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IN BRIEF REPORT

The Relationship of Mentorship to Career Outcomes in Academic Psychiatry and Psychology: a Needs Assessment

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Abstract

Objective Faculty development is designed to facilitate career advancement of junior faculty but there is limited empirical evidence on how to design an effective program.

Methods As a first step in the design of an effective program, a needs assessment was conducted. Participants were faculty members of an academic psychiatry department. Participants completed a quantitative and qualitative survey assessing their experience with mentors, academic self-efficacy, career burnout and satisfaction, academic productivity, and perceived barriers to scholarship.

Results Eighty percent ($N = 104$) of eligible faculty members completed the study survey (54% female; 81% White, 10% underrepresented in medicine). Less than half of the respondents (44%) reported having a current mentor. Number of mentors ($r = .33$; $p < .01$), mentorship meetings ($r = .35$; $p < .01$), and mentorship quality ($r = .33$; $p < .01$) were significantly correlated to a standardized measure of academic self-efficacy. Self-efficacy was significantly associated with academic productivity ($r = .44$; $p < .001$) and career satisfaction ($r = .29$; $p < .05$). The top barriers to scholarship productivity were time and lack of access to resources. Faculty members without a mentor endorsed more barriers to scholarship ($p < .001$) than those with a mentor. Themes that emerged from the qualitative data suggest that mentorship supports career advancement through coaching and professional development, invitations to collaborate and resource share, networking, and active teaching.

Conclusion Based on the relationship of mentoring to career outcomes, a robust faculty development program needs a formal academic mentorship program to improve career satisfaction and academic productivity.

Keywords Faculty development · Mentorship · Academic self-efficacy

Within today's competitive health care environment, psychiatrists and psychologists practicing in academic medical settings are saddled with increasing demands for clinical practice and administrative duties with minimal time and financial support to pursue academic and scholarly activities [1]. Consequently, despite interest and motivation, many psychiatrists and psychologists are unable to prioritize scholarly work that will lead to their academic success, as well as their promotion and advancement of the field. The decreased emphasis on academic activities is of particular concern in the context of the COVID-19 pandemic which has strained the mental health system and further amplified demands for clinical services [2]. Even prior to the COVID-19 pandemic, the number of physicians engaged in research has been steadily decreasing [3].

To support the career and academic success of faculty members, various departments within academic medicine have established faculty development programs. A burgeoning literature provides support for these programs in enhancing important career outcomes including scholarly productivity, academic advancement, and staff retention, as well as improving career satisfaction and reducing burnout [4–6]. In addition, research on these programs has identified distinct gains for junior faculty and clinician educators as well as women and underrepresented minority faculty members [7–12].

One aspect of faculty development programs found to enhance academic success is mentoring. Choi and colleagues

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[13] posit that a dynamic culture of mentorship should be elevated to a top strategic priority for institutions wishing to develop leaders in biomedical science and state-of-the-art health care delivery. However, these authors suggest for this culture of mentorship to be established and for mentorship programs to be successful, departments must identify areas of need.

To design, evaluate, and target systematic faculty development interventions at our institution, our team embarked on a needs assessment survey of the 130-member faculty across the Mayo Clinic Psychiatry and Psychology practice. The goal of the survey was to understand mentorship experiences, perceived barriers to scholarship, academic confidence for completing academic work, and their relationship to career outcomes. Based on the relationship of mentoring to academic success [4, 8, 9, 14], we hypothesized that access to quality mentorship would impact academic self-efficacy and career progression.

Methods

The survey was deemed exempt by the Mayo Clinic Institutional Review Board. Our study team developed a Web-based, 91-item quantitative and qualitative survey that took approximately 15 min to complete. A portion of the items were selected from previously administered faculty surveys in other departments of our institution or modified from existing measures in the faculty development literature (i.e., Faculty Self-Efficacy Scale) [15]. Items in the survey measured the following domains. The survey is available upon request from the corresponding author.

The survey questions examined demographics (i.e., age, gender, race/ethnicity) and professional characteristics (e.g., years on staff, degree, academic rank, number of peer-reviewed publications, and primary area of career focus). For demographics, the race/ethnicity variable was categorized into underrepresented in medicine (URM) or non-URM (i.e., White/Asian) [16].

Participants were assessed on their level of academic self-efficacy, a construct that is defined as an individual's belief that they have the capabilities to carry out tasks that are central to academic success, and has been shown to be related to important career outcomes [15]. Study participants completed 19 items rated on a 5-point Likert scale related to their perception of academic self-efficacy related to perceived skills and confidence to engage in research, writing, and scholarship (e.g., "I have the skills necessary to take a clinical research question and design a research project"; "I understand the process for submitting a grant"). Study participants also responded to a single item rated on a 5-point Likert scale related to career burnout (i.e., "I feel burned out") and a single item rated on a 5-point Likert scale on career satisfaction (i.e., "I feel satisfied in my career").

The survey also included questions regarding how many academic mentors faculty members currently have and the time they spent each week in academic mentoring meetings. Participants also completed 14 items rated on a 5-point Likert scale related to the quality of their primary mentorship relationship (e.g., "My mentor is invested in my academic success"; "My mentor imparts the skills and resources necessary to reach my career goals").

