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Participant Perspectives on a Department of Surgery Faculty Mentoring Program

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Abstract

Background: Mentorship in academic medicine serves to promote career advancement and job satisfaction. This study was to evaluate the initial results of a faculty mentorship program in an academic Department of Surgery.

Methods: A faculty mentorship program was initiated in July 2015 with 63 participants. Junior faculty mentees (n=35) were assigned senior faculty mentors (n=28). After three years, an electronic survey was administered and the results analyzed.

Results: Response rate was 67% (n=42). 34 (81%) respondents had met with their mentor/mentee at least once. Topics discussed included: research (76%), leadership (52%), work-life balance (45%), and promotion (5%). Mentees endorsed achieving promotion (n=2), increasing research productivity (n=2), and obtaining national committee positions (n=2). 61% of mentors and 53% of mentees felt they benefitted personally from the program. Actionable improvements to the mentorship program were identified including more thoughtful pairing of mentors and mentees with similar research interests.

Conclusions: Participants felt the mentorship program was beneficial. Further investigation regarding the optimization of the mentor-mentee pairing is warranted to maximize the benefits from structured mentorship in academic surgery.

Keywords

Mentorship; Education; Surgery; Academic Surgery; Diversity Equity Inclusion

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Introduction:

The most effective mentoring relationships often occur spontaneously throughout the course of an academic career.¹ The use of formal, structured mentorship programs benefits those needing early career guidance when forming these relationships organically is challenging and may be delayed. Historical mentor-mentee relationships traditionally functioned on “advocacy factors,” where mentors chose mentees most like themselves.² In our modern era, we must consider that these spontaneously formed mentoring relationships can be challenging for women and groups in medicine where representation in leadership and sponsorship is lacking and may delay the achievement of early career goals.³⁻⁷

Positive outcomes from structured mentorship programs for individuals may include decreasing burnout, improving research skills, increasing publication and grant support, and allowing individuals to obtain promotions.⁸⁻¹² Departments may also benefit from these programs by building a strong collaborative academic community, increasing recruitment, and through retention of faculty.¹³⁻¹⁵

Despite the recognized importance, only half of surgical departments in the United States have a formal mentorship program.¹⁶ Being an effective mentor requires a significant time commitment to get to know ones mentee, tailor advice, set goals, and work on focused networking.^{17,18} The effort required to mentor an individual is unfortunately often overlooked and rarely compensated.¹⁹ Additionally, the benefits of a structured mentorship program to the mentor are challenging to quantify.

The purpose of this study was to establish and evaluate a faculty mentorship program in an academic Department of Surgery. To achieve these aims, we assessed subjective feedback from both the mentors and mentees and determined program satisfaction and effectiveness.

Material and Methods:

A faculty mentorship program was initiated in the Department of Surgery at a single quaternary care academic institution. The program was initiated in July of 2015 and included 63 participants, recruited through a department-wide email. Thirty-five junior faculty mentees at the Assistant Professor level were assigned to twenty-eight senior faculty mentors at the Professor or Associate Professor level. Individuals were preferentially paired with mentors outside of their division, in order to provide fresh perspective and limit conflicts of interest. Mentor-mentee pairs were instructed to meet twice a year at minimum. The meetings could be in person or virtual. Mentoring meetings did not have a formal structure of topics to discuss, but upon agreeing to participate, groups were encouraged to build a relationship that would foster the academic growth and success of each mentees’ individualized career goals. The program’s administration would send bi-annual reminders to encourage meeting.

With IRB approval, after mentor/mentee pairs met for three consecutive years, participants were asked to complete an anonymous virtual voluntary survey. The survey was administered by a coinvestigator (SD) not involved in the program as a mentor nor mentee with a two reminder emails sent to non-responders. Completion of the survey served

as implicit consent to participate. The survey consisted of 10 questions regarding each participant's experience in the mentorship program (Table 1). The survey was designed based on literature review of mentorship programs and senior surgical leadership expertise. The survey consisted of both multiple choice (frequency of meeting, topics discussed) as well as open-ended responses (tangible benefits, overall feedback). The open-ended responses were analyzed qualitatively for themes with emergent interpretive approach performed by two coinvestigators independently (AG, SD). Discrepancies, if occurred, were to be settled by a third independent reviewer (PZ), which was unnecessary.

