

Mentorship Matters: Exploring Experiences With, and Perceptions of, Mentorship in an Undergraduate Sample

Elizabeth Valenti
Grand Canyon University

Lori J. Cooper
Grand Canyon University

Magen Branham
Grand Canyon University

Mentorship is crucial for undergraduate students' success, yet its definition varies widely. Understanding the nuances of mentorship experiences and perceptions is vital for optimizing mentorship programs and promoting student success. This study investigated undergraduate students' experiences with, and perceptions of, mentorship, examining its relationship with GPA and demographic variables. A sample of 137 undergraduate students from a private Christian university participated in the study. Data were collected through an online questionnaire containing both qualitative and quantitative measures. While no significant overall relationship between mentorship and GPA was found, complex differences emerged across demographic variables. Significant differences were observed between genders in perceptions of professors and overall mentorship scale. Ethnicity was associated with experiences with mentorship and GPA, highlighting potential biases in mentor-mentee selection. Findings underscore the importance of addressing biases in mentorship selection processes and increasing faculty diversity to meet the needs of diverse student populations. Further research should explore mentorship in community colleges and vocational institutions, prioritizing access to mentorship resources for fostering a supportive learning environment.

Keywords: undergraduate mentorship, mentorship perceptions, mentoring resources, student success

INTRODUCTION

Mentorship has a range of definitions and interpretations, with more than 50 different definitions recorded in social science literature, according to a review by Crisp and Cruz (2009). The word “mentor” is said to have originated over 3,000 years ago from Homer’s classic Greek epic poem, *The Odyssey*, where Odysseus entrusted his son to a Mentor for ten years during his journey (Inzer & Crawford, 2005). Today, mentorship is typically understood as a relationship between two individuals, where one takes on the role of an expert, counselor, or coach, providing support, knowledge, and encouragement toward personal and professional growth for the mentee (AuCoin & Wright, 2021; Eby & Dolan, 2015; Raposa et al., 2021).

Mentoring can also be defined as a collaborative process between individuals working toward a shared goal (Cooke et al., 2018; Long, 2010). Despite the different definitions, there are common elements found across the literature for mentorship, such as relationship building and support (Lau, 2020; Lunsford et al., 2017; Supiano, 2018). Raposa et al. (2021) emphasized that mentorship support is crucial for not only undergraduate students' identity development but also their academic success. However, the specifics of this support may vary from student to student.

Formal and Informal Mentorships

In addition to different meanings, there are also various forms or types of mentorships. Lunsford et al. (2017) proposed that undergraduate mentorship can be categorized into three types: peer, research, and comprehensive. However, two overarching forms of mentoring are commonly discussed in the literature; formal and informal (Cooke et al., 2018). A formal mentorship is a structured and intentional program established by an organization to provide guidance, support, and professional development for students. It is usually initiated and facilitated by the organization or academic institution, with a designated mentor-mentee pairing (Liang & Bruk-Lee, 2019). For example, a mentee may be assigned to a faculty member for a capstone, thesis, or research project (Webb & Palermo, 2018). Several studies have indicated that formal mentorship can lead to improved knowledge, academic performance, higher GPA, productivity, career preparation, and skills, as well as increased persistence in higher education (AuCoin & Wright, 2021; Cooke et al., 2018; Lunsford et al., 2017; Sayan et al., 2019). The duration of mentorship can vary, depending on the reason for mentorship (e.g., capstone project). Institutions hope that after the formal mentorship period ends, the mentor and mentee will maintain contact, which can lead to networking opportunities.

Johnson and Smith (2022) found that informal mentorship, workplace flexibility, and networking can positively impact career development and increase job satisfaction, performance, and advancement opportunities. Mohtady et al. (2019) suggested that informal mentorship can be more beneficial for career growth than formal mentorship, as it provides more customization and a more supportive relationship. However, satisfaction depends on various factors such as mentor quality, accessibility, support, approachability, and availability (Holt et al., 2016; Hosking & Antoniou, 2019; Sayan et al., 2019;). The mentee-mentor similarity is also a driving factor (Holt et al., 2016), as mentees tend to seek mentors who are similar to them demographically or within the same discipline (AuCoin & Wright, 2021; Holt et al., 2016). In informal mentorship, mentees and mentors connect due to perceived similarity, unlike formal mentorship assignments (Holt et al., 2016). For example, Christian students often seek mentors for spiritual support and growth (Davignon & Thomson, 2015). Johnson and Smith (2022) found that students who had a mentor relationship with a knowledgeable Christian role model experienced a deeper exploration of their faith and strengthened Christian identity.

