Utility of Recommendation Letters and Correlation with Specific Residency Applicant Qualities

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Utility of Recommendation Letters and Correlation with Specific Residency Applicant Qualities

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Abstract

Object
Each year, residency programs seek to recruit medical students with certain qualities for residency positions. The purpose of our study was to study letters of recommendations (LOR) and vocabulary that correlated with perceived qualities of empathy, teamwork, and self-knowledge. This data was used to create a unique Quality Quotient (Qq), for each parameter, which was then compared with perception of the applicants during the interview process.

Methods
Our study is an observational analytical retrospective cohort study of 67 students who were interviewed during the 2012-2013 recruitment season at a single OBGYN residency program. Each applicant underwent interviews with 8 separate interviewers. At the completion of each interaction interviewers rated the student using a standard questionnaire based on a 5-point Likert scale, focusing on the qualities of empathy, dedication to teamwork, and students’ perceived self-knowledge. They also assigned the student with a global rating or rank. Letters of recommendation were then dissected for “key” words that correlated with the aforementioned qualities (i.e., “compassionate” or “Empathy”). A Qq was created (Number of “key” words/ Total lines in LORs) for each applicant for each quality. This Qq was compared to interviewer perception of the qualities, as well as applicant’s overall ranking. Evaluation of the linear relationship between the Qqs and interviewer rating and rankings was measured using Pearson’s correlation.

Results
For each applicant 3-5 letters of recommendation were analyzed. The number of words correlating with each quality varied per letter; Empathy (1-12), Teamwork (2-16), and Self-knowledge (0-22). Total number of lines in the letters was also quite variable (32-134). Qqs calculated for team work correlated positively with perceived impression of these qualities of the applicants based on the interview process and ratings, although the correlation was not significant (r=0.134, p=0.134; Self-knowledge, r=0.114, p=0.359).

Conclusions
LORs, based on our data, are not strongly predictive of evaluator impression of resident applicants during the interview process nor student ranking. We have created a standard quotient which may, if combined with or if assessed in conjunction with other pertinent data, may eventually serve as a predictor of student impression and perhaps future resident performance.

Introduction

• Each year, residency programs seek to recruit medical students with certain qualities for residency positions. The purpose of our study was to study letters of recommendations (LOR) and vocabulary that correlated with perceived qualities we deemed critical in applicants including:
  - Teamwork
  - Empathy
  - Self-Knowledge
• This data was used to create a unique Quality quotient (Qq), for each parameter, which was then compared with perception of these qualities in applicants during the interview process.

Methods

• Observational retrospective cohort study of 67 students who were interviewed during the 2012-2013 recruitment season at a single OBGYN residency program
• Applicants underwent interviews with separate interviewers and were rated using a questionnaire based on a 9-point Likert scale, focusing on the qualities of empathy, dedication to teamwork, and self-knowledge (Figure 1)
• Letters of recommendation (LOR) were then dissected for associating words that correlated with the aforementioned qualities (Table 1)
• A Quality Quotient (Qq) was created (Number of quality words/ Total lines in LORs) for each applicant for each quality.
• This Qq was compared to interviewer perception of the qualities, as well as applicant’s overall ranking. Evaluation of the linear relationship between the Qqs and interviewer rating and rankings was measured using Pearson’s correlation.

Results

• For each applicant 3-5 letters of recommendation were analyzed
• The number of words correlating with each quality varied per letter; Empathy (1-12), Teamwork (2-16), and Self-knowledge (3-22), total number of lines in the letters was also quite variable (32-134).
• Qqs calculated for team work correlated positively with perceived impression of these qualities of the applicants based on the interview process and ratings, although the correlation was not significant (r=0.134, p=0.134; Self-knowledge, r=0.114, p=0.359).

Conclusions

• LORs, based on our data, are not strongly predictive of evaluator impression of resident applicants relating to the qualities of empathy, teamwork, and self-knowledge
• In our study LORs also did not positively influence student ranking.
• We have created a standard quotient which may, if combined with or if assessed in conjunction with other pertinent data, eventually serve as a predictor of student impression and perhaps future resident performance.

Table 1: Correlation of LOR quality quotient and overall ranking

<table>
<thead>
<tr>
<th>Quality Quotient</th>
<th>Correlation Coefficient</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>0.137</td>
<td>0.204</td>
</tr>
<tr>
<td>Empathy</td>
<td>0.019</td>
<td>0.877</td>
</tr>
<tr>
<td>Teamwork</td>
<td>0.185</td>
<td>0.134</td>
</tr>
<tr>
<td>Self-Knowledge</td>
<td>0.114</td>
<td>0.359</td>
</tr>
</tbody>
</table>