The survey was distributed virtually. Comparison of responses were made between mentor and mentee groups. The responses were analyzed individually and not as pairs in order to maintain anonymity. Statistical analysis was performed using SPSS (IBM, version 28.0.1), and Chi-squared analysis was utilized for categorical variables. This study was approved by the University of Alabama at Birmingham Internal Review Board.

Results:

Of the 63 participants in the mentorship program, 67% responded to the voluntary survey, including 19 mentors and 23 mentees. Fourteen (32%) were women (26% of mentors, 39% of mentees). All mentees (19, 100%) were Assistant Professors; mentors (n=16, 84%) held the rank of Professor or Associate Professor (n=3, 16%). The most represented divisions within surgery that participated include Transplant (n=8), Pediatric (n=7), Vascular (n=4), and Trauma (n=4).

Of the respondents, 81% had met their mentor/mentee at least once during the three-year period. Fifteen respondents met annually (36%), 9 met every 6 months (21%), 1 met monthly (2.4%), 2 met every 3 months (4.8%), 6 met at some other frequency (14%), 1 met only one time (2.4%), 8 (18%) never met. Of the 8 who never met, 5 were mentees and 2 were women. At their meetings, respondents noted the topics discussed included: research (76%), leadership (52%), work-life balance (45%), clinical (45%), teaching (40%), and promotion (5%).

Thirty-seven percent of mentees felt participation in this program helped them achieve something tangible in their career, of these, 3 (43%) were women. These tangible outcomes were captured as open-ended responses whose themes included achieving promotion (n=2), increasing research productivity (n=3), and obtaining national committee positions (n=2) as a result of participation in the mentorship program. One mentee mentioned benefiting from having someone to check-in with to help keep them accountable for their professional progress.

Sixty-one percent of mentors and 53% of mentees felt they benefitted personally from the program, with no statistically significant difference between groups. Thirty-nine percent of mentors and 53% of mentees felt the program enhanced their career, with no difference between groups. A majority of respondents (76%) would recommend the mentorship program to others, with 63% of mentees and 87% of mentors stating they would recommend

the program. There was no significant difference between male and female respondents with regard to program satisfaction.

When suggesting areas of improvement, some respondents (n=6) suggested pairing of mentors and mentees within similar subspecialties or research interests. This would allow improved understanding of some of the intricacies of their specialty. Other mentees (n=4) expressed that difficulty in scheduling meetings with their mentor was a barrier to developing the relationship.

Discussion:

In this study, we explored the subjective outcomes of mentors and mentees who participated in a longitudinal departmental mentorship program at a single institution. We reviewed 42 participants over a 3-year study period. The program had an overwhelmingly positive response from participants, with most mentees meeting with their mentors regularly and most expressing that they would recommend the program to others. Both mentors and mentees, regardless of gender, were equally likely to recommend this program.

There was a difference, however, in the number of mentors versus mentees who recommended the program (although not statistically significant). This is likely due to the reported feedback of requesting better pairing of mentors by subspecialty or research interest. Mentees may have been more sensitive to this since many may have entered the relationship with a specific goal in mind that their mentor may not have had expertise in such as research acumen or building a clinical practice. While mentors may have been pleased to share their personal expertise in hopes that this could benefit others.

