Woodcock Institute Research Grant Final Report

Project Title: Assessing the Simple View of Writing in school-age students with ADHD

1. Purpose of the Project

The current project aimed to validate an extended version of the Not-So-Simple View of Writing (NSVW; Berninger & Winn, 2006), a popular literacy model, for students with ADHD. The extended NSVW model incorporated the effects of multiple cognitive abilities on writing performance and the relationships between basic and advanced writing components. The sample included 2,018 students who completed cognitive and academic measures in the Colorado Twin Project (CTP; Willcutt et al., 2021) and were rated on the Disruptive Behavior Rating Scale (DBRS), a scale commonly used for the diagnosis of ADHD. Practitioners could use the results from the study to select diagnostic tests during psychoeducational assessments and identify key cognitive components leading to poor writing performance in students with ADHD.

2. Timeline

January 2022 to February 2022: Dr. Matta interviewed potential research assistants with a strong background in school psychology and quantitative methods at the University of Houston and identified Ms. Ivana Lozano as the ideal candidate to work on the project. She was hired on the project in February 2022.

March 2022 to July 2022: Dr. Matta and Ms. Lozano established a tentative timeline for the project, with the plan of submitting the manuscript to a peer-review journal in the spring of 2023. Under Dr. Matta's supervision, Ms. Lozano reviewed the empirical literature on school-age students with ADHD and written expression to include in the manuscript. Dr. Matta conducted data analyses on the existing dataset in RStudio to answer primary study questions. In line with the expectations, Dr. Matta and Ms. Lozano met biweekly to monitor the progress of work and actively address potential threats to the validity of the analyses and interpretation of the results. Dr. Matta and Ms. Lozano also submitted a research proposal for the 2023 annual meeting of the National Association of School Psychologists (NASP). The contribution was accepted as a poster in September 2022 (ID session: PO139). The acceptance letter of the NASP contribution and the conference program are attached in the Appendix.

September 2022 to June 2023: Dr. Matta and Ms. Lozano resumed working on the manuscript. Unfortunately, during this period, Ms. Lozano accepted a full-time position outside of the university. Dr. Matta realized that training a new research assistant would require significant time and resources, which would likely have delayed the submission of the manuscript. Therefore, Dr. Matta made changes to the original budget of the research grant and requested a six-month no-cost extension to complete the work. The Woodcock Institute granted the two requests. Dr. Matta completed the dissemination efforts of the grant and submitted the manuscript to the *Journal of Psychoeducational Assessment* in June 2023. The abstract of the paper and evidence of the submission confirmation and status are included in the Appendix.

3. Accomplishments

Year 1: The first year of the project spanned January 1st, 2022, through December 31st, 2022. During Year 1, Dr. Matta obtained the dataset for the study from the LDbase online repository and secured IRB approval from the University of Houston. Dr. Matta and Ms. Lozano reviewed the literature on the writing challenges faced by students with ADHD. Dr. Matta completed the statistical analyses for the study. Dr. Matta and Ms. Lozano submitted a poster proposal to the 2023 NASP annual meeting. Upon approval, they drafted the poster.

Six-month No-Cost Extension: The six-month no-cost extension spanned January 1st, 2023, through June 31st, 2023. During this period, Dr. Matta and Ms. Lozano presented the preliminary results of the research study at the 2023 NASP annual meeting. Then, Dr. Matta drafted and completed the submission of the manuscript to the *Journal of Psychoeducational Assessment*.

4. Personnel

Michael Matta. Dr. Matta has served as the principal investigator throughout the research grant. He was involved in securing the dataset and the IRB approval from the university, conducting data analysis, and in dissemination activities. Dr. Matta also supervised a research assistant at the University of Houston.

Ivana Lozano. Ms. Lozano was a research assistant during Year 1 of the research grant. She conducted a review of the literature on the topic of the research study and helped draft the poster for the 2023 NASP annual meeting. She also co-presented the poster in Denver, CO.

Matta, Michael

From: NASP Conventions <convention@naspweb.org>
Sent: Monday, June 13, 2022 3:28 PM
To: mmatta@uh.edu
Subject: PO139 - NASP 2023 Annual Convention Presentation Proposal Submission - Michael Matta

Michael Matta,

Your poster submission has been received. Please print and save this e-mail confirmation for your records.

