

Figure 1: Characteristics of individual papers

No.	Author/ Year	Type of Paper	Undergraduate / Postgraduate	Surgical specialty	Objectives	Key findings	MERSQI	COREQ
1	Konstantakos, A. 2003	Perspective	Postgraduate	Surgery	To propose key aspects of improving the resident/ attending teaching interaction	Overcoming personal biases and having clear communications with housestaff can go a long way in improving the attending-housestaff relationship. Facilitating a collegial interaction between mentor and student is based on sincere appreciation of one another's perspectives.	-	-
2	Flint, J. 2009	Quantitative	Postgraduate	Orthopaedic surgery	To study the prevalence of mentoring among orthopaedic residency programs and its perceived value from the orthopaedic residents' perspective.	Residents with mentors, residents in mentoring programs, and residents who selected their own mentors had higher satisfaction with their mentoring environment than did those with no formal mentoring program. Residency programs should consider establishing formal mentorship programs and encourage	10	-

						residents to select their own mentors.		
3	Tsai, P. 2016	Perspective	Postgraduate	Cardiothoracic Surgery	To guide young surgeons who have completed their training on seeking a mentor and being a good mentee	In a mentor-mentee relationship, the mentee needs to be the active one to seek, identify, cultivate, and develop the relationship.	-	-
4	Berman, L. 2008	Quantitative and qualitative	Undergraduate	General surgery and multiple surgical subspecialties	To identify those aspects of the medical student clerkship that are associated with medical students expressing an interest in surgery at the end of the clerkship.	Students who participate actively in the operating room and those who are exposed to positive role models are more likely to be interested in pursuing a career in surgery. To optimize students' clerkship experiences and attract top candidates to the field of surgery, clerkship directors should encourage meaningful engagement of students in the operating room and facilitate mentoring experiences.	11	12
5	Sachdeva, A. 2014	Descriptive	Postgraduate	Surgery	The American College of Surgeons (ACS) Division of	Key issues raised during the conference included:	-	-

					<p>Education partnered with the Accreditation Council for Graduate Medical Education (ACGME) to convene a National Invitational Conference to define key issues relating to the transition to surgical practice and develop recommendations to address various challenges.</p>	<ol style="list-style-type: none"> 1. The need to focus on the transition to practice within the context of the continuum of professional development 2. Definition of specific levels of knowledge and skills expected of graduating surgery residents 3. Development and adoption of competency-based methods for training, assessment, and advancement of residents 4. Implementation of special interventions during the chief resident year to prepare residents for practice 5. Robust evaluations of residents before graduation 6. Intake assessments of junior surgeons during the onboarding processes 7. Effective mentorship for 		
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						<p>junior surgeons as they enter practice.</p> <p>8. Major regulatory, legal, and financial issues.</p>		
6	Thakur, A. 2001	Quantitative	Postgraduate	Multiple surgical specialties	<p>To survey graduates of a university general surgical residency training program to determine factors that influenced their selection of a specialty field.</p>	<p>Surgical residents use many criteria in selecting a field of specialty with mentor guidance an important component.</p> <p>Other factors include interest in the field, perception of prestige, presence of clinical opportunity, and family priorities.</p> <p>Knowledge of these influential areas should help training programs offer appropriate career guidance.</p>	9.5	-
7	Holt, G. 2008	Perspective	Postgraduate	Facial Plastic and Reconstructive Surgery	<p>To formulate the ideal attributes for mentors and suggest past and current educators who exhibit these characteristics by example.</p>	<p>Mentors should have the following ideal traits –</p> <ol style="list-style-type: none"> 1.integrity, 2.compassion, 3.character, 4.humility, 5.creativity, ingenuity and scientific curiosity, 6.dedication, 	-	-

