Psychometric Properties of RADAR: Retrospective Assessment of Definitive Antipsychotic Response

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INTRODUCTION

- RADAR is developed as a tool to assess the definitive antipsychotic response with established content validity.[1]
- It attempts to assess response to antipsychotic over a longitudinal course of illness considering multiple factors that influence clinical improvement.
- Part A evaluates the clinical improvement during the treatment with index antipsychotic.
- Part B establishes factors that confound the causal relationship between clinical improvement and the treatment.
- RADAR score = scores of A - score of B
- Higher score represents the strength of definitive response to a given antipsychotic.

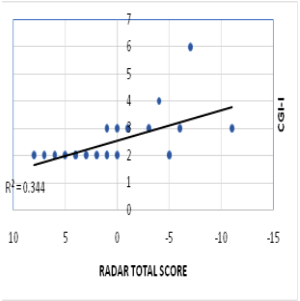
METHODS

- RADAR scale was applied for antipsychotic trials that was closely monitored by a psychiatrist (independent of raters) in 22 patients with schizophrenia.
- Concurrently, 16 antipsychotic trials were rated by two of the three trained raters and 7 antipsychotic trials by single rater.
- Cronbach's alpha was used to measure internal consistency.
- Spearman correlation was used for correlation between total score of RADAR with Clinical global impression Improvement (CGI-I)[2] (rated by an independent primary treating psychiatrist) for concurrent validity.
- Discriminant validity was assessed by evaluating for an absence of correlation with CGI-severity, Simpson Angus scale[3] and brief psychiatric rating scale scores (Rated by the primary assessor of RADAR).
- Intra-class coefficient was used to measure the inter-rater reliability.

RESULTS

CORRELATION	r value	p value
RADAR SCORE VS CGI-I	-0.67	0.001
A SCORE VS CGI-I	-0.76	<0.01
B SCORE VS CGI-I	0.28	0.2
RADAR SCORE VS CGI-S	-0.09	0.69
RADAR SCORE VS SAS SCORE	0.10	0.64
RADAR SCORE VS BPRS SCORE	0.23	0.28

RADAR SCORE vs. CGI-I



Cronbach's alpha among the items of RADAR = 0.46

- Intra-class correlation coefficient (ICC) among the two rates of RADAR total score is 0.99 ($p<0.01$)
- ICC for part A is 0.98 ($p<0.01$) and part B is 1 ($p<0.01$

CONCLUSIONS

- RADAR has good concurrent validity with CGI-I and good discriminant validity from cross-sectional symptom and side-effect severity.
- Poorer internal consistency reflects the presence of several unrelated latent variables.
- A high inter-rater reliability is encouraging for its utility in clinical research.
- Future studies with factor analysis with a higher sample would further assist in standardising the tool.

REFERENCES

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