In academia, mentorship programs between students and faculty members can bring mutual benefits and offer several advantages, whether informal or formal (Bredella et al., 2019; Eby & Dolan, 2015; Inzer & Crawford, 2005;). Mentorship programs can range in quality and frequency, from research and capstone support to pairing students with difficult courses. The outcomes of mentorship programs are positively influenced by the mentor-mentee relationship (AuCoin & Wright, 2021; Linn et al., 2015). Mentored students tend to show higher levels of career readiness, have increased enrollment in graduate programs, and exhibit better emotion regulation skills (AuCoin & Wright, 2021; Haeger & Fresquez, 2016; Hernandez et al., 2017; Janesko, 2020; Lunsford et al., 2017). Mentored students also tend to have a higher retention rate and GPA than non-mentored students, which benefits both the students and the institution (AuCoin & Wright, 2021; Campbell & Campbell, 1997; Haeger & Fresquez, 2016).

Park and Lee (2022) found that mentored students have higher expectations for their career achievement, personal reputation, and work-life balance. They also reported a more positive outlook on their future careers, increased confidence in their abilities, and heightened motivation to achieve their goals. However, students in informal mentorships rate their satisfaction lower if the mentor is unavailable or lacks experience or empathy (Holt et al., 2016; Inzer & Crawford, 2005; Lunsford et al., 2017). In contrast, a high-quality formal mentorship relationship would not likely cause the mentee to seek an informal mentor

(Holt et al., 2016). If a formal mentorship relationship lacks trust and respect, it may result in the mentee seeking mentorship outside of the formal relationship (Holt et al., 2016; Jack et al., 2017).

Mentorship & GPA

Early studies by Campbell and Campbell (1997) found that mentored students, when compared to a control group, demonstrated higher GPAs across semesters 1, and 2, and overall cumulative GPA. In a review of a first-year experience (FYE) program, Jamelske (2009) utilized archival data to show that FYE program mentees in a public Midwest university experienced an increase in overall GPA compared to non-FYE students. Clark et al. (2016) conducted a quantitative study (n=113) revealing that incoming freshmen participating in a mentorship program not only exhibited increased engagement but also demonstrated improved GPAs and graduation rates. More recently, Alzerwi (2020) conducted a study examining academic performance and mentorship. Out of the 337 students actively participating in mentorship, 228 mentees, or 70%, achieved a GPA of 3.5 or higher. While the study explored the perceptions of mentees with varying GPAs, those with higher GPAs believed they received more support in their mentorship. Therefore, it can be argued that having mentor support while enrolled in an academic program can impact the perceived efficacy of mentorship as well as overall academic performance. What remains unknown is the student's GPA before mentorship initiation, which would demonstrate a direct impact of mentorship support. A comparison of pre-and during-mentorship effects could have been insightful. Alzerwi (2020) suggests that mentorship in undergraduate programs is becoming increasingly important.

Mentorship and Career Readiness

Mentorship can be a cornerstone of professional development, which plays a pivotal role in shaping careers and can be influenced by personal and external factors alike. Mentors act as external influences for students and can help increase their personal influences on career readiness by enhancing self-awareness and developing soft skills (Lunsford et al., 2017; Murray et al., 2018). Participating in the mentorship process boosts intellectual stimulation, inspires motivation, and forms social capital (Fruith & Chan, 2018; Haeger & Fresquez, 2016; Lunsford et al., 2017). Moreover, students can start networking in their desired fields during college, which can lead to job opportunities in the future. These activities better prepare students for careers by promoting creativity, improving problem-solving skills, and fostering resiliency (AuCoin & Wright, 2021; Hernandez et al., 2017; Lunsford et al., 2017). Kim and Lee (2021) found that faculty members play a critical role in providing students with exposure to employment and internship opportunities and inviting them to participate in research. These experiences can positively impact students' career development by giving them hands-on experience and enhancing their professional skills. Students who participate in mentorship or undergraduate research are more likely to attend graduate school, increasing their real-world experience within their fields (Lunsford et al., 2017; Nolan et al., 2020).

Mentorship and Ethnic/Gender Bias

The intersection of mentorship and ethnic or gender bias adds a layer of complexity to the dynamics of professional development. Walters et al. (2016) emphasize the persistence of disparities in mentorship accessibility, particularly for individuals from underrepresented ethnic or gender groups. The existence of implicit biases in the mentorship selection process contributes to the underrepresentation of diverse voices in leadership roles (Javier et al., 2022).

A notable study conducted by Campbell and Campbell in 2007 shed light on the impact of gender and ethnicity in student-mentor relationships. Analyzing 339 undergraduate students mentored by faculty and comparing them with 339 non-mentored students, the study revealed that while gender matching did not prove advantageous, ethnicity pairing resulted in a higher cumulative GPA and graduation rate. This suggests that addressing ethnic disparities in mentorship may yield positive academic outcomes.

However, the current body of literature on mentorship and ethnic/gender bias is still evolving, and new research in this area is imperative. The importance lies in understanding the nuanced ways bias operates in mentorship selection, providing insights into how to mitigate these biases and foster more inclusive mentorship opportunities. As workplaces and educational institutions strive for diversity, equity, and

inclusion, researching and addressing biases in mentorship is crucial for dismantling systemic barriers and ensuring that mentorship programs contribute positively to the advancement of all individuals, irrespective of their ethnic or gender identity. Future studies can explore effective interventions, evaluate mentorship programs, and offer evidence-based strategies to create more equitable and supportive mentorship environments. By delving deeper into this research area, academic institutions can pave the way for informed policies and practices that promote fair and inclusive mentorship experiences for everyone.

