

What are We Measuring for Whom? The Relationship between Teacher Rating Scales and Standard Tests

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Teacher Referral for G/T Services



The Literature on Teacher Referrals

- Teacher referrals are a common source of entry to identification processes (Callahan, Moon, & Oh, 2013; Pfeiffer, 2013).
- Questions remain about reliability of teacher referrals compared to other approaches (Card & Giuliano, 2015).
- Overall, teacher referral process tends to be high quality. However, underrepresentation of specific minority groups is apparent in teacher nominations (McBee, 2006).

Research Questions

- What are the correlations among the standardized testings scores and the teacher rating scales?
- Are these correlations moderated by membership in the traditionally underrepresented groups (FRL and Minority)

Study Context



Participants

- Teachers in 11 schools in 3 districts
- 313 students
 - 55% female
 - 28% kindergarten, 41% first grade, 31% second grade
 - 35% Black or Hispanic
 - 33% receive free or reduced price lunch

Comparison of Demographics

- 64% of students receiving free/reduced lunch were Black or Hispanic
- 19% of students *not* receiving free/reduced lunch were Black or Hispanic
- 68% of students who identified as Black and Hispanic received free/reduced lunch
- 22% of students who did not identify as Black or Hispanic received free/reduced lunch

Referral Process

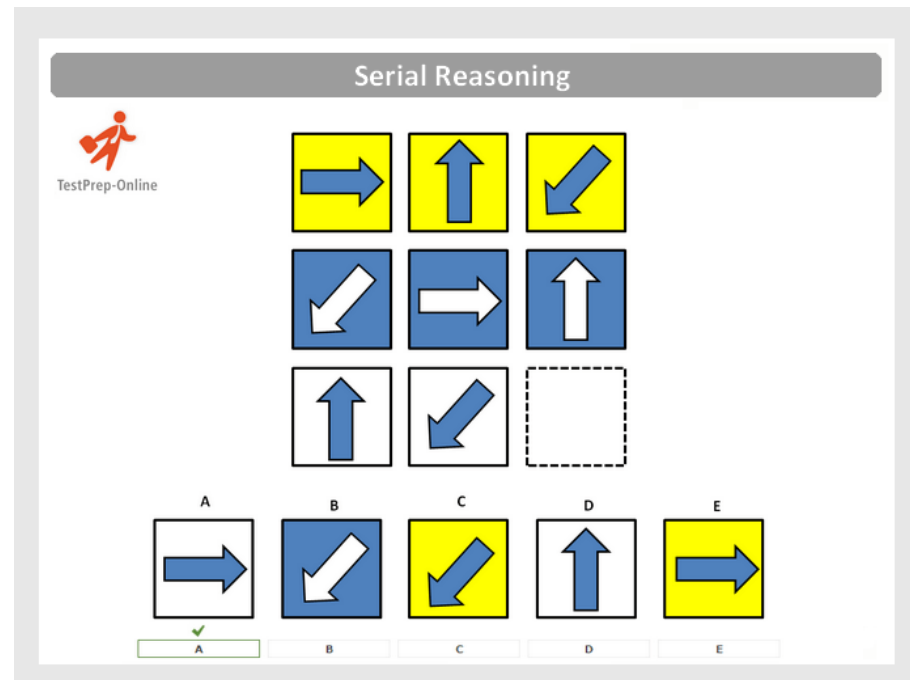
- PD on recognizing behaviors that may indicate advanced academic potential in diverse learners (both treatment and comparison schools)
- In treatment schools: project staff also conduct lessons designed to elicit critical and creative thinking behaviors that may be indicative of high potential.
- Teachers refer students to the project based on observation over the course of several months of the school year.
- All students referred by teachers (with parent permission) participate.

Instruments: GBRS

- Gifted Behaviors Rating Scale (GBRS)
 - Exceptional ability to learn
 - Exceptional application of knowledge
 - Exceptional creative/productive thought
 - Exceptional motivation to succeed
- Teacher-rated scale
- 4-point scale from rarely to consistently

Instruments: NNAT-2

- Naglieri Nonverbal Ability Test-2
 - Measure of general intelligence
 - Does not require any language-related responses



Instruments: MPG

- Measures of Academic Progress for Primary Grades (MPG)
 - Mathematics and reading
 - For grades K-2
 - Computerized
 - Fully adaptive

Methods

- Correlations between the measures
- Multi-group analysis, comparing correlations for students in the underrepresented groups to those not in the underrepresented groups
 - Looked for significant correlations to determine how the relationship between GBRS and other scales may differ across groups.

Correlations for Full Sample

	GBRS Learn	GBRS Apply	GBRS Create	GBRS Motivate	NNAT-2	MPG Mathematics	MPG Reading
GBRS Learn	--						
GBRS Apply	.455*	--					
GBRS Create	.122*	.338*	--				
GBRS Motivate	.357*	.258*	.203*	--			
NNAT-2	.122*	.124*	.045	-.033	--		
MPG Mathematics	.064	.099	-.021	.154*	.166*	--	
MPG Reading	.128*	.146*	-.021	.184*	.135*	.866*	--

MPG Results

- For all subgroups in the study:
 - Mathematics and Reading had strong positive correlations
 - Those correlations never differed between groups.

Correlations by Meal Subsidy Status

	GBRS Learn	GBRS Apply	GBRS Create	GBRS Motivate	NNAT-2	MPG Mathematics	MPG Reading
GBRS Learn	--	.451*	.254*	.302*	.071	-.059	-.031
GBRS Apply	.529*	--	.438*	.307*	-.044	-.055	.008
GBRS Create	.053	.264*	--	.218*	.081	-.142	-.160
GBRS Motivate	.362*	.221*	.217*	--	-.084	.158	.149
NNAT-2	.184	.282*	-.206	-.011	--	.146	.113
MPG Mathematics	.213	.184	.145	.051	.125	--	.859*
MPG Reading	.301*	.276*	.113	.152	.120	.870*	--

Note. Correlations in the upper triangle represent those for students who do not receive free/reduced lunch. Correlations in the lower triangle are for those students who receive free/reduced lunch.

Correlations by Underrepresented Minority Status

	GBRS Learn	GBRS Apply	GBRS Create	GBRS Motivate	NNAT-2	MPG Mathematics	MPG Reading
GBRS Learn	--	.425*	.251*	.288*	.086	.039	.071
GBRS Apply	.493*	--	.454*	.279*	.029	.081	.115
GBRS Create	-.089	.143	--	.270*	.061	-.007	-.007
GBRS Motivate	.465*	.229*	.074	--	-.054	.257*	.230*
NNAT-2	.165	.233*	.017	-.003	--	.190*	.158*
MPG Mathematics	.110	.097	-.064	-.025	.027	--	.868*
MPG Reading	.241*	.195	-.043	.123	.029	.865*	--

Note. Correlations in the upper triangle represent those for students who do not identify as Black or Hispanic. Correlations in the lower triangle are for those students who do identify as Black or Hispanic.

Implications

- We found mostly small or nonsignificant relationships between standard tests (MPG and NNAT-2) and the teacher referral instrument (GBRS) for our subgroups.
- Some of the relationships between the standard tests and GBRS differed for our subgroups
 - Teacher ratings of students ability to learn was more related to student achievement for students from low-income families than for their peers
 - The only relationship between teacher ratings of students motivation and their mathematics achievement was for non-minority students
- Future directions