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## Introduction

A lifetime diagnosis of ADHD is associated with many life impairments. There has been the suggestion in some trade publications that ADHD confers "gifts" on those with the diagnosis, including at least one peer-reviewed study reporting greater creativity in a sample of adults with ADHD (White & Shah, 2011). A previous study of Virtues did not reveal evidence that adults with ADHD scored higher than a non-**ADHD** group on a self-report inventory. The current study builds on the previous study to examine the question of whether there are specific Character Strengths that are associated with ADHD.

# **Purpose and Hypothesis**

The purpose of this study was to provide empirically-derived answers to the question of whether a diagnosis of ADHD is associated with "gifts" when compared to a non-ADHD control group using an established self-report questionnaire of Virtues, with each Virtue comprised of a set of Character Strengths. It was hypothesized that Character Strengths characterized by intact self-control would be lower among the ADHD group when compared to control groups (Self-Regulation, Perseverance, Prudence); on the other hand, it was hypothesized that Character Strengths characterized by creativity, big picture thinking, and other qualities attributed to ADHD would be higher among the ADHD group when compared with controls (Creativity, Curiosity, Kindness).

## **Materials and Methods**

The VIA Inventory of Strengths (VIA; Peterson & Seligman, 2004), was used as the dependent variable. Scores obtained from an online VIA survey of adults selfidentified with ADHD (ADD; n=99), a control group of adults self-identified as non-ADHD (NO ADD; n=54), and the normative database for the VIA (VIA, n=479,367) were compared. Subjects were recruited from the database of an ADHD Coaching training program and from online links to the VIA survey posted on social media. Each subject was assigned a unique passcode to access the online survey and to obtain their VIA results. By completing the survey, participants consented for their de-identified VIA survey results to be used in this study.

Participants were asked whether they had ever been diagnosed with ADHD by a healthcare professional in order to create the ADD group and a NO ADD control group. The normative database for the VIA was also a comparison group, although ADHD status of these respondents is unknown. Comparisons of the ADD, NO ADD, and VIA groups were performed on the 24 VIA Character Strengths.

## References

Peterson, C., & Seligman, M. E. P. (2004). Character strengths and virtues: A classification and handbook. Washington, **DC:** American Psychological Association

White, H. A., & Shah, P. (2011). Creative style and achievement in adults with attention-deficit/hyperactivity disorder. Personality and Individual Differences, 50, 673–677. doi:10.1016/j.paid.2010.12.015

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# **Further Information**

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## TABLE 1. Post hoc Tukey's Studentized Range Tests

## BEAUTY

					Comparis	ons significa	nt at the 0.0	)5 level are	
Comparis	Comparisons significant at the 0.05 level are				indicated by ***.				
indicated by ***.				Difference					
	Difference				Group	Between	Simultaneous 95%		
Group	Between	Simultan	eous 95%		Comparison	Means	Confiden	ce Limits	
Comparison	Means	Confiden	ce Limits		No - VIA	0.172028	-0.019773	0.363829	
ADD - No	0.071717	-0.215596	0.359030		No - ADD	0.273064	0.034638	0.511490	***
ADD - VIA	0.304080	0.133373	0.474787	***	VIA - No	-0.172028	-0.363829	0.019773	
No - ADD	-0.071717	-0.359030	0.215596		VIA - ADD	0.101036	-0.040626	0.242697	
No - VIA	0.232362	0.001235	0.463490	***	ADD - No	-0.273064	-0.511490	-0.034638	***
VIA - ADD	-0.304080	-0.474787	-0.133373	***	ADD - VIA	-0.101036	-0.242697	0.040626	
VIA - No	-0.232362	-0.463490	-0.001235	***					
LOVE						HONE	STY		
Comparisons significant at the 0.05 level are					Comparisons s	ignificant at	the 0.05 lev	el are indic	cated
indicated by ***.					by ***.				
	D:00	Ť.				Difference			

	indicated by ***.						by	***.		
	Difference						Difference			
Group	Between	Simultan	eous 95%			Group	Between	Simultane	eous 95%	
Comparison	Means	Confiden	ce Limits			Comparison	Means	Confiden	ce Limits	
No - ADD	0.328620	0.095659	0.561580	***		No - ADD	0.3444444	0.1511733	0.5377156	***
No - VIA	0.406219	0.218815	0.593623	***		No - VIA	0.4582718	0.3027958	0.6137479	***
ADD - No	-0.328620	-0.561580	-0.095659	***		ADD - No	-0.3444444	-0.5377156	-0.1511733	***
ADD - VIA	0.077600	-0.060814	0.216013			ADD - VIA	0.1138274	-0.0010046	0.2286594	
VIA - No	-0.406219	-0.593623	-0.218815	***		VIA - No	-0.4582718	-0.6137479	-0.3027958	***
VIA - ADD	-0.077600	-0.216013	0.060814			VIA - ADD	-0.1138274	-0.2286594	0.0010046	