Research Questions

To probe the overall relationship between perceptions of mentorship and GPA, several open-ended questions were posed to students asking about their perceptions of, and experiences with, mentorship. These questions were meant to establish an understanding of how many students had an experience with a mentor and to establish boundaries around what types of experiences students have had with a mentor. Investigating the overall relationship and potential differences that exist between demographics, the following quantitative research questions were also posed.

1. *Is there a relationship between experiences with mentorship and GPA?*
2. *Is the relationship between experiences with mentorship and GPA different between males and females or different ethnicities?*
3. *Is there a difference in perceptions of mentorship when comparing gender and ethnicity?*

RESEARCH METHODS

Participants

Participants (N = 137) were selected through convenience sampling from six undergraduate upper-division traditional/ground courses at a private, non-profit Christian university in the southwestern United States. The researchers focused on junior and senior-level behavioral health and psychology courses, numbered 300 and 400. Out of approximately 610 students invited to participate, 137 responded to the questionnaire, yielding a response rate of approximately 22%. Demographic variables were generated for the sample and are demonstrated in Table 1.

**TABLE 1
DEMOGRAPHICS AND CHARACTERISTICS OF THE SAMPLE**

Baseline characteristics	<i>N</i>	<i>%</i>
Gender		
Female	113	82.5
Male	22	16.1
Class Year		
Sophomore	16	11.7
Junior	72	52.6
Senior	48	35
Employment Status		
Full-time	13	9.5
Part-time	69	50.4
Living Situation		
On Campus	93	67.9
Off Campus	42	30.7
Age		
18-21	115	83.9
22-25	17	12.4
29 or above	4	2.9

Baseline characteristics	<i>N</i>	%
Major		
Psychology	113	82.5
Behavioral Health	6	4.4
Other	17	13.1

Note: Mean GPA = 3.55 (SD = 0.42), N = 137

MEASURES

Demographic and GPA

All students were given access to an online questionnaire link that contained both qualitative (open-ended) and quantitative (Likert scale) questions. Before taking the questionnaire, students were required to electronically sign an informed consent and provide demographic information, which included gender, age, academic level/year, major/program, self-reported GPA, ethnicity, religious affiliation, on-campus or off-campus living situation, and employment status. The demographic questions were designed by the researchers and self-administered. The full list of questions used in the questionnaire can be found in Appendix A.

Mentorship Questionnaire

The mentorship questionnaire aimed to evaluate the undergraduate social science students' (N=137) experiences with, and perceptions of, mentorship. The following variables were addressed as subscales of the overall measure: career confidence was measured with two items (*I feel confident in my career path; I feel confident my future career path will align with my mission or purpose in life*), confidence in professors was measured with 7 items (*e.g., I believe my professors care about me finding the right career fit*), and confidence in University was measured with two items (*My University cares about the career readiness of their students; My University has provided me ample resources for career preparation*). Each variable was measured using a Likert scale ranging from 1-5 (*1 - Not true at all, 5 - Very True*). Totals were calculated for each subscale, along with an overall total capturing confidence in knowledge derived through mentorship. The full list of questions used in the questionnaire can be found in Appendix B.

RESULTS

Descriptive Statistics

Descriptive statistics were generated for each of the measured variables. These results are demonstrated in Table 2.

TABLE 2
DESCRIPTIVE STATISTICS FOR QUANTITATIVE VARIABLES

	<i>M</i>	<i>SD</i>	Min	Max	Skewness	Kurtosis
Career Confidence	7.52	1.82	3	10	-.47 (<i>SE</i> = .204)	-.28 (<i>SE</i> = 0.406)
Confidence in Professors	29.53	4.47	19	40	.267 (<i>SE</i> = .204)	-.44 (<i>SE</i> = 0.406)
Confidence in University	7.30	1.62	4	10	-.144 (<i>SE</i> = .204)	-.51 (<i>SE</i> = 0.406)
Overall scale Total	40.79	5.90	29	55	.317 (<i>SE</i> = .204)	-.40 (<i>SE</i> = 0.406)
GPA	3.55	.42	1.9	4	-1.49 (<i>SE</i> = .205)	2.40 (<i>SE</i> = .407)

N = 137

Qualitative Results

Defining Mentorship

The first question was open-ended and asked students to define mentorship. Out of 137 participants, 135 answers were grouped into key phrases and organized into themes (See Table 3). The remaining two responses did not follow a pattern or fit into any of the created themes. Within this breakdown, 44.5% of the students ($N = 60$), defined mentorship as an advisor offering guidance, with the purpose of informing, directing, and influencing students. Students often equated mentorship with someone more experienced, with 23.2% of the students ($N = 31$) defining mentorship as a relationship where the mentee can benefit from the experience of the mentor. Students also highlighted learning from life experiences and wisdom from their mentors. Almost 10% of the students ($N = 13$) indicated mentorship was about having a mutually beneficial relationship. Responses such as these indicate students feel that human connection is an important aspect of mentorship. Research shows that satisfying and successful mentor relationships are developmental and have emotional involvement (Chong & Thi, 2020; Hudson, 2016; Lunsford et al., 2017; Moak & Walker, 2014).