Faculty members also responded to questions related to barriers to scholarly activities (e.g., "Time is a barrier to scholarly activities"; "I experience anxiety when I write"). Finally, to examine specific mentorship behaviors that are related to the mentee's career development, participants provided open-ended responses to questions about ways in which a mentor supported their academic career advancement.

Quantitative analysis of survey items was completed using descriptive statistics appropriate for this level of data, using IBM Statistical Package for the Social Sciences, version 25. Chi-square analyses compared groups (URM vs. non-URM; education vs. research; have a mentor vs. no mentor; gender; psychiatrist vs. psychologist) on whether they have a current mentor. Pearson *r* correlations were conducted to examine the relationship between mentorship variables (number of mentors, number of mentorship meetings, mentorship quality) with academic self-efficacy, career satisfaction and burnout, and scholarly productivity as measured by number of peer-reviewed publications. Independent samples *t*-tests were conducted to examine differences between individuals who have a mentor and those who do not on their composite score on items related to perceived barriers to scholarship. Given that full professors in our department are more likely to serve as a mentor rather than have a mentor, they were removed from the comparison and correlational analyses. Qualitative responses to the item "Please provide an example of how a mentor helped advance your career at Mayo Clinic" were de-identified and analyzed by two study investigators (L.S. and K.V.) using methods of content analysis. Analysis involved a systematic process of deductively sorting information based on preliminary themes (i.e., categories of comments from multiple participants reflecting similar experiences, attitudes, behaviors) to develop a codebook. Investigators then independently coded participant comments and compared resulting themes, subthemes, and representative comments. Any discrepancies in coding were discussed and resolved, and names of predominant themes were refined.

Results

Out of the 130-member faculty, 104 faculty members (80%) participated in this study. In a department with 47.7% female faculty members, survey participants were 54% ($n = 56$) female. Only 9.6% of the faculty were URM.

Mirroring the composition of the department, most participants (70%) held tenured staff positions. In terms of professional discipline, 53.8% ($n=56$) of survey respondents were psychiatrists (M.D./D.O.) and 46.2% ($n=48$) were doctoral-level psychologists (Ph.D.). The majority of respondents (70%) were affiliated with the institutions' main campus, and the rest were part of the larger health system in largely rural satellite clinics across a two-state area. Faculty members were assistant professors (54.8%), followed by associate professors (15.4%), professors (12.5%), and instructors (7.7%), and largely reflect the distribution of academic rank within the department. See Table 1 for demographic characteristics and comparison to the faculty at large.

Only 44% ($n=36$) of faculty members identified having a current academic mentor. Having a mentor did not differ based on gender (female vs. other), $\chi^2=0.186$, $p=0.66$; URM status (URM vs. not URM), $\chi^2=0.002$, $p=0.963$; professional discipline (psychiatrist vs. psychologist), $\chi^2=0.472$; p = 0.492; or having 0.2 FTE or more protected time for research (research protected time vs. no protected time), $\chi^2=0.382$, $p=0.536$. However, faculty members at satellite locations were significantly less likely to have a mentor than those residing at the institutions' main campus $\chi^2=3.57$; $p<0.05$.

Academic self-efficacy correlated significantly with the number of mentors ($r=0.33$, $p<0.01$), the number of mentorship meetings ($r=0.35$, $p<0.01$), the score on the mentorship quality scale ($r=0.33$, $p<0.01$), and the number of publications ($r=0.44$, $p<0.001$), as well as career satisfaction ($r=0.29$, $p<0.05$). Out of a list of barriers to scholarship, both time (*mean* = 4.6; *SD* = 0.72) and a lack of resources such as statistical and research coordinator support (*mean* = 3.7; *SD* = 1.3) were the only two items with an average score that reflected agreement. Independent samples *t*-tests found faculty members without a current mentor (*mean* = 33.2; *SD* = 7.4) endorsed significantly more barriers to scholarship than those with a current mentor (*mean* = 27.3; *SD* = 6.9), $t(68)=-3.43$, $p<0.001$.

Coded qualitative comments were organized into four predominant themes, which are presented in Table 2, along with representative participant comments assigned to that theme. The themes are presented in order of the amount of content in support of that theme. The first theme, "Coaching and Professional Development," comprises content including conveying information, and offering encouragement and support, as well as coaching approaches such as goal setting and accountability. Within this theme, there is a subtheme of offering guidance related to role development, such as transition into leadership and navigating political challenges. Another subtheme was coaching and guidance toward academic promotion. Theme 2, "Invite Collaboration/Share Resources," contains content suggesting the mentor offered to include the participant in a project or opportunity and/or share existing resources. Theme 3, "Networking," included mentor behavior of introducing or connecting the individual to others for collaboration or some other benefit. Content coded in the fourth theme, "Active Teaching and Skill Building," was less frequent. This theme included any specific mention of active engagement of the mentor in teaching or working alongside the mentee, signified by active verbs (e.g., explained, reviewed, helped, demonstrated).

