No Shades of Gray in Physician Ratings: Lack of Discrimination Among Components of Perceived Physician Quality

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Abstract: Patients are increasingly using online consumer ratings to help select high performing physician. While ratings websites provide consumer ratings across a number of physician-based (e.g. trust in provider, how well he/she explains condition, spending sufficient time) and office-based metrics, it is unclear if consumers are able to distinguish between different dimensions of perceived quality, since these metrics have not been psychometrically validated. In this study of consumer reviews of 830,000 physicians in the Healthgrades website, we show that ratings of physician-based subdimensions of care are extremely highly correlated ($r=0.96–0.98$), demonstrating that patients rarely differentiate between the various rated characteristics of a physician. This is in contrast to office-based subdimensions of care, which show less correlation with each other and with physician-based metrics. These findings call into question the utility of subdimensions of physician ratings; either the vast majority of physicians are all good or all bad, or consumers are unable to differentiate between the measured characteristics of physicians using Likert scale metrics.
**Introduction:** Online physician ratings websites have become an increasingly influential source of information for patients in selecting a provider. In a 2012 survey of 2,137 US adults, nearly 60% reported these sites as important in choosing a physician.\(^1,2\) More recently, a survey of 1,000 surgical patients at Mayo clinic found that 75% would choose a physician and 88% would avoid a physician based on ratings alone.\(^3,4\) As testament to the growing trust in consumer ratings, payers are now listing commercial consumer ratings as part of online provider listings.

Ratings websites invite consumers to quantitatively rate physicians across a variety of physician-based metrics (e.g. overall satisfaction, level of trust, how well the provider explains) and office-based metrics (e.g. ease of scheduling, office environment). Yet, it remains unclear if consumers are able to distinguish between these different dimensions of perceived quality, since these metrics have not been psychometrically validated. Here we analyzed a large sample of online reviews to determine if consumers often parse these different components of the patient experience.

**Methods:** We sampled online consumer reviews for 830,308 providers from the Healthgrades website up to March 31, 2017. Average provider metrics on a 5-star Likert scale were collected on overall satisfaction and subdimensions of perceived physician quality including: level of trust in provider’s decisions, how well the provider explains medical conditions, how well the provider listens and answers questions, and spending the appropriate amount of time with patients. Office-based metrics were also collected across subdimensions of: ease of scheduling urgent appointments, office environment,
staff friendliness and courteousness, and total wait time. We excluded providers with no data on overall patient satisfaction and less than 4 reviews (median number of reviews in our sample). We calculated the Spearman’s rank correlation for pairings of metrics. We also performed linear regression with multivariable factor analysis predicting overall satisfaction on the 7 separate subdimension ratings.

**Results:** Physician-based metrics were highly correlated with each other ($r=0.96–0.98$), as were office-based metrics ($r=0.84$ to $0.89$) (Figure 1). Correlations between physician-based and office-based metrics were less robust ($r=0.79–0.81$). Overall patient satisfaction correlated more strongly with physician-based metrics ($r=0.96–0.97$) than office-based metrics ($r=0.82–0.84$). Factor analysis predicting overall patient satisfaction identified two factors, clearly distinguishing between physician-based metrics (factor loading=$0.84–0.88$) and office-based metrics (factor loading=$0.76–0.84$).

**Discussion:** In this analysis of a large national sample of quantitative online reviews, ratings of physician-based subdimensions of care were very highly correlated with one another, demonstrating that consumers rarely differentiate between the various rated characteristics of a physician. Instead, it appears that patients have a more binary view towards their providers – they either like them or not. On the other hand, there is more heterogeneity observed when comparing ratings of office-based subdimensions of care or comparing physician-based and office-based subdimensions, suggesting that patients are better at differentiating the perceived quality of physician versus office staff
as well as the quality of different components of office-based care. Factor analysis objectively supports this contention, clearly identifying two discrete predictors of overall satisfaction clustered around physician-based and office-based dimensions of care. These findings call into question the utility of subdimensions of physician ratings; either the vast majority of physicians are all good or all bad, or consumers are unable to discriminate between the measured characteristics of their physicians using Likert scale metrics. Based on our data, a single quantitative measure of satisfaction with the physician and a single measure of satisfaction with the office staff would suffice. Further research is needed to improve measurement of various aspects of the patient experience, in order to increase the value of ratings to consumers and ultimately drive quality improvement.
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References