in-depth assessment. Either way, an analysis such as the one Silvestre et al. have performed can help ensure that the inevitable bias is a good bias.

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Analysis of References on the Plastic Surgery In-Service Training Exam

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Background: The Plastic Surgery In-Service Training Exam is a knowledge assessment tool widely used during plastic surgery training in the United States. This study analyzed literature supporting correct answer choices to determine highest yield sources, journal publication lag, and journal impact factors.
Methods: Digital syllabi of 10 consecutive Plastic Surgery In-Service Training Exam administrations (2006 to 2015) were reviewed. The most-referenced articles, journals, and textbooks were determined. Mean journal impact factor and publication lag were calculated and differences were elucidated by section.
Results: Two thousand questions and 5386 references were analyzed. From 2006 to 2015, the percentage of journal citations increased, whereas textbook references decreased ($p < 0.001$). *Plastic and Reconstructive Surgery* was cited with greatest frequency (38.5 percent), followed by *Clinics in Plastic Surgery* (5.6 percent), *Journal of Hand Surgery* (American volume) (5.1 percent), and *Annals of Plastic Surgery* (3.8 percent). There was a trend toward less publication lag over the study period ($p = 0.05$), with a mean publication lag of 9.1 ± 9.0 years for all journal articles. Mean journal impact factor was 2.3 ± 4.3 and lowest for the hand and lower extremity section (1.7 ± 2.8; $p < 0.001$). The highest yield textbooks were elucidated by section.
Conclusion: Plastic surgery faculty and residents may use these data to facilitate knowledge acquisition during residency. (*Plast. Reconstr. Surg.* 137: 1951, 2016.)

Questions on the Plastic Surgery In-Service Training Exam are written by committee members of the American Society of Plastic Surgeons and administered to residents and practicing surgeons in the United States. For residents, the Plastic Surgery In-Service Training Exam affords an opportunity for self-evaluation against a national norm and preparation for the boards.[1] For practicing surgeons, the Plastic Surgery In-Service Training Exam affords 30 continuing medical education credits and the opportunity to stay up-to-date with the latest advances in plastic surgery.[2] Trainees reasonably infer that tested material reflects the *Society*'s vision for core curriculum training in plastic surgery. Given its ubiquitous presence among training programs in the United States, the Plastic Surgery In-Service Training Exam has emerged as a cornerstone in plastic surgery resident education.

Nevertheless, despite its relevance to plastic surgery education, the Plastic Surgery In-Service Training Exam is understudied. Insights into the references recommended by question writers may be useful for faculty, residents, and test-takers. In addition, a list of classic articles, high-yield journals, and textbooks may be useful for curricular design and independent study.

The American Council for Graduate Medical Education defines medical knowledge as a core

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Table 2. Articles Referenced at Least Five Times

