



# Teachers are Important, Too! Incremental Validity of BASC-2 TRS in Predicting DSM-5 Autism Spectrum Disorder Severity Ratings



Kimberly S. Ellison, M.S., Myra Beth Bundy, Ph.D., Dustin D. Wygant, Ph.D., Jonathan S. Gore, Ph.D.

Department of Psychology – Eastern Kentucky University, Richmond, Kentucky

## INTRODUCTION

With the publication of DSM-5, the new dimensional framework of Autism Spectrum Disorder (ASD) features two diagnostic criteria encompassing deficits in Social Communication (SC) and Restricted/Repetitive Behaviors (RRB). New severity specifiers were also added.<sup>1,2</sup>

Although not autism specific, the *Behavior Assessment Scale for Children, Second Edition* (BASC-2) has utility as a broadband assessment for use in diagnostic evaluations for ASD; this measure has a Parent Rating Scale (PRS) and a Teacher Rating Scale (TRS). Adaptive skills differences in ASD have been indexed by BASC-2 parent and teacher ratings.<sup>3</sup>

Despite new ASD diagnostic criteria and an updated version of the BASC, the findings of this study are still relevant, as: 1) The clinical and adaptive scales on the BASC-2 are also reflected in the BASC-3 and 2) both versions use statements that combine traditional and novel concepts in order to have an enhanced focus of helping clinicians determine an accurate diagnosis.<sup>4</sup>

## CURRENT STUDY

**Aim 1:** Explore different contributions that parent and teacher behavior ratings make to understanding children with ASD.

**Aim 2:** Explore the new DSM-5 Severity Rating System for ASD.

**Hypothesis:** Mean teacher ratings on rationally-selected BASC-2 Subscales (Atypicality, Withdrawal, Functional Communication, Adaptability, and Social Skills) will add incrementally to mean parent ratings when predicting DSM-5 ASD Severity Ratings for SC and RRB.

## METHOD

### Participants:

- Sample:  $N=67$  (59 males and 8 females)
- Age range: 2 years, 2 months - 18 years ( $M=8.24$  years,  $SD=3.29$ )
- IQ range:  $<38 - 128$ ; ( $M=83.85$  in  $N=52$ )
- Participants selected from an archival database at a university psychology clinic in a rural, Midwestern state and in a nearby private psychological practice.
- DSM-5 ASD diagnosis was confirmed by two independent raters utilizing clinical measures, developmental history, and previous evaluations; DSM-5 ASD SC and RRB severity levels were assigned.
- Interrater reliability: (67 items:  $Kappa=.70$ ,  $Kappa=.72$  respectively)