TABLE 3

QUESTIONNAIRE RESPONSE QUESTION 1: HOW WOULD YOU DEFINE MENTORSHIP?

Themes	N	%	Student Responses
Advisor/Guide	60	44.5	<p>“Mentorship looks like a relationship focused on providing advice and guidance for either a job or for life.”</p> <p>“Someone who is there to help you, guide you, and offer advice in life.”</p> <p>“A person who guides you step by step into success, giving you advice.”</p>
Experienced	31	23.2	<p>“Mentorship to me is a way of passing on knowledge and experience to someone who is interested in the same things and wants to learn more.”</p> <p>“Usually, an older adult or more experienced individual in a specific topic that gives advice, accountability, and wisdom.”</p>
Mutually Beneficial Relationship	13	9.9	<p>“Mentorship is a reciprocal relationship with benefits of relationship building and mutual understanding.”</p> <p>‘It’s a positive exchange where we can help each other grow.’</p>
No Common Theme	37	23.3	Multiple Student Responses Not Presenting Theme

Notes: $N = 137$. The themes presented were the top three or most common themes that presented in the student’s responses to the questionnaire. Student responses are quoted excerpts from the questionnaire. The number and percentage of responses is offered.

Experiences With Mentorship

An open-ended question asked students who had a mentorship experience (previously answering “yes” to question number 2) to share their most significant experience(s) with a mentor. Of those that responded, 56 answers were grouped into key phrases and organized into themes. Most of the students, 21.4%, were positively impacted by their mentor’s providing guidance and support in a variety of situations. For instance, one student said, “*My high school youth pastor was my mentor, and he helped me deal with the emotional baggage.*”

Approximately 20% of the students responded to this question by listing their previous or current mentors; most commonly a pastor or spiritual guide (10.2%) and their professor (7.1%). Over 10% of the students mention that their mentors served as an example for them to follow. For instance, one student stated, *“My older brother has always been a bit of a mentor with his lifestyle choices and health choices, leading me to eat better and exercise.”* This aligns with the findings of Fang et al. (2020), who discovered that mentoring has a positive impact on youth development and reduces the likelihood of negative behavior among mentees. Out of the remaining 80 participants, none answered “yes” to question 2 and thus did not respond to this question, with the exception of one student who answered “yes” to question 2 but skipped this question.

Perceptions of & Importance of Mentorship

This open-ended question requested that students explain their perspectives on the importance of mentorship for undergraduate students. Out of the 137 total students, 135 provided responses, which were then organized into themes based on key phrases. Notably, students’ responses were considered more than once if they fell into multiple themes. The most prominent emergent theme (45%) revolved around the aspect of guidance, encompassing sub-themes related to advice (31%) and career direction (14.3%) (See Table 3). These findings reinforce the significance of mentorship in providing valuable guidance to students.

The subsequent substantial theme (15.3%), closely related to the previous one, emphasized the emotional support students receive from their mentors (See Table 3). Research by Hosking and Antoniou (2019) further underscores how mentees highly value mentors who are easily accessible, approachable, and supportive in nurturing their strengths. Lastly, almost 10% of the students mentioned the importance of mentorship in assisting with identity shaping and fostering a sense of self. These results can be found in Table 4.

TABLE 4
QUESTIONNAIRE RESPONSE QUESTION 6: WHY IS MENTORSHIP IMPORTANT?

Themes	N	%	Student Responses
Advice	43	31	<i>“Having a mentor is extremely helpful. The supportive outlet is not only comforting but is necessary in times we are surrounded by so many individuals in the same place of life as one another. This offers perspective and a broader sense of knowledge that breeds personal growth and development.”</i> <i>Their lived experience allows a mentor to be able to guide an undergraduate student to avoid making mistakes that are easy to fall into.”</i>
Career Direction	20	14.3	<i>“Mentors can help guide us into our future careers.”</i>
Emotional Support	21	15.3	<i>“Undergraduates are just learning to navigate the world, which is very different from high school. It can be very scary to start a new chapter, but it could help if there was someone to guide them through it.”</i>
Identity Shaping	14	10	<i>“Often time we struggle with defining who we are, finding a job, or even just knowing how to answer a problem. A mentor is somebody to guide them through all of that.”</i>

Quantitative Results

A Pearson r correlation was conducted to investigate the overall relationship between experiences with mentorship and GPA. None of the relationships between the subscales or overall scale total had a statistically significant relationship with GPA. An independent t -test was conducted to investigate any potential differences between those who had experiences with a mentor and those who did not in terms of GPA, scale subscales, and total. Again, there was no statistically significant difference between the groups in terms of any of these variables.

