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Evaluation of mentors by postgraduate trainees in structured mentoring program

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Abstract

Introduction: In graduate medical education, trainees have different academic and professional growth needs throughout their career, but these needs have not been well studied (Gusic, Zenni, Ludwig & First, 2010). Traditional mentoring programs in many disciplines including medicine, science, law, business and education report individuals with mentors having higher earnings, higher job satisfaction and higher rates of promotion, compared to individuals without mentors (Bussey-Jones et al., 2006; Sambunak, Straus & Marusic, 2010).

Methods: We developed a structured mentoring program in the Department of Medicine in Cooper University Hospital which encourages both academic and professional growth through a major emphasis on academic scholarship. We created a 21 questions survey to evaluate mentee satisfaction towards their assigned mentors. The questions fit into four categories consisting of the mentor's personal attributes and action characteristics and mentee's short term and long term career goals. Sixty junior trainees (Post Graduate Year 1-3) and 39 senior trainees (Post Graduate Year 4-7) completed the survey.

Results and Conclusions: Senior trainees were more satisfied with their mentors' intrinsic qualities (96%) compared to junior trainees (93%), $\chi^2(1, N=980) = 5.72, p=0.017$. Additionally, senior trainees were more satisfied with their mentors' action characteristics (95%) compared to junior trainees (91%), $\chi^2(1, N=677) = 4.03, p=0.045$. Junior trainees had a lower satisfaction rating, compared to their senior colleagues, which might imply that their needs and desires were not properly addressed by their mentors. Both junior and senior trainees identified the lowest satisfaction rates in their mentors' communication skills and ability to challenge them. This was an area of weakness within the mentorship program which requires further research and attention.

Keywords: *Mentoring; Graduate Medical Education; Assessment*

Practice Highlights

- Traditional mentoring programs in many disciplines including medicine, science, law, business, and education report mentees having higher earnings, higher job satisfaction and higher rates of promotion, compared to individuals without mentors (Bussey-Jones et al., 2006; Sambunak et al., 2010).
- There have been many variations to the mentorship framework, but there is a lack in scientific evidence to conclude which aspects of such a program holds the most beneficial characteristics (Bussey-Jones et al., 2006; Gusic et al., 2010).
- The professional and personal development needs for trainees change as they progress in their medical training.
- There is need for faculty development to enhance communication skills between mentor and mentee.

I. INTRODUCTION

Mentoring is an integral part of academic medicine and professional development during graduate medical

education (Sambunak et al., 2010). Traditional mentoring programs in many disciplines including medicine, science, law, business, and education report individuals with mentors having higher earnings, higher

job satisfaction and higher rates of promotion, compared to individuals without mentors (Bussey-Jones et al., 2006; Sambunak et al., 2010). Unfortunately, mentoring in academic medicine is often undervalued and not well studied (Sambunjak et al., 2006). Additionally, while many trainees and faculty form mentoring relationships independently, there is a lack of formal mentoring of postgraduate trainees in medicine (Sambunjak et al., 2006).

In recent years, many different forms of mentoring programs have been established in medical training. Omary et al. (2008) described multi-leveled mentorship as a way of “mentoring the mentors” which allowed for more well-rounded and thorough relationships. Conversely, Bussey-Jones et al. (2006) describes other organizations that established peer-to-peer mentoring programs which replace the claimed hierarchy and exploitation of traditional mentorship with mutual gain and friendship. However, these programs struggled with conflicts of competition to secure funding, publications, and networking opportunities. Gusic et al. (2010) explored the idea of an informal mentorship that allowed flexibility and fluidity in the mentorship, but later found that formal mentorship with structure and expectations was more beneficial than an informal one (Gusic et al., 2010). There have been many variations to the mentorship framework, but there is a lack of scientific evidence to conclude which aspects of such a program holds the most beneficial characteristics. Our mentoring program is designed to foster relationships between faculty and trainees regarding personal, clinical, and career goals. Academic growth is a major emphasis of this program for those trainee physicians who wish to follow an academic career pathway. With this research, we hope to better understand the dynamic between faculty and trainees in graduate medical education. We hypothesize that there will be no difference in satisfaction rates between junior and senior trainees in regards to their respective mentors.

II. METHODS

A. Participants

Participants consisted of 60 junior trainees (PGY 1-3) and 49 senior trainees (PGY 4-7) who were assigned to clinical facility mentors through a formal mentoring program in the Department of Medicine at Cooper University Hospital, Camden, NJ, for the 2013-2014 academic year.

