Do Letters of Recommendation Predict Residency Match Rank Order List

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Learner Audience: Anesthesiologists, other physicians and medical educators.

Background: Selection of applicants for residency training who will ultimately become the most capable physicians is important to society. Like other medical specialty training programs, anesthesiology programs endeavor to meet this responsibility. It is not clear what criteria should be used to stratify applicants for anesthesiology residency training. Letters of Recommendation (LOR) and United States Medical Licensing Examination (USMLE) scores are required by specialties which use the Electronic Residency Application Service (ERAS; Association of American Medical Colleges, Philadelphia, Pennsylvania).

Whether LOR are a valid predictors of resident performance has recently come into question. If no correlation exists between evaluation of LOR and the final match rank order list of residents submitted by residency programs, then consideration should be given to either establishing criteria for LOR which are valid and reliable, or letters of recommendation should be eliminated from the application process. The primary goal of this research project is to determine if there is a correlation between letters of recommendation and how applicants are ranked on the final match rank order list.

Hypothesis: Letters of recommendation do not predict final match list ranking and are therefore not a useful assessment tool.

Method Designs: After approval by the Institutional Review Board, the ERAS files and final match rank order list for the 2008 applicant class to an anesthesiology residency program at a large academic medical center were obtained. There were 612 applications. Of these, 120 were selected for interview. Of those interviewed, 65 files were randomly selected for study. USMLE scores and three LOR were obtained from each file. The LOR were de-identified and provided to two experienced attending anesthesiologists for evaluation. Each LOR was read by both attendings and scored as to the quality of the applicant being referenced in the letter. The scale employed was superior, above average, average, below average, poor. Each letter was scored per the attending anesthesiologists own discretion. No rubric was provided.

Correlations were determined between individual reviewer's LOR scores and the final match rank order list as well as between USMLE scores and final match rank order list. Correlation between USMLE and LOR scores were also determined. Finally, inter-observer reliability was determined between each reviewing anesthesiologist's scores for the LOR.

Outcome: There was no correlation between either reviewing anesthesiologists scoring of the LOR and final match rank order list. There was no correlation between the applicant's averaged part I & II USMLE scores and the final match rank order list. For LOR scoring, the scale of superior, above average, average, below average, poor was transposed into ordinal data with 5=superior and 1=poor. On this scale, mean LOR scores for reviewer 1 was 4.574 with a SD of 0.443; and reviewer 2 mean LOR score of 3.897 with a SD of 0.586. There existed a mild statically significant inter-rater reliability of r = 0.418, p=0.001 for scoring of the letters. (FIGURE 1).

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FIGURE 1

Variable 1	Variable 2	Pearson Correlation	Probability Level
MUSMLE Score	FMRO	r = -0.315	p = .018
LOR Rev 1	FMRO	r = -0.235	p = .060
LOR Rev 2	FMRO	r = -0.009	p = .946
LOR Rev 1	USMLE Score	r = 0.140	p = 0.305
LOR Rev 2	USMLE Score	r = -0.112	p = 0.410
LOR Rev 1	LOR Rev 2	r = 0.418	p = .001