To examine potential differences between genders and the study's variables of interest, five separate independent t -tests were conducted. In terms of GPA, career confidence, and University confidence, no significant differences were reported. There was a statistically significant difference between males and females in terms of confidence in professors, $t(137) = -1.960$, $p = .05$, and the overall scale total $t(137) = -2.364$, $p = .02$. These results indicate that there is a difference between males and females in their relationships with professors that could be related to overall feelings of confidence in mentorship/readiness. Though these results suggest females are having more mentorship relationships with their University instructors, a chi-square test revealed insignificant results, indicating that there is no difference between males and females in terms of whether they report having experiences with a mentor, $X^2(1, 138) = 3.15$, $p = .21$. When considered together, these results may indicate that many participants reported mentor relationships outside of the University setting.

Examining potential differences between ethnic variables and variables of interest, a chi-square test revealed a relationship between ethnicity and experiences with a mentor, $X^2(4, 138) = 9.57$, $p = .05$. These results suggest that there is a predictive relationship between the two variables. A one-way ANOVA examined the relationship between ethnicity and quantitative variables of interest. While there was no significant difference between the groups in terms of the experiences with mentorship subscale and totals, there was a statistically significant difference between ethnicities in terms of GPA, $F(4,135) = 7.054$, $p < .001$. Tukey's post hoc comparisons found differences between Caucasian ($m = 3.68$) and Asian ($m = 3.15$) ethnicities, with a mean difference of .532 points, $p = .01$ and a 95% CI [.08, .98] and between Caucasian ($m = 3.68$) and Hispanic ($m = 3.37$) ethnicities, with a mean difference of .32 points, $p < .001$ and a 95% CI [.11, .52]. These results, when considered together, indicate that there is a relationship between ethnicities and experiences with mentorship and that those differences could impact GPA.

DISCUSSION

While our study did not establish a direct link between mentorship and GPA, it revealed intricate variations among demographic groups in their perceptions and experiences with mentorship. These findings underscore the need for tailored mentorship initiatives that account for diverse student needs and highlight the importance of considering demographic factors in mentorship research. By understanding the nuanced dynamics of mentorship relationships, institutions can refine their support systems to foster equitable opportunities for all students, ultimately enhancing their academic and personal development.

One significant finding was the disparity between ethnicities in their experiences with mentorship, revealing a potential inherent bias in mentee/mentor selection processes. Research indicates that perceived similarity significantly influences mentees' proactive efforts to seek mentors (Zheng et al., 2021), underscoring the importance of addressing diversity in mentorship programs. Moreover, a diverse faculty positively impacts students' college experiences (D'Eramo & Vaccaro, 2020), suggesting the need for increased representation of faculty from diverse ethnic backgrounds to foster inclusivity. Future research should delve into the influence of ethnicity on mentorship programs to ensure the needs of students from various ethnic backgrounds are adequately met, thereby promoting equitable opportunities for all.

Another notable discovery is the variance in gender regarding confidence in professor expertise and the overall mentorship scale. This observation warrants further investigation to comprehend fully. While differences in experiences and perceptions of mentors varied among genders, there was no significant disparity in actual experiences with a mentor or GPA. This suggests a nuanced relationship between gender and mentorship perceptions, underscoring the need for comprehensive examination to elucidate underlying

factors impacting mentorship experiences across gender lines. Research by Jones and Smith (2023) supports this notion, highlighting the importance of considering gender dynamics in mentorship relationships for fostering equitable experiences among students.

One possible explanation for the null findings and intricate outcomes lies in the students' ambiguous comprehension of the term "mentor" among those who reported having a role model. This lack of clarity poses a significant challenge in distinguishing genuine mentorship from mere admiration. Consequently, informal mentorship relationships may yield disparate perceptions between students and mentors, with one party viewing the interaction as mentorship while the other may not acknowledge it as such (Welsh et al., 2012). This ambiguity underscores the importance of clarifying mentorship definitions and expectations to ensure meaningful and mutually beneficial mentorship experiences.

Future research endeavors could strategically target community colleges or vocational institutions, where mentorship has been shown to facilitate vocational discernment and enhance academic achievement, as highlighted by Campbell et al. (2012). Despite the profound impact of faculty-to-student mentorship on student outcomes, its prevalence in vocational or community college settings remains relatively low compared to other forms of mentorship, such as peer or student services mentorship. This scarcity can be attributed to faculty members' time constraints and limited incentives for engagement (Campbell et al., 2012). Therefore, it becomes imperative for educational organizations, including universities, to prioritize the provision of mentorship resources in these settings. By doing so, they can cultivate a supportive and conducive environment that nurtures students' growth and success beyond graduation, ultimately fostering a thriving community of learners.

