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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 desired 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 9-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" = 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 (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 ($r=0.237$, $p=0.53$). The correlation for the quality of self-knowledge and empathy was negligible. Qqs for all qualities were found to be weak predictors of the overall rank of each applicant (Empathy, $r=0.019$, $p=0.877$; Teamwork, $r=0.185$, $p=0.134$; Self-knowledge, $r=0.114$, $p=0.359$).

Conclusions

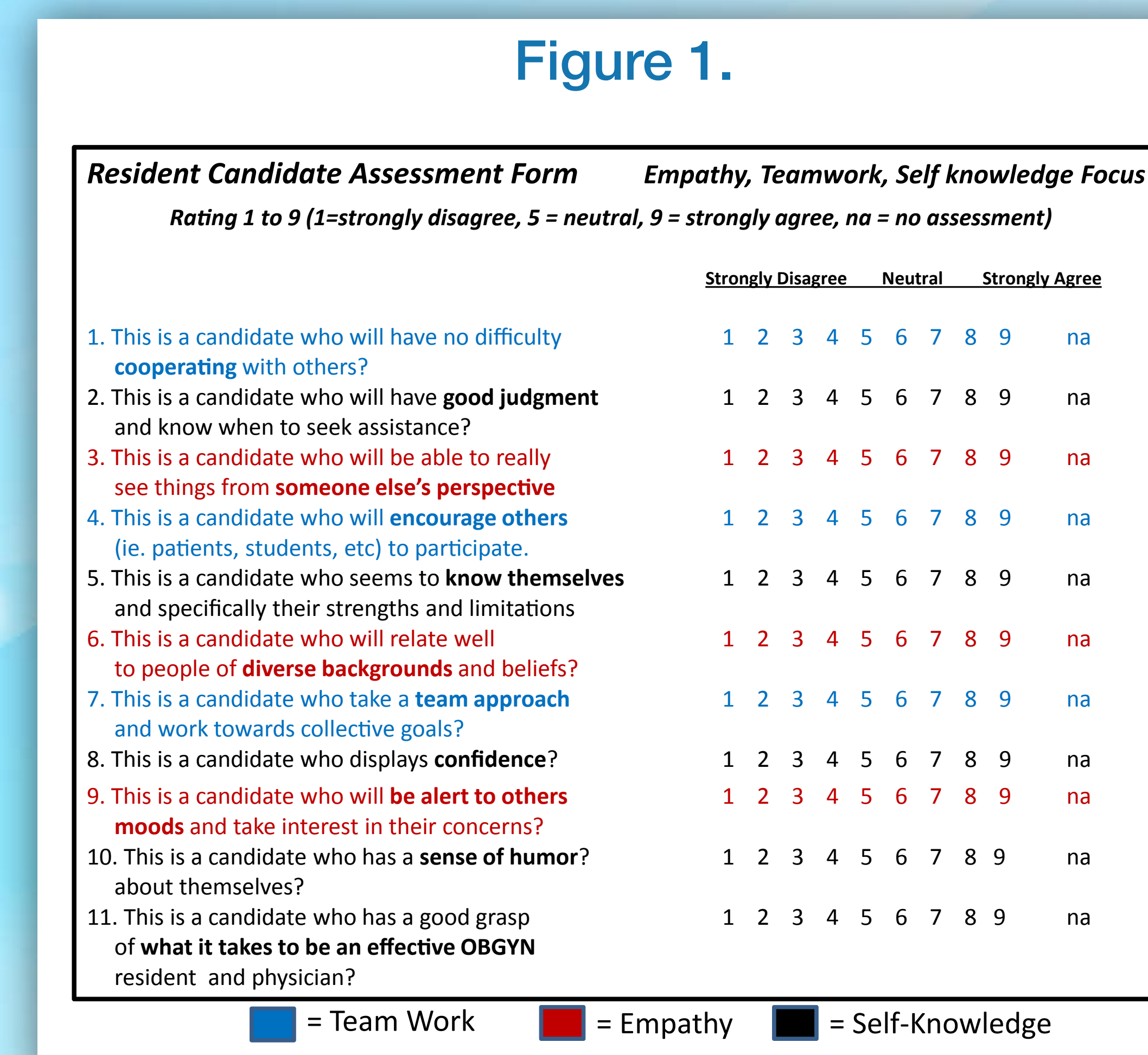
LORs, based on our data, are not strongly predictive of evaluator impression of resident applicants, during the interview process nor student ranking. We have created a standard quotient which may, if combined with or if assessed in conjunction with other pertinent data, may eventually serve as a predictor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

Introduction

- Each year, residency programs seek to recruit medical students with certain qualities
- The purpose of our study was to study **letters of recommendations (LOR)** and vocabulary that correlated with 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

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 8 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 associated 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 to see if it was predictive of how they were rated.
- Evaluation of the linear relationship between the Qqs and interviewer rating and rankings was measured using Pearson correlation.



Quality Words and Phrases

Words Associated with "Empathy"	Words Associated with "Team Work"	Words Associated with "Self Knowledge"
<ul style="list-style-type: none"> • Empathetic • Compassionate • Caring • Rapport • Connection 	<ul style="list-style-type: none"> • Team-player • Dependable (comes early and leaves late) • Hard working • Ethical • Energetic • Positive • Responsive 	<ul style="list-style-type: none"> • Professional • Mature • Knowledgeable • "We want her" • Motivated • Composed • "One of the best" • "Will be excellent OBGYN"

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 ($r=0.237$, $p=0.53$)
- The correlation for the quality of self-knowledge and empathy was negligible.
- Qqs for all qualities were found to be weak predictors of the overall rank of each applicant (Empathy, $r=0.019$, $p=0.877$; Teamwork, $r=0.185$, $p=0.134$; Self-knowledge, $r=0.114$, $p=0.359$).

Table 1: Correlation of LOR quality quotient and overall ranking

	Quality Quotient	Correlation Coefficient	p-value
Qqs Predictors	Overall	0.157	0.204
	Empathy	0.019	0.877
	Teamwork	0.185	0.134
	Self-Knowledge	0.114	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.

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