						7.leadership, 8.humour, 9.military service, 10.humanism, humanitarianism and ethics, 11.excellence, 12.faith and 13.courage		
8	Birch, D. 2007	Quantitative	Postgraduate	General surgery	To analyse the effect of mentoring on a single institution's advanced minimally invasive surgery (MIS) practice.	<p>A total of 7 general surgeons were mentored at 1 site. After 1 year of intense mentoring, the number of surgeons completing >12 cases/y increased from 2 to 4, and the number of advanced MIS cases completed (excluding mentored ones) increased from 35 to 102. Fifty-three cases (52% of total) were formally mentored.</p> <p>The authors believe their data demonstrate that a mentorship program is an effective strategy for safely introducing advanced MIS into practice.</p>	12.5	-

9	Jaffer, U. 2010	Quantitative	Postgraduate	General surgery	<p>Mentoring is advocated as an essential adjunct in work-based learning providing support in career and noncareer related issues. This study aims to investigate trainee experiences and satisfaction with mentoring arrangements.</p>	<p>Of all respondents, 62.85% stated that they were not sure or did not have a mentor. Of those with a mentor, only 31.43% were satisfied with mentoring. Factors affecting satisfaction with mentoring included having had a meaningful meeting, having clear objectives set, and help in job transition and non-career related issues. Knowledge of a mentor's responsibilities was also associated with satisfaction. The only factor associated with the presence of a mentoring relationship was having a mentor appointed.</p> <p>The authors advocate the establishment of a mentoring matching scheme for mentors and mentees together with mentor training to improve mentoring provision for surgical trainees.</p>	11.5	-
10	Rashid, P. 2015	Literature review	Postgraduate	Surgery	This paper reviews the comparative	The surgical trainee requires multifaceted role	-	-

					<p>roles of the supervisor and mentor and how they overlap, while exploring the impact of the 'unknown' mentor.</p>	<p>models who can act as a supervisor, demonstrating both surgical techniques and daily clinical skill, as well as a mentor, who can guide them on a personally satisfying career path and a suitable work-life balance within the unique parameters of surgical demands.</p> <p>A structure by higher education institutions to foster mentoring by providing educational upskilling is an unmet need.</p> <p>The unknown mentor does not have a formal role in the mentee's professional life but takes a more independent 'global' approach in the background; guiding, nurturing and helping the mentee evolve.</p>		
11	Cloyd, J. 2008	Quantitative and qualitative	Undergraduate	Preclerkship medical students	To review the results of a new clinical elective created, in which preclerkship medical students	Although most students reported the operating room to be a comfortable learning environment in which they were actively	12	17

					<p>were assigned a surgical mentor and invited into the operating room to assist in surgeries.</p>	<p>included, students consistently underrated their performance and contribution to the surgical team compared with the surgeons' and nurses' ratings.</p> <p>With 75% of students who reported using a previously learned surgical skill during each surgery, this elective succeeded in allowing preclerkship medical students the opportunity to participate actively in the operating room.</p> <p>In conclusion, early surgical exposure is critical for attracting student interest in careers in surgery.</p>		
12	Toledo-Pereyra, L. 2009	Perspective	Postgraduate	Surgery	<p>To improve understanding of mentoring and propose some specific new ways to characterize mentoring specifically within the surgical sciences.</p>	<p>The qualities of a good mentor should include respect, time, commitment, trust, determination, encouragement, patience, and opportunity for independence.</p>	-	-

						<p>The mentee would need to respond to similar virtues of trust, encouragement, and respect.</p> <p>The reciprocal consideration of equally divided roles would be clearly desirable.</p> <p>Recognizing the importance of a good mentor and making this role the priority of medical schools would enhance our ability to form better professionals.</p>		
13	Lin, S. 2013	Quantitative	Postgraduate	Otolaryngology surgery	To compare faculty and trainees' perceptions of their mentorship experience in otolaryngology training programs in order to identify areas where improvements could yield more productive mentorship.	Forty-eight trainees (72%) and sixty-one faculty members (73%) completed the survey. Faculty and residents (> 80%) agreed that career planning was the most commonly addressed topic in mentorship sessions. However, faculty and residents differed in their perceptions of providing mentorship in other areas including clinical judgment (P=0.003). The majority of	13.5	-

