

Responsiveness of the Quality of Life in Epilepsy Inventory (Qolie -89) In an Antiepileptic Drug Trial

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ABSTRACT

This study examined relationships among responsiveness indices for health-related quality of life (HRQOL) measures administered to adults with epilepsy enrolled in an antiepileptic drug trial. The Quality of Life in Epilepsy (QOLIE)-89 was completed at baseline and at a 28-week follow-up. Six responsiveness indices (effect size, standardized response mean, responsiveness statistic, paired *t*-test, area under receiver operating characteristic curve or ROC, *F*-statistic) were calculated for each of the 16 QOLIE-89 scales, using two different external criteria for clinically significant change: (1) attainment of complete seizure freedom, and (2) a 2-category improvement between baseline and follow-up in a self-rating of the subject's overall condition. Spearman correlations among the 6 responsiveness indices for the 16 QOLIE-89 scales tended to be moderate to large (Spearman's rho = 0.53 to 1.00; *p*'s < 0.05 for 29 out of the 30 correlations). Rankings of the 16 scales across the two external criteria for change were similar for the responsiveness statistic (Spearman's rho = 0.62; *p* < 0.05), but dissimilar for the other responsiveness indices (all *p* > 0.05). Both effect size and standardized response mean were well predicted by the other indices, except for ROC, using regression modeling. In conclusion, results using different responsiveness indices are comparable for a given

external criterion. However, only the responsiveness statistic yielded robust results across 2 different external criteria. Responsiveness of this HRQOL measure can be reported in terms of previously established benchmarks for effect sizes, which can be predicted from other indices.