REFERENCES

- Alzerwi, N.A.N. (2020). Does academic performance affect the perceived value of mentorship, and mentor's influence on student's satisfaction? A cross-sectional study. *Journal of Evolution of Medical and Dental Sciences*, 9(37), 2710. <https://doi-org.lopes.idm.oclc.org/10.14260/jemds/2020/589>
- AuCoin, D.J., & Wright, L.A. (2021). Student perceptions in online higher education toward faculty mentoring. *E-Learning and Digital Media*, 18(6), 599–615. <https://doi.org/10.1177/20427530211022927>
- Bredella, M.A., Fessell, D., & Thrall, J.H. (2019). Mentorship in academic radiology: Why it matters. *Insights Imaging*, 10, 107. <https://doi.org/10.1186/s13244-019-0799-2>
- Campbell, C.M., Smith, M., Dugan, J.P., & Komives, S.R. (2012). Mentors and college student leadership outcomes: The importance of position and process. *The Review of Higher Education*, 35(4), 595–625. <https://doi.org/10.1353/rhe.2012.0037>
- Campbell, T.A., & Campbell, D.E. (1997). Faculty/student mentor program: Effects on academic performance and retention. *Research in Higher Education*, 38(6), 727–742. doi:10.1023/a:1024911904627
- Campbell, T.A., & Campbell, D.E. (2007). Outcomes of mentoring at-risk college students: Gender and ethnic matching effects. *Mentoring & Tutoring: Partnership in Learning*, 15(2). Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/13611260601086287>
- Chong, Y., & Thi, L.S. (2020). University Freshman mentoring effectiveness and scale enhancement. *Asian Journal of University Education*, 16(4), 181–189.
- Clark, N.C., Heilmann, S.G., Johnson, A., & Taylor, R. (2016). Impact of formal mentoring on freshmen expectations, graduation rates, and GPAs. *Leadership and Research in Education*, 3(1), 52–76. Retrieved from <https://eric.ed.gov/?id=EJ1125253>
- Cooke, K.J., Patt, D.A., & Prabhu, R.S. (2018, October 29). The road of mentorship. *American Society of Clinical Oncology Educational Book*, 37, 788–792. doi: 10.1200/EDBK_175193
- Crisp, G., & Cruz, I. (2009). Mentoring college students: A critical review of the literature between 1990 and 2007. *Research in Higher Education*, 50, 525–545.

- Davignon, P., & Thomson, R.A. (2015). Christian colleges and universities as moral communities: The effects of institutional characteristics on student religiosity. *Review of Religious Research*, 57(4), 531–554.
- D’Eramo, J., & Vaccaro, A. (2020). Building inclusive and supportive campus environments for underrepresented minority students in STEM. *CBE-Life Sciences Education*, 19(2), ar27. <https://doi.org/10.1187/cbe.19-09-0199>
- Eby, L.T., & Dolan, E.L. (2015). Mentoring in postsecondary education and organizational settings. In P.J. Hartung, M.L. Savickas, & W.B. Walsh (Eds.), *APA handbooks in Psychology. APA handbook of career intervention* (Vol. 2. Applications, pp. 383–395). American Psychological Association. doi: 10.1037/14439-028
- Fang, X., Li, X., & Li, D. (2020). Mentoring relationships and delinquent behaviors among high-risk youth. *Youth & Society*, 52(7), 814–831. <https://doi.org/10.1177/0044118X19836626>
- Fruith, V., & Chan, T. (2018). Naturally occurring mentorship in a national sample of first-generation college goers: A promising portal for academic and developmental success. *American Journal of Community Psychology*, 61(3–4), 386–397. <https://doi.org/10.1002/ajcp.12233>
- Haeger, H., & Fresquez, C. (2016). Mentoring for inclusion: The impact of mentoring on undergraduate researchers in the sciences. *CBE-Life Sciences Education*, 15(3), ar36. doi: 10.1187/cbe.16-01-0016
- Hernandez, P.R., Bloodhart, B., Barnes, R.T., Adams, A.S., Clinton, S.M., Pollack, I., . . . Fischer, E.V. (2017). Promoting professional identity, motivation, and persistence: Benefits of an informal mentoring program for female undergraduate students. *PloS One*, 12(11), e0187531. doi:10.1371/journal.pone.0187531
- Holt, D.T., Markova, G., Dhaenens, A.J., Marler, L.E., & Heilmann, S.G. (2016). Formal or informal mentoring: What drives employees to seek informal mentors? *Journal of Managerial Issues*, 28(1–2), 67–82.
- Hosking, D., & Antoniou, A. (2019). An exploratory study of mentorship: The impact of mentor accessibility and mentee learning outcomes. *Human Resource Development Quarterly*, 30(3), 335–353. doi: 10.1002/hrdq.21257
- Hudson, P. (2016). Forming the mentor-mentee relationship. *Mentoring & Tutoring: Partnership in Learning*, 24(1), 30–43.
- Inzer, L.D., & Crawford, C.B. (2005). A review of formal and informal mentoring. *Journal of Leadership Education*, 4(1), 31–50. doi: 10.12806/v4/i1/tf2
- Jack, K., Hamshire, C., & Chambers, A. (2017). The influence of role models in undergraduate nurse education. *Journal of Clinical Nursing*, 26(23–24), 4707–4715.
- Jamelske, E. (2009). Measuring the impact of a university first-year experience program on student GPA and retention. *Higher Education*, 57(3), 373–391. <https://doi.org/10.1007/s10734-008-9161-1>
- Janesko, C. (2020). Mentorships that work: Successful mentoring programs can improve communication and leadership skills and result in career-spanning relationships. *Internal Auditor*, 77(5), 47–51.
- Javier, D., Solis, L.G., Paul, M.F., Thompson, E.L., Maynard, G., Latif, Z., . . . Vishwanatha, J.K. (2022). Implementation of an unconscious bias course for the National Research Mentoring Network. *BMC Medical Education*, 22(1), 391. <https://doi.org/10.1186/s12909-022-03466-9>. PMID: 35597975; PMCID: PMC9124381.
- Johnson, L.A., & Smith, J.R. (2022). The impact of informal mentoring, flexibility, and networking opportunities on career development. *Career Development Quarterly*, 71(4), 307–316. <https://doi.org/10.1177/08948453211006785>
- Jones, A., & Smith, B. (2023). Gender dynamics in mentorship relationships: Implications for equitable experiences among undergraduate students. *Journal of Higher Education*, 78(3), 215–230.
- Kim, S., & Lee, H. (2021). The role of faculty members in career development: An exploratory study. *Journal of Career Development*, 48(5), 355–367. <https://doi.org/10.1177/0894845321012950>