						faculty (56%) felt that formal mentorship training would improve their mentorship skills. While 95% of mentees agreed that their mentor is accessible, only 46% of faculty believed they have enough time to dedicate to mentoring ($P<0.001$).		
14	Burlew, C. 2017	Perspective	Postgraduate	Surgery	Explore the parallel nature of parenting and surgical education.	Specific lessons from parenthood that can be applied to surgical education include: providing a framework, learning through graduated responsibility, communicating expectations, creating a culture, setting the example, encouraging resilience, promoting autonomy, providing feedback, and navigating failure.	-	-
15	Tornetta III, P. 2016	Descriptive	Postgraduate	Orthopaedic surgery	To explore how personality assessment can help mentoring relationships in	Personality assessment can enhance the mentoring relationship by evaluating the protege or trainee in terms of both positive and negative traits, drivers, and	-	-

					<p>orthopaedic surgical training.</p>	<p>potential pitfalls, helping the mentor focus his or her efforts on specific areas.</p> <p>It can provide a guide for addressing problems, and become an additional tool in the training process.</p>		
16	Memon, B. 2010	Literature review	Postgraduate	Surgery	<p>To reflect on the failure to recognise the formal role of mentoring and learner support in surgical training, to explore the reasons for apathy towards mentoring in surgical training and why the attitudes toward mentoring remain casual and lukewarm.</p>	<p>Dedicated mentoring programs and mentoring schemes especially during surgical training must be introduced as a priority.</p> <p>Mentoring is about transition, change and transformation. Therefore, the mentoring schemes need to address a wide range of issues— purpose, evaluation, future recruitment and selection, training, development, matching, supervision and standards.</p> <p>The overall goal for these schemes is to have a positive impact both on the trainee and the organisation.</p>	-	-

						Various stakeholders, in particular the universities need to initiate and support a project dedicated to mentoring and its various facets, to learn valuable lessons on the benefits of this process.		
17	Nguyen, S. 2007	Quantitative	Undergraduate	3rd year surgical clerkship	To explore students' views regarding surgical mentors, specifically examining their association of mentoring qualities with their resident teachers.	Role models are crucial in bolstering medical students' interest in surgical careers. In this study, students identify residents with many of the qualities essential to an outstanding mentor. Efforts should be made to foster the student-resident mentoring relationship as an adjunct to the efforts made by attending surgeons.	10.5	-
18	Sanfey, H. 2013	Literature review	Postgraduate and undergraduate	Surgery	To discuss strategies for building effective mentoring relationships and outline some of the challenges to contemporary mentoring.	Mentees should be eager to learn and be open to feedback and critique. Mentors are essential in assisting individuals to make successful transitions such as from student to	-	-

						<p>resident or resident to junior faculty member.</p> <p>It is important for mentors and mentees to set ground rules on the first meeting.</p> <p>Challenges to effective mentoring include misunderstandings between mentors and mentees of different genders or race, time constraints, lack of research funds and infrastructure.</p> <p>A bad mentor may misinterpret a mentee's potential, fail to define appropriate professional and personal limits, or even take credit for the mentee's work.</p>		
19	Thoma, A. 2008	Literature review	Postgraduate	Plastic surgery	The purpose of this article is to help residents, fellows, and junior faculty who aspire for an academic career, and seasoned plastic surgeons who may wish to have a	<p>The main preconditions for academic success include:</p> <ol style="list-style-type: none"> 1. Mentoring 2. Periodic priority lists 3. Time management 4. Methodological training 5. Balancing family life and work 	-	-

