EDUCATION LEVEL AND EXPERIENCE INFLUENCE RATING PERFORMANCE OF THE PANSS IN SCHIZOPHRENIA TRIALS

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BACKGROUND

• Clinical trials of schizophrenia often rely on assessments that are complex, subjective, and require clinical judgment. The Positive and Negative Syndrome Scale1 (PANSS), a widely used primary endpoint measure, requires considerable probing and consulting several sources to facilitate scoring.
• Raters who administer this scale in different settings and across multiple sites have varying levels of education as well as experience with the scale and study population.
• In the present study, we examined the extent to which diverse qualifications of raters contribute to scoring errors in the administration of the PANSS.

RESULTS

• A total of 350 PANSS assessments were completed by 60 raters across 128 sites; raters reported education levels of Bachelor’s, Master’s, M.D., Ph.D., or both M.D. and Ph.D.
• Error rates varied based on education level. Individuals with Master’s and Ph.D. degrees showed fewest errors (Figure 1).
• Experience with study population was also associated with rater performance. Individuals having two years or less experience with schizophrenia population showed the highest percentage of errors (Table 1).
• In addition, scoring errors declined as a function of scale experience, as measured by number of PANSS assessments individuals administered over the course of their career (Figure 2).

<table>
<thead>
<tr>
<th>Population Experience</th>
<th># Reviews</th>
<th>% Reviews with 1 Discrepancy</th>
<th>% Reviews with 2+ Discrepancies</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2 Years</td>
<td>10</td>
<td>90.0%</td>
<td>70.0%</td>
</tr>
<tr>
<td>3-5 Years</td>
<td>41</td>
<td>31.7%</td>
<td>14.8%</td>
</tr>
<tr>
<td>6+ Years</td>
<td>285</td>
<td>41.4%</td>
<td>24.2%</td>
</tr>
</tbody>
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METHODS

• PANSS assessments that were completed by raters across multiple sites in a schizophrenia trial were analyzed.
• Raters reported information on highest academic degree obtained, years of scale experience, and experience with study population.
• Scoring errors were identified via review of audio recordings and worksheets by an independent cohort of calibrated expert clinicians.
• The percentages of reviews with two or more discrepancies as a function of education level and scale experience were examined.

CONCLUSIONS

• PANSS rating performance appears to vary based on education level, and is also influenced by scale experience and experience with the study population.
• Rater variability can contribute to error variance and add noise around the signal2.
• As such, these findings underscore the need for rater training, including applied training and rating precision exercises, to mitigate the effects of rater variability and ensure quality control in clinical trials.

References