Article Title	Author(s)	Journal	Year	No. of References
Reconstruction of acquired scalp defects: An algorithmic approach[6]	Leedy et al.	PRS	2005	8
Acute burns[7]	Kao and Garner	PRS	2000	7
Classification and management of gynecomastia: Defining the role of ultrasound-assisted liposuction[8]	Rohrich et al.	PRS	2003	7
"Components separation" method for closure of abdominal-wall defects: An anatomic and clinical study[9]	Ramirez et al.	PRS	1990	7
Practice advisory on liposuction[10]	Iverson and Lynch	PRS	2004	7
Free flap reexploration: Indications, treatment, and outcomes in 1193 free flaps[11]	Bui et al.	PRS	2007	6
MOC-PS(SM) CME article: Liposuction[12]	Iverson and Pao	PRS	2008	6
Otoplasty[13]	Janis et al.	PRS	2005	6
Prevention of venous thromboembolism in the plastic surgery patient[14]	Davison et al.	PRS	2004	6
Conservative approaches to lymphedema treatment[15]	Rinehart-Ayres	*Cancer*	1998	5
Current management of hemangiomas and vascular malformations[16]	Marler and Mulliken	CPS	2005	5
Evidence-based patient safety advisory: Liposuction[17]	Haeck et al.	PRS	2009	5
Hemangiomas and vascular malformations in infants and children: a classification based on endothelial characteristics[18]	Mulliken and Glowacki	PRS	1982	5
Learning from a lymphedema clinic: An algorithm for the management of localized swelling[19]	Garfein et al.	PRS	2008	5
Long-term outcomes and complications associated with brachioplasty: A retrospective review and cadaveric study[20]	Knoetgen and Moran	PRS	2006	5
MOC-PSSM CME article: Face lifting[21]	Stuzin	PRS	2008	5
Nasal reconstruction-beyond aesthetic subunits: A 15-year review of 1334 cases[22]	Rohrich et al.	PRS	2004	5
Patient safety in the office-based setting[23]	Horton et al.	PRS	2006	5
Staged skin and subcutaneous excision for lymphedema: A favorable report of long-term results[24]	Miller et al.	PRS	1998	5
Timing of presentation of the first signs of vascular compromise dictates the salvage outcome of free flap transfers[25]	Chen et al.	PRS	2007	5
Vascular anomalies: Current overview of the field[26]	Greene	CPS	2011	5

PRS, *Plastic and Reconstructive Surgery*; CPS, *Clinics in Plastic Surgery*.

Two hundred ninety-two unique textbooks were referenced, and the highest yield textbooks are listed in Table 4.[27–32] In total, the most-referenced textbooks were *Plastic Surgery* by Mathes et al. [154 of 1285 (12.0 percent)], *Green's Operative Hand Surgery* [153 of 1285 (12.0 percent)], and *Grabb and Smith's Plastic Surgery* [136 of 1285 (10.6 percent)]. The largest percentage of questions were supported by *Plastic Surgery* by Mathes [141 of 2000 (7.1 percent)], *Green's Operative Hand Surgery* [140 of 2000 (7.0 percent)], and *Grabb and Smith's Plastic Surgery* [133 of 2000 (6.7 percent)].

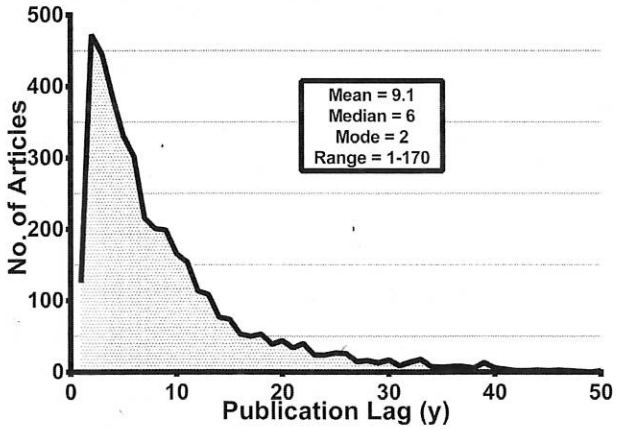

Fig. 2. Frequency plot of publication lag for journal references.

DISCUSSION

Plastic surgery residents must obtain sufficient knowledge to pass the written and oral board examinations during training. During this time, the American Council for Graduate Medical Education mandates that residents receive regular competency assessment of medical knowledge.[3] This study suggests that regular review of recent articles (<10 years) in *Plastic and Reconstructive Surgery* may help prepare residents for the Plastic Surgery In-Service Training Exam. Furthermore, review of high-yield textbooks in plastic surgery may have utility for Plastic Surgery In-Service Training Exam preparation (Table 2). For the hand and lower extremity section, *Green's Operative Hand Surgery* was the overwhelming favorite for question writers. Together, these data may help optimize curricular design and independent study for plastic surgery residents.

Over the past decade, the Plastic Surgery In-Service Training Exam demonstrated a trend toward fewer textbook references and more