Figure 1. Teacher Ratings of Atypicality Predicting SC Severity

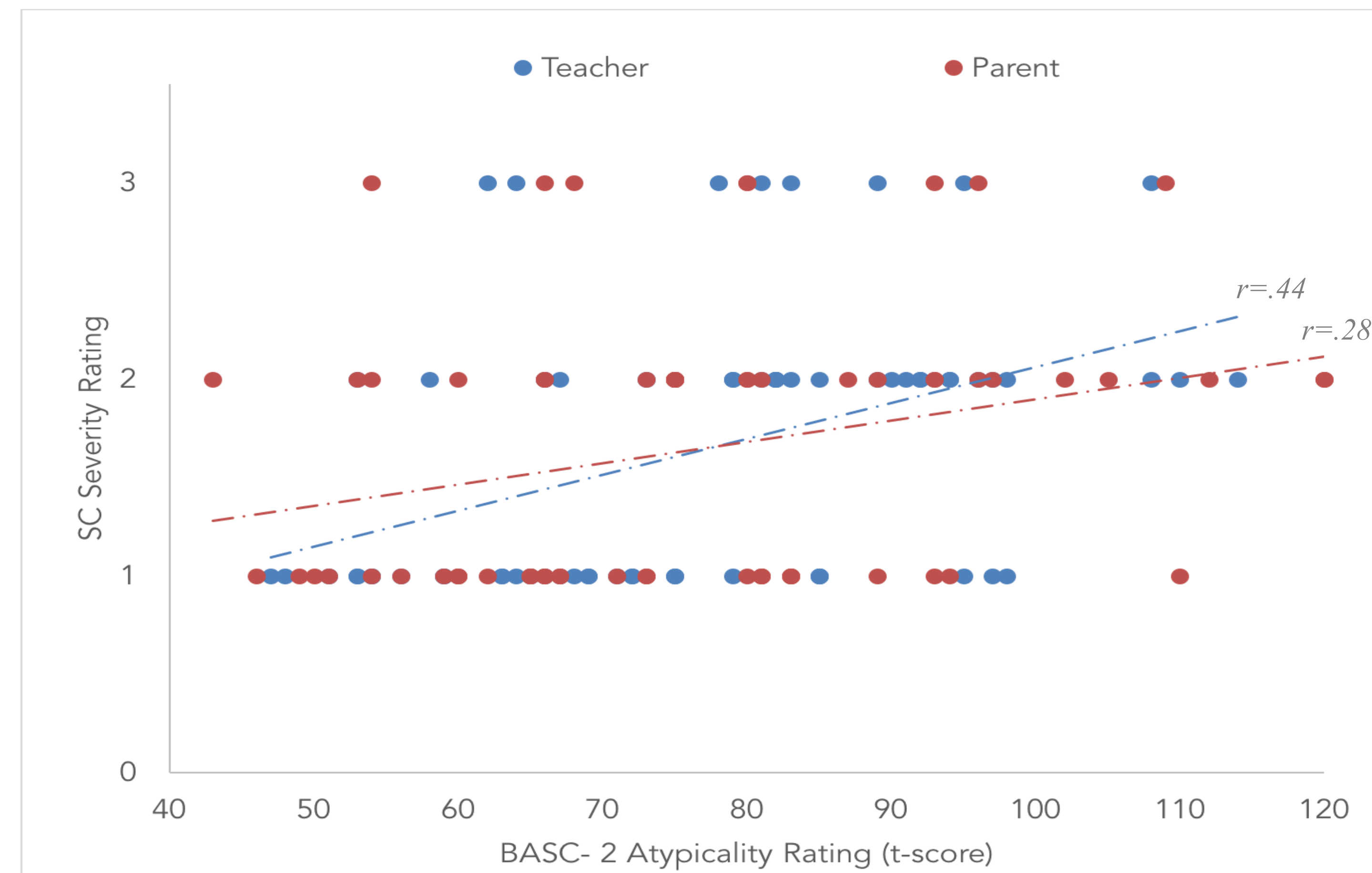


Table 1. Predicting SC and RRB Severity Ratings

BASC-2 Scales	Social Communication Severity				Restricted/Repetitive Behavior Severity			
	Order of Predictors: PRS, TRS				Order of Predictors: PRS, TRS			
	Zero-order B	R <sup>2</sup>	ΔR <sup>2</sup>	Final B	Zero-order B	R <sup>2</sup>	ΔR <sup>2</sup>	Final B
Adaptability								
PRS	-.03	.01		-.01	-.02	.01		-.01
TRS	-.06	.05	.04*	-.05*	-.03	.02	.01	-.03
Atypicality								
PRS	.03	.05		.01	.03	.05		.02
TRS	.06	.13	.08*	.06*	.06	.12	.07*	.05*
Functional Comm.								
PRS	-.13	.14		-.08*	-.14	.17		-.11*
TRS	-.14	.20	.06*	-.10*	-.13	.20	.03*	-.08*
Social Skills								
PRS	-.10	.11		-.08*	-.08	.08		-.06*
TRS	-.16	.19	.08*	-.14*	-.09	.10	.02	-.07
Withdrawal								
PRS	.04	.04		.03	.05	.07		.04*
TRS	.05	.09	.05*	.04*	.05	.12	.05*	.04*

Note. PRS = Parent Rating Scale, TRS = Teacher Rating Scale, Comm. = Communication, \* $p < 0.05$ .

## RESULTS

- Ordinal regressions were conducted with parent ratings in the first regression model and teacher ratings added in the second as predictors of SC and RRB (Table 1).
- Overall, teacher ratings enhanced parent ratings of Adaptability, Atypicality, Functional Communication, Social Skills and Withdrawal when predicting severity of SC ( $\Delta R^2 = .04-.08$ ,  $p < 0.05$ ).
- Teacher ratings also enhanced parent ratings of Atypicality, Functional Communication, and Withdrawal when predicting RRB severity ( $\Delta R^2 = .03-.07$ ,  $p < 0.05$ ).

## DISCUSSION

- Teacher reports accounted for more predictive variance in our sample than did parent ratings alone, suggesting it is **important** to have teachers rate individuals with ASD being assessed with the BASC-2.
- Having teachers rate children on BASC-2 scales adds incrementally and significantly to the parent ratings in predicting both DSM-5 SC and RRB severity levels in ASD, above and beyond parent ratings on the same BASC-2 scales alone.
- Separate parent and teacher ratings still had unique predictive variance for particular scales (e.g., Social Skills).

Why these trends may exist:

1. Teachers tend to have fresh perspectives of the children.
2. Objectivity of parent's ratings of their children may be influenced by their close relationship.
3. The school environment is different than the environment at home.

## FUTURE DIRECTIONS

Due to the novelty of the DSM-5 ASD severity scale, this research is exploratory. It would be beneficial to replicate this study with a participant sample more representative of the full autism spectrum (specifically a wider range of severity level diagnostic combinations).

Future validation of the DSM-5 severity scale should be conducted and will provide a more stable standard against which parent and teacher behavioral reports can be assessed and compared.

### Selected References

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4. Reynolds, C.R. (2015). *Development and Applications of the BASC-3 Family of Assessments* [PowerPoint slides]. Retrieved from <http://www.txasp.org/assets/conference-materials/2015/basc-3%20three%20hour%20powerpoint.pdf>