If there are questions regarding your submission or the NASP 2023 Annual Convention, please call 301-347-1667 or e-mail convention@naspweb.org.

Presenter Information

Presenter	Michael Matta
Member #:	1042705
E-mail Address:	mmatta@uh.edu
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Address:	2828 Greenbriar Dr Apt 3312 Houston, TX 77098 USA
Affiliation:	University of Houston
Job Title:	Research Scientist
Affiliation Address:	Houston, TX

Secondary Presenter(s)

Secondary Presenter:	Ivana Lozano
E-mail Address:	ivana.lozano13@gmail.com
Member #:	1093997
Affiliation:	University of Houston Houston, TX

Presentation Information

Presentation Type:	Poster (PO)
ID:	PO139
Title:	Validating the Not-So-Simple View of Writing Model for ADHD Students
Poster Strand:	Psychological Services for Specific Groups of Students
Practice Model Domains:	**Domain 8:** Diversity in Development and Learning
Skill Level:	I
Primary Index Term:	Assessment, Academic
Secondary Index Term(s):	Achievement ADHD Assessment, Writing
Does your session address diversity issues?	No
Does this session present the results of a research study?	Yes
Does your session address early career issues?	No
Does your session address graduate student issues?	No
Do you have a personal financial interest in this topic and/or any product, service, or company related to this presentation?	No
Learner Objectives:	identify the critical characteristics of psychoeducational assessment of written expression in data-based decision-making as outlined by the NASP Practice Model use the Not-so-Simple View of Writing model as a theoretical framework to guide the assessment of writing skills and the interpretation of test scores learn similarities and differences between the model components for students with and without ADHD
Summary (file):	1042705_972626382_NASP2023Simpleviewadhd.docx

Description:	This presentation will provide practitioners with guidelines for the task selection and score interpretations of writing performance for students with and without ADHD using the Not-so-Simple View of Writing framework.

Registration Agreement

I understand and agree that, if my proposal is accepted, I and my secondary presenter(s), (if applicable), must register to attend the NASP convention by the *Wednesday, November 9, 2022 deadline*. If I, as the primary presenter do not register by the deadline, my presentation will be cancelled. **[Yes]**

Paul H. Henkin Memorial Scholarship Award

Do you wish to be considered for the Paul H. Henkin Memorial Scholarship Award? **[No]**

I meet the Henkin scholarship award qualification requirement of having been newly credentialed within the last three years prior to the proposal submission deadline of *Wednesday, June 15, 2022*. *(If you chose "Yes" to the Henkin Awards above, you must also meet this requirement.)* **[No]**

Note: You may edit your submission(s) until ***Wednesday, June 15, 2022***. You may access your submission(s) by going to **MyCFP**.

NASP
NATIONAL ASSOCIATION OF
School Psychologists

NASP 2023

RADICAL HOPE
2023
AUTHENTIC HEALING

ANNUAL CONVENTION

FEBRUARY 7–10, 2023
Colorado Convention Center
Denver, CO

Each year, the NASP convention Exhibit Hall allows me to stay up to date on all of the latest and greatest products and services available!

— JOANNE, CHARLESTON, SC

WWW.NASPONLINE.ORG/NASP2023

11:30 a.m.–1:00 p.m., Thursday

P0128: Supporting Students With a Chronic Illness: The School Psychologist's Role [D]

Convention Center—Exhibit Level, Exhibit Hall C
Practice Domain: 4, 8; Skill Level: I
Presenter(s): ***Hannah E. Miller,*** *University of Florida*

This poster presents results of a literature review summarizing the effects of chronic illness on students and shares best practices for school psychologists working with this population in educational settings.

11:30 a.m.–1:00 p.m., Thursday

P0139: Validating the Not-So-Simple View of Writing Model for ADHD Students

Convention Center—Exhibit Level, Exhibit Hall C
Practice Domain: 8; Skill Level: I
Presenter(s): ***Michael Matta*** *and* ***Ivana Lozano,*** *University of Houston*

This presentation will provide practitioners with guidelines for the task selection and score interpretations of writing performance for students with and without ADHD using the Not-so-Simple View of Writing framework.