Previous work has explored the effectiveness of structured mentorship programs in academic medicine and surgery.^{17,20,21} Mentorship has been touted as being important to success of academic surgeons with many successful surgeons citing their mentors as being pivotal in their career path.¹⁶ Previous works suggest that impactful mentorship relies on a mentor who is experienced, a good listener, well-connected, that sets clear expectations, and creates a personal connection with mentees.^{17,18} The paucity of women and minority mentors in medicine and leadership make forming these spontaneous mentoring relationships difficult for women and minority mentors.^{7,22-27} This may originate from a perceived barrier of mentors to developing personal relationships with women and minorities if they are of differing backgrounds, or potentially be due to implicit bias.²⁸

Our program is similar to mentorship programs of other surgical departments' across the United States in that it is relatively informal with regular meeting between parties being the sole requirement.¹⁶ Phitayakorn et al, implemented a mandatory departmental program with some structured components, and over 75% of their mentees recommended their program to others.²⁰ Unfortunately, they were unable to quantify a significant difference in markers of career advancement between participating mentees and non-participating surgeons. This remains a limitation in most studies on mentoring relationships in surgery. Eby et al performed a meta-analysis of mentoring in a variety of fields and found that although effect sizes are small, the most likely outcome of a mentoring relationship is changing attitudes,

relationships, and involvement, with limited quantifiably change in career outcomes (e.g. promotion, salary).⁹ These changes in career outcomes may exist, but are challenging to quantify without stringent and careful qualitative and quantitative methodologic planning over the course of one's career. Additionally, it may reflect institutional patterns where one's personal involvement and productivity are the key for recognition but do not necessarily lead to promotion.

Our program achieved equal levels of satisfaction between men and women participants. When considering the “leaky pipeline” of losing minority and women faculty members on the climb toward leadership in academic surgery, mentorship has been shown to augment retention.^{29,30} This was supported by our study with some of our participants achieving promotion by participating in this program. Although measurable outcomes of success were not abundant, this program clearly influenced mentor and mentee career and personal satisfaction. Additionally, the implementation of assigned mentorship pairs did result in meaningful relationships between pairs with mentors and mentees that were of differing race, gender, and surgical specialty. This type of structured mentorship program is able to create meaningful relationships in the early career setting and is potentially helpful for women and minority faculty.

The strengths of our study include its longitudinal, and granular data on mentee and mentor perspectives. Limitations of the study include small sample size limiting statistically significant findings and the short-term career-focused nature of the outcomes. We do not know if the survey non-responders participated in the program which may introduce selection bias. A larger sample size and longer follow-up would aid in detecting the impact not only on the program as a whole, but also for women and minority mentees. The academic setting of our department of surgery may also make it difficult to generalize results to non-academic mentorship programs. It is important to note that compulsory departmental mentorship programs may increase participation and incorporation of minority groups but cannot recreate organically formed relationships. Therefore, the optimal long-term method to make mentorship accessible and effective for all is to recruit, hire, and develop a diverse faculty that can serve as mentors to future mentees.

Department-lead mentorship programs it can be difficult to enforce participants to meet. Future iterations of this program may incorporate protected time for meetings and/or incentives such as paid meals during meetings or reimbursement for meeting time. Participants also noted difficulty in navigating the mismatch of specialties, which has been cited in prior studies.²⁰ While this was initially perceived as a barrier, similar to differing gender and race in mentee pairs, mentees may benefit from a perspective outside of their own specialty. To overcome the above barriers, a multi-institutional mentorship program, training of mentors in mentorship skills, and implementing a curriculum for professional development for mentors/mentees at national meetings are potential areas that could improve mentee productivity.¹⁶⁻¹⁸

Conclusions:

Mentorship is a critical component of advancement in academic surgery. While this single institution program's participants did not universally endorse certain tangible results through participation in the mentorship program, most participants felt they personally benefitted from their mentor/mentee relationship. Further investigation on optimizing mentor-mentee training and matching is warranted to maximize the benefits from structured mentorship in academic surgery.