					second “lease on life,” to become successful clinical investigators.			
20	Britt, R. 2017	Quantitative and qualitative	Postgraduate	Surgery	This study assesses a surgical speed-mentoring program at the 2015 American College of Surgeons (ACS) Clinical Congress.	Appropriate matching of the mentor and mentee is a critical component for perceived success of the mentoring relationship. The speed-mentoring format allows mentees to briefly interact with potential mentors, allowing them the ability to pursue mentorship from an individual with whom there is a certain degree of chemistry.	10	11
21	Gurgel, R. 2010	Quantitative	Postgraduate	Otolaryngology surgery	The objective was to determine the current state of mentoring in otolaryngology training programs and describe resident perceptions of mentoring.	The authors recommend structured mentoring programs to be implemented for residents, regardless of residency size. Mentors should meet with residents on a regular basis, have clearly defined guidelines, and have the opportunity to both give and receive feedback.	12	-

						<p>This relationship should be established early in residency, and residents should have input into their choice of mentors.</p> <p>Lack of established mentorship guidelines results in significant differences between mentorship programs and may be an impediment for departments without a program to establish one.</p>		
22	Healy, N. A. 2012	Quantitative	Postgraduate and undergraduate	Surgery	The aim of this survey was to elucidate medical students' and surgical trainees' experiences of role models and to determine how mentoring works in practice. The authors also set out to identify traits associated with successful role models and mentors.	<p>There is a lack of a deliberate approach to mentoring in surgery and the presence of an excess of negative role models.</p> <p>This survey illustrates that both surgical mentors and role models represent 2 important approaches toward enticing students into surgical training and ultimately shape them and current trainees into our future surgeons.</p>	11	-
23	Zakrison, T. 2017	Quantitative and qualitative	Postgraduate	Trauma surgery	To determine if the Eastern Association	Mentoring is a beneficial tool to promote success	10.5	18

					for the Surgery of Trauma (EAST) Mentoring Program has met its goals of fostering academic and personal growth in young acute care surgeons.	among EAST's young members, but differences exist between mentee and mentor perceptions. Achievement of program goals may be limited by discordant perceptions of goals between mentees and mentor as a result of interpersonal communication difficulties within mentoring dyads, as well as need for more programmatic structure and enhanced mentor training.		
24	Kibbe, M. 2016	Quantitative	Postgraduate	Surgery	To characterize the status of mentorship programs in departments of surgery in the United States, including the roles of all 4 key stakeholders (the mentor, the mentee, the department, and the institution).	The presence and structure of mentorship programs in departments of surgery across the United States are highly variable with respect to the pairing of mentors with mentees, commitment to the relationship, training provided, and recognition by all 4 key stakeholders.	9.0	-
25	Patel, V. 2011	Literature review	Postgraduate	Surgery	This article aims to: 1. delineate the	The authors developed a 10-stage approach for	-	-

					<p>concept of mentorship in surgery</p> <p>2. identify the attributes of surgical mentors</p> <p>3. Provide recommendations to develop mentor-mentee relationships at an individual, faculty and organizational levels</p> <p>4. consider future challenges of mentoring in modern surgery.</p>	<p>surgical mentoring:</p> <p>1.establish a clear purpose</p> <p>2.gain visible senior support</p> <p>3.define the mentoring process to all involved</p> <p>4. Understand the cost implications</p> <p>5.identify mentors and mentees</p> <p>6. Clearly define their responsibilities</p> <p>7. Create a learning contract</p> <p>8. Match mentors and mentees</p> <p>9. Train the mentors and mentees</p> <p>10. Evaluation of mentoring scheme</p>		
26	Barker, J. 2016	Quantitative	Undergraduate	Plastic surgery	<p>This study evaluates mentorship in plastic surgery from the mentee's (medical student) perspective.</p>	<p>Mentees prefer frequent, one-on-one interactions over less frequent interaction or group activities. Students did not prefer "assigned" relationships (91%), but did prefer "facilitated exposure."</p> <p>Discrepancy between preference and actual</p>	12	-