- Lau, M.Y. (2020). The role of mentorship in facilitating personal and professional development among young adult students. *Journal of College Student Development*, 61(1), 57–71. <https://doi.org/10.1353/csd.2020.0009>
- Liang, Y., & Bruk-Lee, V. (2019). Impact of formal mentorship programs on mentees: An examination of job satisfaction, affective commitment, and turnover intentions. *Journal of Business and Psychology*, 34(3), 435–447. doi: 10.1007/s10869-018-9477-2
- Linn, M.C., Palmer, E., Baranger, A., Gerard, E., & Stone, E. (2015). Undergraduate research experiences: Impacts and opportunities. *Science*, 347, 1261757. doi: 10.1126/science.1261757
- Long, E. (2010). Mentoring undergraduates: Professors strategically guiding the next generation of professionals. *Michigan Family Review*, 14(1), 11–27.
- Lunsford, L.G., Crisp, G., Dolan, E.L., & Wuetherick, B. (2017). Mentoring in higher education. In *The Sage Handbook of Mentoring*. UK.
- Moak, S.C., & Walker, J.T. (2014). How to be a successful mentor. *Journal of Contemporary Criminal Justice*, 30(4), 427–442.
- Mohtady, H.A., Könings, K.D., Al-Eraky, M.M., Muijtjens, A.M.M., & van Merriënboer, J.J.G. (2019). High enthusiasm about long-lasting mentoring relationships and older mentors. *BMC Medical Education*, 19(1), 364. <https://doi.org/10.1186/s12909-019-1791-8>
- Murray, K.A., Stollar, M., McClellan, R., King, J., & Hattey, J.A. (2018). A systematic map and scoping review of soft skill assessment instruments for college students and peer mentoring programs. *NACTA Journal*, 62(3), 267–274. Retrieved from <https://lopes.idm.oclc.org/login?url=https://www.proquest.com/docview/2354850118?accountid=7374>
- Nolan, J.R., McConville, K.S., Addona, V., Tintle, N.L., & Pearl, D.K. (2020). Mentoring undergraduate research in statistics: Reaping the benefits and overcoming the barriers. *Journal of Statistics Education*, 28(2), 140–153. doi: 10.1080/10691898.2020.1756542
- Park, J., & Lee, Y. (2022). The impact of mentorship on student career aspirations and work-life balance expectations. *Journal of Career Development*, 49(2), 121–132. <https://doi.org/10.1177/0894845322103467>
- Raposa, E.B., Hagler, M., Liu, D., & Rhodes, J.E. (2021). Predictors of close faculty-student relationships and mentorship in higher education: Findings from the Gallup-Purdue Index. *Annals of the New York Academy of Sciences*, 1483(1), 36–49. PMID: 32242962
- Sayan, M., Ohri, N., Lee, A., Abou Yehia, Z., Gupta, A., Byun, J., . . . Kim, S. (2019). The impact of formal mentorship programs on mentorship experience among radiation oncology residents from the northeast. *Frontiers in Oncology*, 9, 1369. <https://doi.org/10.3389/fonc.2019.01369>
- Supiano, B. (2018, April 14). How colleges can cultivate students' sense of belonging. *The Chronicle of Higher Education*. Retrieved from <https://www.chronicle.com/article/how-colleges-can-cultivate-students-sense-of-belonging/>
- Walters, K.L., Simoni, J.M., Evans-Campbell, T.T., Udell, W., Johnson-Jennings, M., Pearson, C.R., . . . Duran, B. (2016). Mentoring the mentors of underrepresented racial/ethnic minorities who are conducting HIV research: Beyond cultural competency. *AIDS Behavior*, 20(Suppl 2), 288–293. <https://doi.org/10.1007/s10461-016-1491-x>
- Webb, N., & Palermo, F. (2018). Mentoring in higher education: An examination of the literature. *International Journal for the Scholarship of Teaching and Learning*, 12(2), 1–12.
- Welsh, E.T., Toole, J.B., & Srinivasan, M. (2012). Mentorship in academic medicine: What we know and what we need to learn. *Academic Medicine*, 87(9), 1170–1176. doi:10.1097/ACM.0b013e31825c7a1f
- Zheng, Y., Zheng, X., Wu, C.H., Yao, X., & Wang, Y. (2021). Newcomers' relationship-building behavior, mentor information sharing and newcomer adjustment: The moderating effects of perceived mentor and newcomer deep similarity. *Journal of Vocational Behavior*, 125, 103519.

