

Association of PANSS interview duration with data quality – an exploratory analysis

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The Methodological Question Being Addressed

Is there an association between PANSS interview duration and data quality?

Introduction

Recent technological advances in clinical trial data collection (e.g. eCOA platforms) generate a number of quality indicators (such as interview length) that can be utilized in risk based monitoring. The length of a thorough PANSS interview varies with the psychopathology of the subject and interviewing style of the rater. An unusually short interview may acquire inadequate information to discriminate among the anchors of the 30 PANSS items. In our experience few high quality PANSS interviews are completed in 20 minutes or less.

We have previously explored a variety of data quality concerns in schizophrenia clinical trials, many of those associated with increased placebo response or decreased drug-placebo separation. For the current analysis we hypothesized that interviews of short duration are associated with data quality concerns.

Methods

2094 individual subject visits from multiple schizophrenia clinical trials with available PANSS interview duration were included in the analysis. We queried the data for the presence of the following PANSS related data quality concerns: PANSS scores close to inclusion; 30/30 PANSS items rated identically across consecutive visits; 30% or more improvement right after randomization; large changes from prior visit; erratic changes; rater change; within PANSS discrepancies; discrepancies between PANSS and CGI-S; and discrepancies between change in PANSS and CGI-S. We have arbitrarily set 20 minutes as a threshold for the PANSS interview duration to be considered short. Using univariate logistic regression we explored the association between the short interview duration and the data quality concerns, additionally using t-test we compared the average interview durations in the groups affected by individual data quality concerns to those not affected.

Results

The average PANSS interview duration in our sample was 39.5 minutes (+/-31.6). In 601(28.7%) interviews the interview duration was below 20 minutes. Short duration interviews were associated with a significantly increased presence of the following data quality concerns: 30/30 PANSS items rated identically (OR = 4.7; $p < 0.001$); large change from prior visit (OR = 1.7, $p = 0.026$); and PANSS vs. CGI-S discrepancies (OR = 2; $p < 0.001$). The interview duration was significantly decreased in the presence of the following data quality concerns: 30/30 PANSS items rated identically (23 vs. 38 minutes, $p < 0.01$); and PANSS vs. CGI-S discrepancy (32 vs. 40 minutes, $p < 0.001$).

Discussion

Short PANSS interviews were associated with a variety of data quality issues compared to more standard interviews. The association between short duration of interview and data quality issues is

not surprising given the extensive, complex information required to rate the 30 PANSS items. eCOA permits rapid assessment of interview duration and timely intervention. These findings will be explored in additional data sets as well as the effects of intervention.