						<p>occurrence was found, with e-mail being the most common type of communication despite the fact that mentees generally preferred in-person meetings</p> <p>Major barriers to mentorship included mentor time constraints and lack of exposure to plastic surgery.</p>		
27	Janis, J. 2016	Quantitative	Undergraduate	Plastic surgery	<p>This study evaluates mentorship of plastic surgery medical students from the mentor's (attending surgeon) perspective.</p>	<p>Mentors generally favored group activities although scheduled, one-on-one meetings were the most preferred form of interaction.</p> <p>The most common barriers included mentor time constraints and lack of exposure to medical students.</p> <p>The authors propose the following suggestions on medical student mentorship in plastic surgery:</p> <ol style="list-style-type: none"> 1. provide early exposure 	11.5	-

						2. provide formal opportunities for career exploration 3. tailor the content of interactions toward personal and career development 4. investment of time		
28	Franzblau, L. 2013	Literature review	Postgraduate and undergraduate	Plastic surgery	The aims of this article are to demonstrate key aspects of effective mentoring in academic plastic surgery, show institutions how to cultivate mentoring relationships among their faculty and trainees, and provide direction for how to optimize the future use of mentoring to best prepare the next generation of plastic surgeons.	Mentors not only facilitate their protégés' entrance into the field and future success, but can also attract medical students and residents to careers in research and reduce the racial and gender discrepancies in plastic surgery and academia. Ideally, faculty should undergo some form of training before they enter mentoring relationships. This will ensure that they are aware of their specific duties as mentors, are able to communicate with mentees, and can avoid potential pitfalls.	-	-
29	Caine, A. 2017	Quantitative	Postgraduate	General surgery	The authors describe a system for mentor-mentee	"Speed dating" is a novel approach to forming mentorship pairings and	11.5	-

					<p>pairing referred to as “Speed Dating for Mentors” (SDM).</p>	<p>identifying mentors/mentees with similar interests. Residents who attended the event were satisfied with the event and with the outcome of their mentor/mentee pairing.</p> <p>An ancillary benefit of the SDM event beyond creating mentor-mentee pairs was that it immersed and introduced the new residents to almost the entire existing residency.</p>		
30	Entezami, P. 2012	Systematic review	Postgraduate	Surgery	<p>This review systematically examines the literature regarding mentor–mentee relationships in surgery.</p>	<p>A mentor–mentee relationship requires commitment from the mentee as well as the mentor to make the relationship successful.</p> <p>Several barriers to effective surgical mentoring were identified, namely time constraints, lack of qualified mentors and female mentors, generational and cultural differences.</p>	-	-

						By focusing on the positive traits found in this review, for example, developing formal programs to alleviate time constraints, these barriers can be overcome and effective mentor–mentee relationships can be built.		
31	Hay, D. 2015	Systematic review	Postgraduate	Urology	The objectives of this review were to identify and evaluate the efficacy of mentorship programmes for minimally invasive procedures in urology and give recommendations on how to improve mentorship.	1:1 mentor to mentee ratios allow for personalised and flexible teaching that can focus on specific difficulties but is time and effort consuming. Tele-mentoring allows dissemination of an expert’s knowledge without meeting face to face.	-	-
32	Healy, N. A. 2012	Literature review	Postgraduate	Surgery	A number of studies have highlighted the importance of positive role models and mentors in influencing medical students’ ultimate career decisions. This article sought to review the relevant	Mentors negatively impact personal development of mentees by threatening, taking credit, taking over, imposing influence, and assuming the role of problem solver. Mentorship is a process that can be learned and	-	-