B. Procedure

We have a formal mentoring program to foster relationships between faculty and trainees in Department of Medicine since 2011. PGY1 trainees were assigned a

mentor within the first three months of their internship. Senior trainees were required to seek and identify a professional or academic mentor, preferably across the division and department boundaries. Program Directors and the Division Head of Medical Education helped to identify the mentors and mentees and establish the partnership. A list of mentor/mentee was developed and distributed to all the house staff. Mentor and mentee were required to sign a contract and meet in person for a one hour session at least two times a year at a local restaurant using provided meal vouchers. All meetings between mentor and mentee were recorded in narratives and brief encounter forms. They could continue their relationship outside this program as per their needs.

C. Instrumentation

We conducted IRB approved research by developing an anonymous, structured questionnaire modified based on a validated survey (Archer, Swanwick, Smith, O'Keeffe & Cater, 2013). The survey addressed the quality and satisfaction ratings of the existing mentoring program by identifying 21 areas of mentor qualities and attributes, using a four point agreement scale. The survey questions were grouped into categories that reflected traits which the mentors exhibited or goals which the mentors encouraged. The categories consisted of two competing groups: "personal attributes" versus "action characteristics" and "short-term goals" versus "long-term goals" (Archer et al., 2013) Table 1 lists the questions from the survey and the qualities and traits which correlated with them. Question 6, 11 and 17 from the survey were excluded from data analysis due to low response rates.

D. Data Analysis

We used Chi Square tests for statistical analyses. We also used reliability testing with Cronbach's alpha to be sure that the question for each category was internally consistent. We compared the perception of junior trainees and senior trainees regarding their mentors' personality traits and their mentors' ability to address their long term and short term goals. We also analyzed the difference in satisfaction between trainees with known research interest versus no research interest.

III. RESULTS

When comparing satisfaction rates, senior trainees (PGY 4-7) were more satisfied (96%) compared to junior trainees (PGY1-3) (93%) regarding their mentors' inherent qualities, $\chi^2 (1, N=980) = 5.72, p=0.017$. Additionally, senior trainees were more satisfied (95%) compared to junior trainees (91%) regarding their mentors' actions characteristics, $\chi^2 (1, N=677) = 4.03, p=0.045$. There were no statistical differences in mentor

satisfaction rates irrespective of prior established research interest among trainees. When comparing PGY 1 to PGY 2-7 to identify if there were special needs for the first year junior trainees, there were no differences in satisfaction rates regarding how the mentees perceived their mentors and their career goals. The lowest satisfaction rates among all mentees (PGY 1-7) were regarding their mentors' communication skills and ability to challenge them for their professional growth and career. Of all mentees, 13% did not believe their mentor showed ability to communicate with clinical supervisors and 14% did not believe their mentors adequately coached them on communication skills. Of all mentees,

11. % did not believe their mentor had the ability to take their supervision beyond a tick box exercise and 13. % did not believe their mentor was able to adequately challenge them.

There was strong reliability for each category of questions. The Cronbach's Alpha =.914 for the 9 items measuring "Inherent characteristic". The Cronbach's Alpha =.915 for the 7 items measuring "Action characteristics". The Cronbach's Alpha =.872 for the 4 items measuring "Short-Term". The Cronbach's Alpha =.892 for the 4 items measuring "Long Term".

	Short Term	Long Term	Intrinsic	Action
Q1- Remained up-to-date on your career		X	X	
Q2- Showed genuine interest in your portfolio	X		X	
Q3- Showed enthusiasm			X	
Q4- Approachability			X	
Q5- Ability to inspire you				X
Q6- Ability to seek help from other sources				
Q7- Ability to challenge you				X
Q8- Willingness to act to resolve problems in timely manner	X			X
Q9- Gave constructive feedback				X
Q10- Communication skills		X	X	
Q11- Showed ability to communicate with your clinical supervisors				
Q12- Encouragement towards achieving excellence		X		X
Q13- Ability to take your supervision beyond a tick box exercise				X
Q14- Honesty and integrity			X	
Q15- Ability to assure privacy and confidentiality			X	
Q16- Ability to make time for you	X		X	
Q17- Commitment to rearrange meetings				
Q18 - Interest in you as an individual	X		X	
Q19 - Ability to be your advocate			X	
Q20 - Ability to offer practical tailored advice for your long-term career planning		X		X
Q21 - Overall how do you rate your mentor				

Note: Modified from Archer et al., 2013
Table 1. Evaluation of principal mentor attributes

