you were capable of. – *Quentaxia, African American/black mentee, female*

She helped me grow as a person by encouraging me to step out of my comfort zone, I may not have done so completely during my internship, but her encouragement has allowed me to continue working on this. – *Jerika Ruiz, Hispanic/Latinx mentee, female*

Definitely the 'tough love' type of mentorship. Dr. Reitzel recognizes potential in students even when they don't and is willing to motivate and push them towards new goals and career-building experiences. This often requires the mentee to step out of their comfort zone and face challenges head-on, but in the end it is worth the new knowledge, skills, and experiences gained. – *Sarah Childress, non-Hispanic white mentee, female*

I would say that my mentor's style was to challenge her students. My experience consisted of constantly learning new things. My mentor would provide me with guidance, and then push for me to do it on my own. – *Edna, Hispanic/Latinx mentee, female*

Being a Good Role Model

The following may go without saying: In order to train the next generation of mentees and practitioners, faculty mentors must be the best role model possible. Student mentees reported that their mentors personified the role that they themselves wanted to achieve professionally. As such, they were also good roles models in that they lived the value of the work they inspired students to do professionally:

Along with that is the support of a mentor with positivity, encouragement, and simply being a hard working role model that can show the mentee that the hard work is possible and worth it. – *Denny Dao, Asian American/Asian mentee, male*

From the moment I saw Dr. Reitzel I knew I wanted to be like her whenever I got into my career. No matter what she had going on she always looked nice and put together while juggling 100 different [things]. My admiration for her and her patience and nurturing working with me made our mentor relationship a great fit. – *Quentaxia, African American/black mentee, female*

I connected with my mentor's strong work ethic that translated into success. She quickly became a strong female role model that I could relate to. – *Alexis Moisiuc, non-Hispanic white mentee, female*

Tying it All Together: Conclusions, Recommendations, and Benefits

Themes

Overall, eight primary themes emerged as related to what respondents considered to be characteristics of a good mentor, and which guided mentor selection, within the context of their work with the first and second author: 1) identifying with mentors through shared values, ethnicity, and profession; 2) engaging in a positive and non-judgmental mentoring environment; 3) being accessible, and always willing to make time; 4) providing supportive guidance while fostering independence; 5) fostering hands-on learning; 6) providing honest and clear communication, guidance, and expectations; 7) challenging students to grow and excel; and 8) being a good role model. Although these themes are listed separately, they are interrelated, and we believe essential for forming and maintaining effective mentorship relationships with undergraduates. Several of these themes that emerged have been cited in previous research about undergraduate mentorship; for example, “taking time” (Schreiner, Noel, Anderson, & Cantwell, 2011); role modeling and reciprocal relationships (Jacobi, 1991), and acceptance (Kram, 1988). They were also in alignment with Crisp and colleagues’ undergraduate mentoring constructs, which include the provision of psychosocial and emotional support, degree and career support, academic subject knowledge support, and role modeling (Crisp & Cruz, 2009). Consequently, we recommend that other mentors of undergraduate students in behaviorally-focused laboratories consider the relevance of these themes to their mentorship practices. Below we provide additional recommendations for forming and maintaining mentorship relationships, as well as highlighting the benefits of mentorship collaborations.

Flexibility. We believe that flexibility as a mentor is a key aspect of ensuring student success. Consequently, it is important to consider that mentoring processes and practices that worked with one mentee may not be the best fit for the next mentee, even if both individuals appear to share similar characteristics and experiences. While we follow the approaches described in this reflective piece, we have certainly deviated from them to meet respective mentees’ needs. Thus, the mentorship “recipe” is unique to each student – something that may not be apparent if attention lies solely in achieving the goal-oriented outcome.

Context matters: Scholars. We quickly became aware that undergraduate students do not check email as frequently as we would like, making it necessary to find a form of communication that works for both mentors and mentees. Thus, we share our cell phone numbers with mentees to encourage text communication. Some faculty may frown upon this, but we encourage text communications to troubleshoot challenges in a timely manner, keeping in mind that all the members in the laboratory are working towards a common goal.