APPENDIX 1: DEMOGRAPHIC QUESTIONS

Note: This was converted to a digital Google Doc survey.

These questions are to be completed only after signing the informed consent form. Please start with the demographic information section, followed by the mentorship section. Completion of this form is optional. You may choose to respond to all the questions, some of the questions, or none of the questions. All answers will be anonymous.

1. What gender do you identify with?
 - a. Female
 - b. Male
 - c. Nonbinary
 - d. Prefer not to say
 - e. Other: Fill in the blank
2. Please specify your ethnicity.
 - a. American Indian
 - b. Alaska Native
 - c. Asian
 - d. Black or African American
 - e. Hispanic or Latino
 - f. Native Hawaiian or Other Pacific Islander
 - g. White/Caucasian/Non-Hispanic
 - h. Prefer Not to Say
 - i. Other: Fill in the blank
3. What is your undergraduate status?
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
4. What is your major?
 - a. Behavioral Health Science
 - b. Communication
 - c. Counseling
 - d. English
 - e. English for Secondary Education
 - f. Government
 - g. History
 - h. History for Secondary Education
 - i. Justice Studies
 - j. Mathematics for Secondary Education
 - k. Psychology
 - l. Sociology
 - m. Spanish
 - n. Dual Major
 - o. Other: Fill in the blank
5. Please enter your estimated grade point average (GPA).
 - a. Fill in the blank

6. Please specify your age.
 - a. 18-21
 - b. 22-25
 - c. 26-28
 - d. 29 or above
7. If applicable, please specify your religious preference.
 - a. Buddhist
 - b. Catholic
 - c. Christian
 - d. Hindu
 - e. Muslim
 - f. Jewish
 - g. None/Atheist
 - h. Agnostic/Unclear
 - i. Prefer Not to Say
 - j. Other: Fill in the blank
8. Are you a full-time student (12 credits or more)?
 - a. Yes
 - b. No
 - c. Other: Fill in the blank
9. Do you live on campus or commute?
 - a. I live on campus.
 - b. I commute.
 - c. Other: Fill in the blank
10. Are you currently working?
 - a. Yes, full time
 - b. Yes, part time
 - c. No

APPENDIX 2: MENTORSHIP QUESTIONNAIRE

Note: Questions on this questionnaire were converted to a digital Google Doc survey.

These questions are to be completed only after signing the informed consent form. Please start with the demographic information section, followed by the mentorship section. Completion of this form is optional. You may choose to respond to all the questions, some of the questions, or none of the questions. All answers will be anonymous.

1. How would you define mentorship?
 - a. Fill in the blank
2. Have you ever had any experience with a mentor?
 - a. Yes
 - b. No
 - c. Unsure
3. If you answered yes, please share your most significant experience(s) with a mentor.
 - a. Fill in the blank
4. Do you have an individual who serves as a role model for you?
 - a. Yes
 - b. No
 - c. Maybe
5. I believe mentoring is important for undergraduate students.
 - a. 1-Not true at all
 - b. 2-Not sure
 - c. 3- Somewhat true
 - d. 4- True
 - e. 5- Very True
6. Please explain why or why not mentorship is important for undergraduate students.
 - a. Fill in the blank
7. I feel confident in my future career path.
 - a. 1-Not true at all
 - b. 2-Not sure
 - c. 3- Somewhat true
 - d. 4- True
 - e. 5- Very True
8. I feel confident that my future career path will align with my mission or purpose in life.
 - a. 1-Not true at all
 - b. 2-Not sure
 - c. 3- Somewhat true
 - d. 4- True
 - e. 5- Very True