IV. DISCUSSION and CONCLUSION

With this mentorship program, we hoped to foster the scholarly development of apprentices in graduate programs (Bussey-Jones et al., 2006). From the results of our survey, we see that senior trainees (95%) are more satisfied with their mentors learned skills compared to junior trainees (91%). While a mentor's personal attributes are intrinsic within themselves and their nature, a mentor's action characteristics (learned skills) can be improved through various training sessions and

workshops (Archer et al., 2013). By identifying these areas of weakness and matching them with a plan of action, we can strengthen the mentorship program and provide services to accommodate mentees' needs. Senior trainees (96%) also found more satisfaction in their mentors' intrinsic characteristics than junior trainees (93%). It is possible that senior trainees are closer in maturity and life stage to their mentors or have more in common with their mentors compared to junior trainees. This highlights a potential area of improvement since it

shows trainees have various needs and goals and we need to better address them. This finding warrants additional investigation to further the scope of the current research.

Junior and senior trainees (PGY 1-7) had lowest satisfaction rates regarding mentors' coaching abilities in communication skills (13.5%) and mentors' ability to communicate with clinical superiors (12.5%). Additionally, both junior and senior trainees (PGY 1-7) had the low satisfaction rates regarding mentors' ability to challenge them (13.1%) and their ability to supervise them beyond a checkbox exercise (11.2%). Both of these components, communication and ability to challenge, are relatively teachable qualities, thus mentors might benefit from having educational workshops, which focus on those components of the mentoring experience.

Limitations which we encountered in our study included obtaining data from only one institution and having a small sample size. Additionally, the method with which the junior and senior trainees were matched with their mentors differed, which might impact the satisfaction rates. This was done because junior trainees are not familiar with the program's faculty members and are less certain about which subspecialty they are interested in pursuing, compared to senior trainees.

Mentorship is a dynamic dyad interaction with immediate and long term impact. Establishing a mentor program fosters the scholarly development of apprentices in graduate programs (Sambunjak et al., 2006). Our program consisted of junior and senior trainees who might desire different skills and attributes from faculty mentors depending on their career goals and stage in training. Our aim was to identify areas of our mentor program which needed attention and restructuring to ensure a stronger program for the future. This research will help in developing future faculty development and mentoring programs across graduate medical education.

Notes on Contributors

Dipanshi Patel is a third year medical student at Cooper Medical School at Rowan University. She conducted literature review, assisted with data collection and data analysis, and contributed to the construction of short communications manuscript.

Dr. Namrata Baxi, MD is currently doing her specialty training in Nephrology at Robert Wood Johnson University in New Jersey. She collected and analyzed the data for this research while she was a senior post graduate trainee at Cooper University hospital.

Dr. Abhishek Agarwal, MD is currently a Chief resident at Cooper University hospital in the department of Internal Medicine. He assisted in collecting the data and analyzing it.

Kenyetta Givans is a third year medical student at Cooper Medical School at Rowan University, who contributed to the collection of the data.

Ms. Krystal Hunter, MBA is a statistician at Cooper Research Institute, and has contributed to the statistical analysis of this project. She has a valued interest in medical education research.

Dr. Vijay Rajput is Professor and Chair of Medicine at Ross University School of Medicine. He served as senior mentor for this research study. He has an extensive experience in medical education and has a passion for the holistic development of student and faculty.

Dr. Anuradha Mookerjee is Associate Professor of Medicine at Cooper University Hospital, in the Department of Internal Medicine. She helped in the design and implementation of this study. She has a marked interest in medical education and faculty development.

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Declaration of Interest

There is no conflict of interest, including financial, consultant, institutional or otherwise for any of the authors involved in this manuscript.

References

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- Archer, J., Swanwick, T., Smith, D., O'Keeffe, C., & Cater, N. (2013). Developing a Multisource Feedback Tool for Postgraduate Medical Educational Supervisors. *Medical Teacher*, 35, 245-154.
- Bussey-Jones, J., Bernstein, L., Higgins, S., Malebranche, D., Paranjape, A., Genao, I., Lee, B., & Branch, W. (2006). Repaving the Road to Academic Success: The IMERGE Approach to Peer Mentoring. *Academic Medicine*, 81, 674-679.
- Gusic, M. E., Zenni, E. A., Ludwig, S. & First, L. R. (2010). Strategies to Design an Effective Mentoring Program. *The Journal of Pediatrics*, 156, 174-176.
- Omary, M. B. (2008). Mentoring the Mentor: Another Tool to Enhance Mentorship. *Gastroenterology*, 315, 13-16.
- Sambunak, D., Straus, S. E., & Marusic, A. (2010). A Systemic Review of Qualitative Research on the Meaning and Characteristics of Mentoring. *Journal of General Intern Medicine*, 25, 72-78.
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