Context matters: Faculty. We recognize that faculty may feel ill-equipped to mentor first-generation, underrepresented students because they have not experienced similar socio-economic barriers. Relatedly, faculty may be deterred from mentoring students that they do not resemble in terms of their race/ethnicity, gender identity, or sexual orientation for fear that they may say the wrong thing. In either case, enriching mentoring opportunities may be missed. For faculty who want to gain entry into mentoring students with different backgrounds from their own, we suggest approaching these new relationships with cultural humility. It is important for the faculty member to admit that they may not fully understand a particular circumstance, but also acknowledge that they are invested in their new mentee and are ready to support them. While it may be difficult to engage in these conversations when mentor-mentee relationships are

new, including a faculty or staff member that the mentee trusts to broker the relationship may assist with forming new mentoring collaborations. Lastly, we recommend accessing the National Research Mentoring Network (<https://nrmnet.net/>) for research mentor training opportunities.

Self-reflection regarding time and related commitments. Despite the immense amount of time it takes to mentor large teams of undergraduate mentees, it remains an important priority. However, we have both evaluated whether we can realistically take on “one more” undergraduate student and have fluctuated in the number of students who we mentor from semester to semester. Some semesters this meant we took on more students and perhaps provided less one-on-one attention to them in order to oversee the completion of a task (e.g., data collection). Other semesters it meant taking on fewer students in order to spend more one-on-one time with a particular mentee to accomplish a goal-oriented outcome that would be intellectually rewarding for the student (e.g., turning an undergraduate research scholarship project into a publication). In the end, we recommend evaluating time and related commitments every semester to provide students with the best mentoring environment and being forthright with the mentee about competing demands.

Self-reflection regarding our own behavior. In addition to self-reflecting about time and related commitments, it is important to self-reflect on one’s own behavior in order to ensure student success. We admit that we have made mistakes: we have been frustrated, we may have spoken too harshly, we assigned tasks prematurely and without enough guidance, and we could have spent more time on one thing or another when training our mentees. However, we believe a critical aspect of mentorship is learning from our mistakes, accepting and addressing feedback from mentees, and investing time to have an underlying relationship with each of them that can be relied upon to keep things moving forward in times of occasional conflict. We recommend addressing problems and mismatches in expectations early and directly, in the context of supportive and accepting relationships.

Burning the midnight oil. In the end, the value we placed on undergraduate mentorship translated into routinely working late into the night and on most weekends to enable adequate time and attention to also achieve our own professional goals. Although we make no assertions that our choices and time investments are the right ones for all undergraduate-focused mentors, we have a shared experience of “living our values” in mentorship.

Our own personal growth. Working with mentees has provided us the opportunity to see tasks, events, and experiences from a less academic perspective and perhaps from a more “real world” lens. It has forced us to break down concepts into highly understandable component parts, use less academic jargon, and find ways to communicate that remain professional but are potentially more salient for the students’ age and stage of development. In the end, we have become better teachers, communicators, and public speakers for our mentorship of undergraduates.

Work hard, play harder. Though it may seem like all work and no play, we celebrate the students’ milestones (e.g., engagements, graduations) and host team building activities (e.g., painting parties with the team, holiday dinners). We also keep in touch with them following their commencement from the University of Houston to continue to share in their accomplishments. It is extremely rewarding when alumni from our programs randomly send us an email or card to update us on their professional and personal lives. We interpret communication post-graduation to mean we did “something right.” While our job is to prepare them for the next stage in their career, we care about their well-being and want to see them thrive in life. Receiving emails and cards (or even unexpected visits to our office) gives us the energy to continue mentoring

students, many of whom have never been given an opportunity to experience their true academic potential. We consider the joy, pride, and meaning in what our mentees have accomplished and how they have developed professionally to be an invaluable part of our own development as leaders.

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