Comments on “Factors Associated with Treatment Adherence in Children with Attention Deficit Hyperactivity Disorder”

Sir,

Safavi et al,1 identified factors related to treatment adherence in a ‘convenience’ sample of children with attention deficit/hyperactivity disorder (ADHD). We believe that there are several reasons why their findings should be interpreted with reservations.

Studies may be exploratory (hypothesis generating) or confirmatory (hypothesis testing) in design.2 Hypothesis-testing studies need to state primary and secondary outcome measures in advance.3 Safavi et al,1 neither stated a priori outcome measures nor admitted that their study was exploratory. Consequently, readers may not realize that their findings should be interpreted as speculative, not definitive.

Curiously, Safavi et al,1 did not even outline a plan of analysis; rather, they enthusiastically examined the association between every sociodemographic, clinical, and instrumental variable for which they had collected information and adherence, as operationalized by Medication Adherence Report Scale scores. When a large number of statistical associations are indiscriminately tested, the risk of a Type 1 (false positive) error is magnified. This means that some or many of the significant findings reported in the paper1 may have been false-positive findings, and the average reader would not know that this was so because the authors did not declare that their plan of analysis was exploratory in nature. The absence of a plan of analysis and such testing of all possible associations between variables is, unfortunately, a common failing in scientific studies and publications.

The multivariable regression analysis described by the authors1 does not address the false-positive risk because no correction of the P value is applied in regression, regardless of the number of variables entered into the equation.4,5 Additionally, given that the variables entered by the authors in their regression were chosen because they were significant or near significant in univariate testing, that some variables remained significant in multivariable testing is hardly surprising and will not mean that the associations identified in the sample are true for the population.

Last but not least, the authors conducted their study in patients who had been on treatment for at least 6 months; that is, in patients for whom a reasonable degree of adherence was established by virtue of retention in follow-up. So, this is an extreme example of a convenience sample and one that is very likely not representative of the population of children with ADHD.

As a take-home recommendation, we suggest that all original studies describe their primary and secondary outcomes if these were set a priori; else, the exploratory nature of the study should be declared in both abstract and text so that readers can interpret the findings with caution.

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There are no conflicts of interest.

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REFERENCES

1. Safavi P, Saberzadeh M, Tehrani AM. Factors associated with treatment adherence in children with attention deficit hyperactivity disorder. Indian J Psychol Med 2019;41:252-7.

2. Andrade C. Describing research design. Indian J Psychol Med 2019;41:201-2.
3. Andrade C. The primary outcome measure and its importance in clinical trials. J Clin Psychiatry 2015;76:e1320-3.
4. Andrade C. Multiple testing and protection against a type 1 (false positive) error using the Bonferroni and Hochberg corrections. Indian J Psychol Med 2019;41:99-100.
5. Andrade C. Author’s response to ‘Multiple testing and protection against type I error using P value correction: Application in cross-sectional study designs’. Indian J Psychol Med 2019;41:198.

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Comments on “Adaptation and Validation of Parental Behavioral Scale for Children with Autism Spectrum Disorders to Kannada”

Sir,
Gayathri and Tiwari[1] studied the psychometric properties of their Kannada translation of a parental behaviour scale for children with autistic spectrum disorders. We wish to express our concerns regarding some of their methods and findings.

First, the authors examined test-retest reliability in a sample of only three parents. This is far too small a sample to allow credible conclusions about the reliability of an instrument. Whereas it could have been challenging for the authors to estimate, in advance, a necessary sample size to identify an unknown value for the reliability, it would have been desirable to recruit a sample of at least 30 parents so as to reasonably represent the population.

Next, the authors reported that the intra-class correlation coefficient (ICC) value for test-retest reliability was 0.993. This is an incredibly high level of agreement and is credible only if the authors were assessing facts that do not change. However, they were assessing the agreement on 50 different items, rated on a 1–5 point scale, at time points that were 15–30 days apart. In such circumstances, such a high value for the ICC seems impossible.

Finally, the authors asked three speech-language pathologists to indicate their agreement/disagreement with each item of the scale and to provide suggestions/modifications. The authors wrongly described this exercise as inter-rater reliability. Inter-rater reliability is actually the agreement between different raters who each use the instrument to assess the same patients at the same point in time.

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