11:30 a.m.–1:00 p.m., Thursday

P0154: COMPASS: Addressing Disparities for Rural Students With Autism [D]

Convention Center—Exhibit Level, Exhibit Hall C
Practice Domain: 2, 7; Skill Level: I
Presenter(s): ***Rebecca Stayton, Mary B. Hoffman, Mallory R. Bopp,*** *and* ***Lisa A. Ruble,*** *Ball State University*

COMPASS is an evidence-based consultation and coaching framework for students with ASD that shows promise for addressing disparities in ASD-specific services within rural schools.

11:30 a.m.–1:00 p.m., Thursday

P0158: A Bibliometric Analysis of Black Families and Special Education [D]

Convention Center—Exhibit Level, Exhibit Hall C
Practice Domain: 7, 8; Skill Level: I
Presenter(s): ***Shanye A. Phillips,*** *Columbus City Schools;* ***Darwin M. Jacobs,*** *The Ohio State University*

Given the disproportionality of Black students and the essential role of family involvement in the special education process the goal is to examine existing literature.

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11:30 a.m.–1:00 p.m., Thursday

P0165: Autism Spectrum Disorder Assessment Across Culturally Diverse Groups [D]

Convention Center—Exhibit Level, Exhibit Hall C
Practice Domain: 9; Skill Level: I
Presenter(s): ***Christina L. Kowalczyk,*** *Hogrefe Publishing Company*
Contributor(s): ***Penny Roy, Shula Chiat***

This poster session examines score consistency of performance across three cultural groups (United States, United Kingdom, and Saudi Arabia) using the Early Sociocognitive Battery (ESB).

11:30 a.m.–1:00 p.m., Thursday

P0169: Multidisciplinary Team-Based Practices Benefiting School Psychologists and Students With Autism [D]

Convention Center—Exhibit Level, Exhibit Hall C
Practice Domain: 2, 8; Skill Level: I
Presenter(s): ***Jennie A. Morton,*** *Western Carolina University*
Contributor(s): ***Lori Unruh***

Have you worked with a multidisciplinary school-based team? Learn how doing so can improve your self-efficacy when working with students with autism and the outcomes for those students.

11:30 a.m.–1:00 p.m., Thursday

P0170: Meaningful Transition Supports for Graduating Students With Autism Spectrum Disorders

Convention Center—Exhibit Level, Exhibit Hall C
Practice Domain: 4, 7; Skill Level: II
Presenter(s): ***Nicole A. DiFoglio*** *and* ***Heather L. Rickmers Tacovsky,*** *Georgian Court University*

Support students with autism spectrum disorder as they transition from high school to adulthood through intentional transition planning guided by state and federal regulations and programs.

11:30 a.m.–1:00 p.m., Thursday

P0174: Engaging Students With or at Risk for Emotional Disturbance

Convention Center—Exhibit Level, Exhibit Hall C
Practice Domain: 4, 5; Skill Level: II
Presenter(s): ***Ji Won Kim, Thuy Nguyen,*** *and* ***Mahasweta Bose,*** *University of Minnesota-Twin Cities*
Contributor(s): ***Amanda Sullivan***

Teachers and staff of students with ED often struggle to get them interested and involved in school. This presentation focuses on what can be done to keep these students engaged.

Assessing the Simple View of Writing in school-age students with ADHD

Matta, M. (mmatta@uh.edu), & Lozano I.

BACKGROUND:

- Four out of five students with ADHD are unable to produce cohesive written text and consistently show lower writing performance than their peers without ADHD (Graham et al., 2016).
- The Simple View of Writing (SVW) model might help practitioners select appropriate writing tasks during the assessment, interpret performance scores, and for targeted interventions.
- Scope of the poster is to examine two extended versions of the NSVW model in school-aged students with ADHD and evaluate similarities and differences among students without ADHD.

