



# Mentoring in Graduate Medical Education: A Scoping Review

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## Introduction

- Mentoring in graduate medical education (GME) is a facilitated relationship between a mentor and mentee in order to develop professional and personal characteristics.
- Mentoring may involve education, role-modeling, faculty development, and research development. Scoping reviews accumulate and summarize existing published literature in terms of the volume, nature, and characteristics.
- A systematic review of mentoring in academic medicine acts as a foundation and thus this study reviews articles more recent (from January 2006) to act as an update with the increasing presence of literature on the topic

## Methods

The authors adopted Arksey and O'Malley's (2005) and Levac et al.'s (2010) methodological frameworks and agreed upon six research questions for a scoping review. The authors searched modern literature that exists, and interpreted what has been learned in regards to mentoring in GME.

### Questions include:

1. Benefits of mentoring for trainees in GME?
2. Benefits of mentoring for faculty in GME?
3. Benefits of mentoring for the parent institution in GME?
4. Types of mentoring relationships in GME?
5. Implementation of a mentoring program in GME?
6. Measurement and evaluation of mentoring in GME?

Inclusion and exclusion criteria process was guided by the PICOS style format. Databases searched with key mentoring terms from January 2006 to present in order to find relevant articles: EBSCO and Ovid.

Additional searches will be conducted from reviewing bibliographies of found articles. When analysing articles in each question, if the article was related to a different question it was moved and added to the correct question and re-assessed.

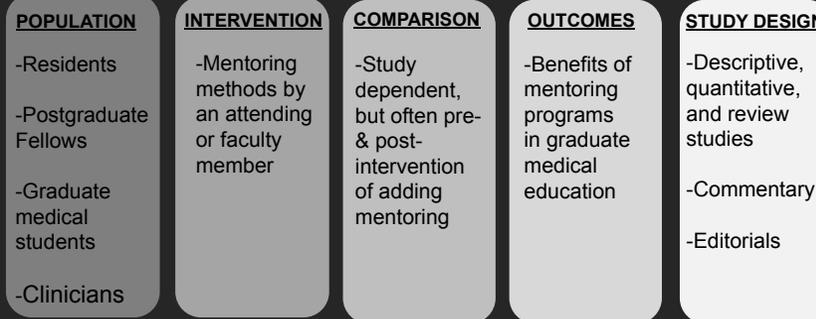


Fig. 1 – PICOS Inclusion and Exclusion Criteria

<sup>1</sup>Excluded: Medical, graduate, undergraduate students, coaches, consultants, advisors, guides/counselors, allied health specialties such as nursing, physiotherapy, etc.

<sup>2</sup>Excluded: Qualitative studies, Case reports

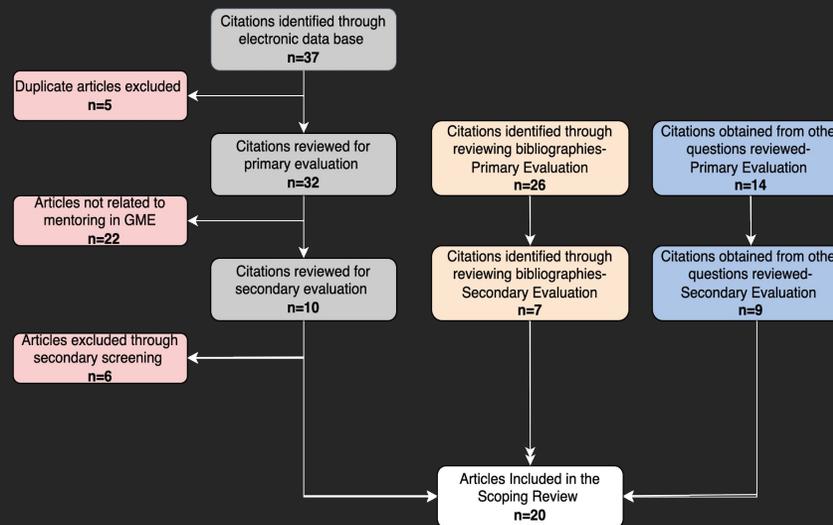


Fig. 2 – Flowchart for Selection of Articles for Question 1. Model will be used for the remaining questions.

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## Results

### QUESTION 1- Benefits of mentoring for trainees in GME?

There were 20 articles included in review of this question. Summary of themes collected from review of question 1 include:

1. **Pursuing Fellowship**- mentorship played the most influential factors in residents choosing subspecialties. Mentors provided guidance, information and motivation in pursuing fellowships.
2. **Career Outcomes**- Residents achieved a number of academic and career milestones such as improvement in exam results, scholarship, success in grant competitions and increased ability to secure promotions.
3. **Support**- residents revealed that having the support of a mentor especially during their transition to residency was highly valued, especially with a huge transition from schooling to work expectations and time requirements.
4. **Emotional and Psychological**- residents reported benefit on an emotional level, with more insight, which created positive psychosocial outcomes

### QUESTION 2- Benefits of mentoring for faculty in GME?

There were 4 articles included in review of this question. Summary of themes collected from review of question 2 include:

1. **McMains**- Increased mentorship has the potential to positively affect career development in military academic military medicine. Results from this study affirm previous reports that effective mentorship potentially represents a powerful tool for faculty retention.
2. **Patel**- Central themes to enhance participants' experience were individualization and flexibility, mutual agreement of the ground rules, and enhanced communication from program leadership.
3. **Alisic**- Discrepancy between whether mentorship, during residency functioned primarily for psychosocial support and whether it should focus on professional guidance. - goals need to be clear
4. **Harrison**- mentorship is a major issue for clinician-educator and research faculty

## Conclusion

Modern literature identified that a mentoring program put in place between mentors and mentees promoted involvement in research, helped obtain career development awards and independent funding, and promoted physicians entering both academic and private practices. Future work will enhance results of the question and more information in regards to all the research questions being asked.

### References:

1. Arksey H, O'Malley L. Scoping studies: Towards a Methodological Framework. *Int J Soc Res Methodol.* 2005;8:19–32. doi: 10.1080/1364557032000119616.
2. Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: advancing the methodology. *Implementation science* : IS, 5, 69. <https://doi.org/10.1186/1748-5908-5-69>
3. Sambunjak, D., Straus, S. E., & Marusic, A. (2006). Mentoring in academic medicine: a systematic review. *JAMA*, 296(9), 1103–1115. <https://doi.org/10.1001/jama.296.9.1103>

\*All articles reviewed are available upon request