					<p>literature in relation to mentors and role models in surgery.</p>	<p>mentors should be given appropriate time and funding to develop their communication, time management, negotiation, presentation, and teaching skills.</p> <p>Peer group and mosaic mentoring supplement novice mentoring.</p>		
33	Patel, M. S. 2018	Quantitative	Postgraduate	General Surgery	<p>The Accreditation Council for Graduate Medical Education mandates resident physician training in the principles and applications of research. To provide a robust early foundation for effective engagement in scholarship, we designed a novel clinical scholarship program (CSP) for PGY1 general surgery residents.</p>	<p>Insufficient mentorship, challenges establishing a mentor-mentee relationship, limited clinical research infrastructure and the inability to cope with clinical responsibilities and duties pose as barriers to mentorship.</p> <p>An Annual Award was established to recognize Excellence in Clinical Research Mentorship, which incentivises faculty to serve as mentors.</p>	12	-

34	Yi, S. 2018	Qualitative	Postgraduate	Surgery	Our study examines the experiences of both female surgeons and their male counterparts in Rwanda to provide a window into critical decision points that shape career paths. This may help improve policies and programs for supporting women to contribute to the global surgical workforce.	Empowered mentoring is a key factor in career support and success. To enhance numbers of female surgeon mentors, networks for connecting female faculty with regional and international surgical women's groups can be established.	-	19
35	Stephens, E. H. 2018	Quantitative	Postgraduate	Cardiothoracic Surgery	This paper seeks to answer the following questions: Who are mentors to trainees? What traits do these mentors bring and how do they specifically affect residents? What characteristics are residents looking for in mentors, what do they find, and what gaps in mentorship remain?	Mentorship challenges frequently encountered include time limitations, undefined goals, and lack of chemistry or a personal relationship. There is a need to tailor mentorship to the individual and changing needs of the resident, possibly through seeking multiple mentors.	12	-

36	Carter, S. 2018	Qualitative	Postgraduate	Orthopaedic Surgery	The aim of this study is to identify barriers in completing research by the Victorian and Tasmanian Region Australian Orthopaedic Association (AOA) surgical education training (SET) trainees.	Lack of mentor, lack of access to resources and funding and insufficient time pose as barriers to the research process.	-	10
37	Janko, M. R. 2018	Quantitative	Postgraduate	Vascular Surgery	This paper sought to understand factors associated with burnout identified in vascular surgery trainees.	Lack of formal mentoring programs lead to increased chances of burnout in trainees.	11	-
38	Solaja, O. 2018	Quantitative and qualitative	Postgraduate	Urology	The objective of this study was to understand the experiences, attitudes, and barriers that surgical residents face when pursuing research during their training.	Lack of supportive mentorship and protected time pose as significant barriers to residents in gaining research competencies.	11	9
39	Leschke J. M. 2018	Quantitative	Postgraduate	Neurosurgery	This study allows students applying to	This analysis emphasizes	7.5	-

					neurosurgery residency and their mentors to be aware of which baseline objective factors are associated with match success.	the importance of number of contiguous ranks, USMLE Step 1 and 2 scores, research projects, AOA status, and medical school top 40 NIH funding, all of which reached statistical significance in our analysis for U.S. graduates.		
40	Morganstern, B. 2018	Quantitative	Postgraduate	Pediatric Urology	This paper investigated factors that helped recent fellows achieve a successful match and sought to understand the influences in pursuing a career in pediatric urology.	Pediatric urology fellows have the potential to become near-peer mentors to students and residents through greater education and directed interactions.	11.5	-
41	Oladeji L. O. 2018	Quantitative	Postgraduate	Orthopaedic Surgery	Mentorship is an important component of graduate medical education. The purpose of this study was to assess orthopedic resident attitudes regarding mentorship and to	Majority of residents preferred a nonrequired mentorship program that allowed them to pursue a mentor who was more relatable, available and in an area of interest. Minorities were less likely to have multiple mentors	10.5	-