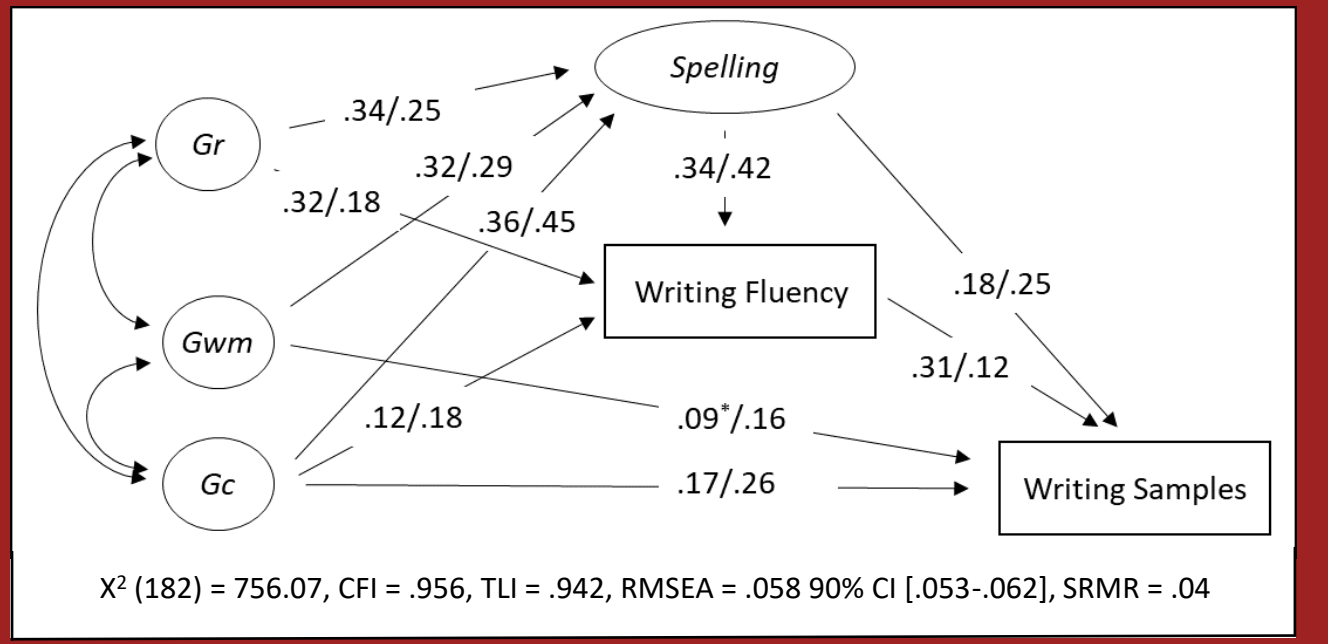
METHODS AND ANALYSES

1. 451 school-age students with ADHD and 1,453 without ADHD completed an extensive battery of cognitive and achievement tests from 2002 to 2016 in the context of the Colorado Twin Project.
2. Students with ADHD were identified if parents or teachers endorsed six items or more for one ADHD type on the Disruptive Behavior Rating Scale (DBRS).
3. To address the research question, we used SEM to assess the contribution of working memory, retrieval fluency, verbal comprehension on spelling and written expression tasks.

RESULTS

- Overall, the pattern of coefficients in the model for students with and without ADHD was comparable
- Broad cognitive abilities were moderate predictors of basic writing skills (i.e. spelling). However, they were not significantly related or had weaker relationships with more complex writing abilities, such as writing fluency and writing quality.

Practitioners can use the Simple View of Writing model to guide the assessment process of writing skills with ADHD students.



X^2 (182) = 756.07, CFI = .956, TLI = .942, RMSEA = .058 90% CI [.053-.062], SRMR = .04

Take a picture to **download** the **full paper**

WOODCOCK INSTITUTE
For the Advancement of Neurocognitive Research and Applied Practice
TEXAS WOMAN'S UNIVERSITY