Table 1 Demographic and professional characteristics of survey respondents compared to the departmental faculty members at large

Demographic/professional characteristics	*N* (*N* = 104)	%	% Faculty (*N* = 130)
Female	56	53.8	47.7
Underrepresented in medicine	10	9.6	n/a
Degree			
M.D	56	53.8	58.5
Ph.D	48	46.2	41.5
Staff position			
Tenured	72	69.2	73.6
Non-tenured	32	31.0	26.2
Work location—main campus	74	71.2	66.9
Rank			
Instructor	8	7.7	5.4
Assistant professor	57	54.8	46.5
Associate professor	16	15.4	13.2
Full professor	13	12.5	13.2
Have a current mentor at Mayo Clinic	36/81	44%	n/a

n/a not available

Discussion

This mixed methods study provides unique insights on the perceived needs of faculty members in an academic department of psychiatry and psychology to enhance their participation in scholarship and advance academically. Consistent with findings of prior research, our study highlights the central relationship of mentorship to important academic career outcomes and career advancement [6, 12, 14, 17, 18] and attributes this relationship to both the number of mentors and the quality of mentorship rather than simply having a mentor [17, 19]. By expanding the focus of prior literature beyond narrowly defined groups of faculty members (e.g., clinician educators, early career scientists) to those representing a broad range of career levels (i.e., early though late career) and academic experiences (i.e., instructor to full professor), our study has implications for more equitable distribution of mentorship resources within psychiatry

Table 2 Mentorship themes and example comments on how mentors support academic career advancement

Theme 1. Coaching
He has encouraged me to apply for opportunities to advance my career and be involved in research opportunities
Clarifying opportunities and providing feedback on focusing efforts
Helped mentor during transition into new leadership role
Encouraged me to apply for academic advancement
Asked me if I had applied for recognitions/awards; created time to meet
Theme 2. Invitation to collaborate and share resources
This mentor provided me with an opportunity on one of his grants which gave me protected time
Include me in different projects and indicatives
Allowed me to use her study coordinators and statisticians to support my project
Allowed me to participate in a grant
Not only does she support my projects, but she also brings me on to hers
Theme 3. Networking
Inviting me to submit posters/symposia for multiple conferences, particularly for conferences/organizations that I am less familiar with to expand my area of expertise and networking
Internal and external introductions to collaborators
Spoke highly of me to others in positions of power
Introduction to opportunities to serve on national organization committees
Introducing me to the key individuals in my research field and including me in the related projects
Theme 4. Active teaching and skill building
Explain the basics of presentations and publishing
Helped design and write my first research project
Reviewed written applications and provided feedback
Helps me develop my writing skills

departments, as well as within other departments within academic medicine.

This study also contributes to the literature by delineating the specific aspects of mentoring that faculty members view as important to their academic success and development. Consistent with the mentorship literature, these findings suggest that mentees benefit from active mentoring that involves coaching and professional development, encouragement, goal setting, and accountability, including the mentee in scholarly projects and/or sharing existing resources such as protected time, statistical support, and research coordinators, assets endorsed by our study participants as essential for scholarly productivity. Responses from faculty members also underscore the importance of mentors in facilitating networking, as well as engagement in active teaching and skill building for academic work. Such findings can inform interventions to train mentors so that mentees may reap the most benefit from the mentoring relationship.

While our findings resonate with other studies on unmet needs of academic faculty members [20], a surprising lesson for us was that more than half of faculty members did not identify a current mentor. These results were shared with department leadership and faculty members through a grand rounds presentation, which fostered dialog, acquired support for faculty development initiatives, and helped us secure resources, including protected time for senior faculty to participate as mentors.

Guided by the needs assessment results, faculty development chairs have also conducted interviews with major stakeholders (junior faculty, senior faculty, institutional leaders) to build this faculty development program to meet the most unmet needs of faculty that are within our departmental and institutional resources and aligned with our institutional mission. We also have begun to address a notable disparity in mentorship of faculty members practicing at satellite locations through connecting these faculty members to active collaborations with colleagues on the main campus.

Although the high response rate with participant characteristics reflecting the composition of our faculty at large increases confidence in our findings, our study had several limitations. The homogeneous racial/ethnic composition of our sample, with less than 10% of faculty members identifying as URM, does not allow us to understand specific needs of minority faculty members. Another limitation is that these results may not generalize beyond the Department of Psychiatry and Psychology at Mayo Clinic, which does not offer alternative promotional pathways.

In conclusion, our study supports the value of faculty member engagement in mentorship activities and the quality

of the mentorship relationship in improving academic self-efficacy, a characteristic that is related to academic productivity and career satisfaction. Based on the value of mentoring for scholarly career outcomes [4, 8, 9, 14], faculty development programs should consider incorporating a robust mentorship program to enhance faculty members' participation in scholarly activities and academic promotion. Establishing a consortium of capable mentors, formalizing criteria for mentorship, and enhancing the training of mentors will be vital to this effort. Future research is needed to determine if allocating resources into formalized mentorship programs creates a return on investment by increasing the number of psychiatrists and psychologists engaged in scholarly activities.

Declarations

Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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