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Highlights:

- Mentorship programs are paramount to success in academic surgery
- We created a mentor/mentee pairing program in the Department of Surgery
- A majority of respondents would recommend the program
- Tangible outcomes may not be the best goal of mentorship programs
- Nontangible outcomes include sharing steps to increase productivity and promotion

Table 1:

Faculty Mentorship Participant Survey

Question	Response Options						
Did you meet with your mentor/mentee?	Yes				No		
How often did you meet?	Biweekly	Monthly	Every 3 months	Every 6 months	Annually	Did not meet	Other
What do you think is the optimal frequency for meeting?	Biweekly	Monthly	Every 3 months	Every 6 months	Annually	Other	
Did you feel that your mentor/mentee was adequately prepared for your meetings?	Yes		No		If not, explain here:		
Were both parties committed to the mentoring relationship?	Yes		No		If not, explain here:		
What topics did you discuss?	Research	Clinical	Leadership	Work/Life Balance	Teaching	Other	
Any additional topics that you think should be a part of the mentor/mentee meeting?							
What tangible results came from your meeting (goals that were achieved, research activity, networking, opportunities, promotion)?							
Would you recommend your mentor/mentee?	Yes				No		
Would you recommend the mentoring program?	Yes				No		
Do you think the mentoring program provided a benefit to you personally?	Yes				No		
Do you think your relationship with your mentor/mentee enhanced your career?	Yes				No		
Will you continue to meet with your mentor/mentee?	Yes				No		
Do you think the mentoring program time commitment (i.e. preparation time, time for meeting) is reasonable to ask from all faculty?	Extremely reasonable	Moderately reasonable	Slightly reasonable	Neither reasonable nor unreasonable	Slightly unreasonable	Moderately unreasonable	Extremely unreasonable
Please provide any additional comments/feedback below:							

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Table 2:

Demographics of study participants n=42

Category	N, (%)
Mentors	23
Mentees	19
Female	14 (33)
Mentors	5/23 (22)
Mentees	9/19 (47)
Rank	
Professor	16 (38)
Associate Professor	5 (12)
Assistant Professor	21 (50)
Departments/Divisions	
Transplant Surgery	8 (19)
Pediatric Surgery	7 (16)
Vascular Surgery	4 (9.5)
Trauma Surgery	4 (9.5)
Breast/Endocrine Surgery	3 (7.1)
Colorectal Surgery	3 (7.1)
GI/Minimally Invasive Surgery	3 (7.1)
Cardiothoracic Surgery	3 (7.1)
Surgical Oncology	3 (7.1)
Plastic Surgery	2 (4.8)
Orthopedic Surgery	2 (4.8)

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Table 3:

Survey responses of participants

Survey Response	Mentors n= 23 n(%)	Mentees n= 19 n(%)	p-value
Met with mentor/mentee	21 (91)	13 (68)	0.53
Met at least every 6 months	8 (34)	7 (37)	0.92
Optimal meeting frequency, at least every 6 months	19 (83)	13 (68)	0.69
Mentor/mentee adequately prepared	19 (83)	10 (53)	0.36
Both parties were committed	17 (74)	11 (58)	0.62
Topics discussed			
Research	19 (83)	13 (68)	0.69
Leadership	16 (70)	6 (32)	0.16
Clinical	15 (65)	4 (21)	0.07
Work/Life Balance	14 (61)	5 (26)	0.16
Teaching	11 (48)	6 (32)	0.48
Tangible results for mentee as a result of program	4 (17)	7 (37)	0.27
Productivity	1 (3.1)	3 (16)	0.25
Promotion	3 (9.4)	2 (11)	0.82
National Committees	0	2 (11)	
Would recommend mentor/mentee	21 (91)	11 (58)	0.35
Personal benefit	14 (61)	10 (53)	0.77
Career enhanced	9 (40)	10 (53)	0.59
Will continue to meet	17 (74)	11 (58)	0.62
Biannual commitment was reasonable	22 (95)	11 (58)	0.29
Would recommend the mentorship program	20 (87)	12 (63)	0.50