UNIVERSITY of HOUSTON
COLLEGE OF EDUCATION

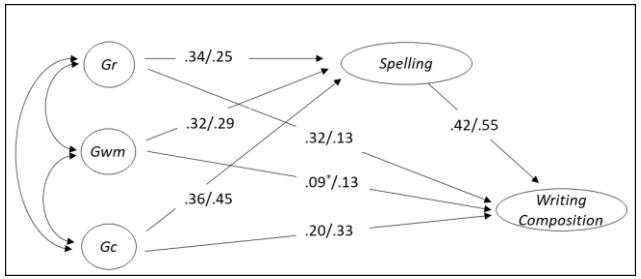
Table 1. Sample demographics

Variables	Non-ADHD	ADHD
Sample size	1453	451
Age, *M* (*SD*)	11.6 (2.7)	11.2 (2.4)
Sex, *n* (%)		
Boy	663 (45.6)	326 (72.3)
Girl	790 (54.4)	125 (27.7)
School level, *n* (%)		
Elementary school	809 (55.7)	280 (62.1)
Middle school	395 (27.2)	120 (26.6)
High school	249 (17.1)	51 (11.3)

Table 2. Measurement invariance between groups

Model	X2	df	CFI	TLI	RMSEA	SRMR	AIC	BIC
Overall Model	646.86	71	0.952	0.939	0.065	0.042	109423	109689
ADHD Model	218.34	71	0.952	0.938	0.068	0.046	26276	26473
Control Model	479.62	71	0.953	0.939	0.063	0.042	82984	83237
Configural Model	697.96	142	0.952	0.939	0.064	0.043	109260	109793
Metric Model	723.64	152	0.951	0.941	0.063	0.046	109266	109743
Scalar Model	781.81	162	0.947	0.940	0.063	0.047	109304	109726
Strict Model	814.45	176	0.945	0.943	0.062	0.048	109308	109653

Figure 1. Alternative model (fully latent)



X^2 (116) = 800.813, CFI = .953, TLI = .940, RMSEA = .059 90% CI [.054-.063], SRMR = .043

Matta, Michael

From: Journal of Psychoeducational Assessment <onbehalfof@manuscriptcentral.com>
Sent: Thursday, June 15, 2023 4:10 PM
To: mmatta@uh.edu
Subject: Journal of Psychoeducational Assessment JPA-23-0146

15-Jun-2023

Dear Dr. Matta:

Your manuscript entitled "Assessing an Extended Version of the Not-So-Simple View of Writing Model in School-Aged Students with ADHD" has been successfully submitted online and is presently being given full consideration for publication in Journal of Psychoeducational Assessment.

Your manuscript ID is JPA-23-0146.

You have listed the following individuals as authors of this manuscript:
Matta, Michael

Please mention the above manuscript ID in all future correspondence or when calling the office for questions. If there are any changes in your street address or e-mail address, please log in to ScholarOne Manuscripts at https://urldefense.com/v3/__https://mc.manuscriptcentral.com/jopa__;!!LkSTlj0I!AsElf_3ilO3wLZyvJDdWIUYi5W6OZpcvDzN6qSwPPlgfomC93SccPLEXeUkMfSOyC211LsPt4irKcSzuAJwD8n2COA$ and edit your user information as appropriate.

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Thank you for submitting your manuscript to Journal of Psychoeducational Assessment.

Sincerely,
Prachi Negi
Journal of Psychoeducational Assessment
JPA@sagepub.com

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Journal of Psychoeducational Assessment

Assessing an Extended Version of the Not-So-Simple View of Writing Model in School-Aged Students with ADHD

Journal:	*Journal of Psychoeducational Assessment*
Manuscript ID	Draft
Manuscript Type:	Regular Article
Keywords:	Not-So-Simple View of Writing, ADHD < Psychopathologies and symptomologies, Invariance, Multi-Group Structural Equation Models, Academic Assessment

Abstract: Students with Attention-Deficit/Hyperactivity Disorder (ADHD) are struggling writers. Yet no comprehensive model has been validated to explain their poor writing outcomes. This study aims to test whether an extended version of the Not-So-Simple View of Writing (NSVW) model can describe the effects of key abilities on writing performance in students with ADHD. The sample included students with and without ADHD who completed cognitive and academic measures in the Colorado Twin Project. A Multi-Group Structural Equation Model approach revealed that multiple broad cognitive abilities predicted student writing performance and basic writing skills predicted more advanced writing skills. Model fit was excellent both for a model with writing as a single latent variable (fully latent) and as interrelated manifest variables (partially latent). Furthermore, students with and without ADHD demonstrated comparable patterns of relationships among the variables in the model. Implications for the assessment of writing difficulties in students with ADHD are discussed.

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