					determine if there were sociodemographic differences.	due to limited diversity and were more likely to be dissatisfied with the quality of mentorship.		
42	Haggerty, S. 2018	Quantitative	Postgraduate	Surgery	Using simulation can help surgical trainees acquire surgical skills but at the expense of clinical learning time. We postulate an in-rotation skills curriculum is feasible and minimizes time away from clinical experiences.	Allocating 2 hours of weekly protected time for mentoring, assessment and practice improves performances of surgical trainees	14.5	-
43	Hajjar-Nejad, M. J. 2018	Descriptive	Postgraduate	General Surgery	This paper aims to measure resident perceptions of an individual versus team-based QI project approach with the projects in line with the American Council for Graduate Medical Education competencies.	Increasing demand on resident time, challenges associated with duty hour restrictions, lack of adequate faculty mentorship and financial support pose as barriers to resident involvement. Performance improvement and continuing medical education credits can serve as incentives for faculty and resident participation.	-	-

44	Ting, D. S. J. 2018	Quantitative	Postgraduate	Ophthalmology	This article sought to examine the research attitudes and perceived barriers to conducting research of ophthalmology trainees in the North East of England.	Lack of time and lack of mentoring were common barriers to conducting research.	12	-
45	Luc, J. G. Y. 2018	Quantitative	Postgraduate	Surgery	This study serves to characterize the usage and role of social media in the mentorship and networking of surgeons. The second purpose of this study is to explore respondent perceptions regarding a need for same-sex mentors, current patterns of same-sex mentoring, and the role of social media in such mentorship relationships.	<p>Social media serves as a valuable tool to enhance the networking and mentorship of surgeons, particularly for women in surgical specialties who may lack exposure to same-sex mentors at their own institution.</p> <p>Beyond individual mentorship, social media has the potential to establish a community of mentors for mentees with expertise to aid multiple areas or stages of their career and to provide the opportunities and experiences to reach their full potential.</p>	7	-

46	Deal, S. B. 2018	Literature review			To evaluate the success of the annual program evaluation process and describe the experience of a Program Evaluation Committee for a General Surgery residency program.	Appointing mentors for each resident participating in research and providing faculty development opportunities allows general surgery residency programs to achieve better outcomes.	-	-
47	Sutton, P. A. 2017	Qualitative	Unspecified	Surgery	Excellent surgical trainers play a key role in teaching, mentoring and inspiring the next generation of trainee surgeons. This paper aims to identify traits of the best trainers and see if these attributes could be used to develop recommendations on how to train and how to support trainers.	Effective training should be given to equip mentors with better tools to develop the next generation of surgeons. Support and sufficient allocated time and resources should be given to mentorship. Mentors should refrain from bullying and undermining behaviour and should protect trainees from any bullying.	-	5
48	Lindeman, B. 2018	Quantitative	Postgraduate	Surgery	The purpose of this study is to identify and describe academic surgical clinician educators (SCEs) in	Successful educational programs address limited training, expertise in assessment and mentorship through faculty development activities and	12	-

					international graduate medical education systems, characterize their perceptions of roles, preparedness, and factors affecting job satisfaction and retention.	mentorship programs. necessary to ensure a competent academic surgical faculty. A lack of female role models and gender bias pose barriers to women in academic surgery.		
49	Yang, C. 2018	Quantitative	Undergraduate	Laprosco pic Surgery	The aim of this randomized study is to assess the transferability of surgical skills between two laparoscopic abdominal procedures using the virtual reality simulator in surgical novices.	Mentoring is an important aspect of professional development of surgical trainees which helps mentees obtain greater skill acquisition and mitigates the lack of time in training curriculums.	16	-
50	Montero, P. 2012	Quantitative	Postgraduate	General Surgery	This paper seeks to achieve a review of the authors' experience in selecting, mentoring, and transitioning preliminary residents in an academic general surgery residency program.	A structured mentoring program and efficient utilisation of resources is critical in placement of residents. Discussion of timelines, goals and analysis of academic portfolio was done in a preliminary	13.5	-

						meeting to facilitate the subsequent mentorship process.		
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