## PRUDENCE

Comparisons significant at the 0.05 level are					Comparisons significant at the 0.05 level are indicated					
indicated by ***.						by ***.				
	Difference					Difference				
Group	Between	Simultan	eous 95%		Group	Between	Simultan	eous 95%		
Comparison	Means	Confiden	ce Limits		Comparison	Means	Confiden	ce Limits		
No - VIA	0.288757	0.093624	0.483890	***	No - VIA	0.279024	0.064812	0.493236	***	
No - ADD	0.728956	0.486388	0.971524	***	No - ADD	0.560269	0.293984	0.826555	***	
VIA - No	-0.288757	-0.483890	-0.093624	***	VIA - No	-0.279024	-0.493236	-0.064812	***	
VIA - ADD	0.440199	0.296077	0.584321	***	VIA - ADD	0.281245	0.123032	0.439458	***	
ADD - No	-0.728956	-0.971524	-0.486388	***	ADD - No	-0.560269	-0.826555	-0.293984	***	
ADD - VIA	-0.440199	-0.584321	-0.296077	***	ADD - VIA	-0.281245	-0.439458	-0.123032	***	

## CREATIVITY

Comparisons significant at the 0.05 level are indicated by ***.					Comparisons significant at the 0.05 level a indicated by ***.				
Difference					Difference	Uy .			
Group	Between	Simultane	eous 95%		Group	Between	Simultane	eous 95%	
Comparison	Means	Confiden	ce Limits		Comparison	Means	Confiden	ce Limits	
ADD - No	0.148822	-0.122316	0.419959		ADD - No	0.112121	-0.133666	0.357908	
ADD - VIA	0.469794	0.308697	0.630890	***	ADD - VIA	0.307465	0.161430	0.453499	***
No - ADD	-0.148822	-0.419959	0.122316		No - ADD	-0.112121	-0.357908	0.133666	
No - VIA	0.320972	0.102857	0.539088	***	No - VIA	0.195343	-0.002379	0.393065	
VIA - ADD	-0.469794	-0.630890	-0.308697	***	VIA - ADD	-0.307465	-0.453499	-0.161430	***
VIA - No	-0.320972	-0.539088	-0.102857	***	VIA - No	-0.195343	-0.393065	0.002379	

#### CURIOSITY

Compariso	Comparisons significant at the 0.05 level are					Comparisons significant at the 0.05 level				
	indicated by ***.					indicated by ***.				
	Difference						Difference	<i>.</i> .		
Group	Between	Simultan	nultaneous 95% nfidence Limits			Group		Simultan	eous 95%	
Comparison						Comparison		Confiden		
No - ADD	0.159933	-0.059859				No - VIA	0.207121	-0.004186		
No - VIA	0.186485	0.009675	0.363295	***		No - ADD	0.982492	0.719816	1.245167	
ADD - No	-0.159933	-0.379724	0.059859			VIA - No	-0.207121	-0.418429	0.004186	
ADD - VIA	0.026552	-0.104037	0.157141			VIA - ADD	0.775370	0.619302	0.931439	
VIA - No	-0.186485	-0.363295	-0.009675	***		ADD - No	-0.982492	-1.245167	-0.719816	
VIA - ADD	-0.026552	-0.157141	0.104037			ADD - VIA			-0.619302	

## FAIRNESS

Comparisons significant at the 0.05 level are indicated by ***.				Comparisons significant at the 0.05 level are indicated by ***.					
	Difference					Difference			
Group	Between	Simultane	eous 95%		Group	Between	Simultan	eous 95%	
Comparison	Means	Confiden	ce Limits		Comparison	Means	Confiden	ce Limits	
No - ADD	0.014815	-0.192402	0.222031		No - VIA	0.268125	0.101592	0.434657	***
No - VIA	0.260308	0.093614	0.427002	***	No - ADD	0.278114	0.071099	0.485129	***
ADD - No	-0.014815	-0.222031	0.192402		VIA - No	-0.268125	-0.434657	-0.101592	***
ADD - VIA	0.245493	0.122375	0.368611	***	VIA - ADD	0.009990	-0.113008	0.132988	
VIA - No	-0.260308	-0.427002	-0.093614	***	ADD - No	-0.278114	-0.485129	-0.071099	***
VIA - ADD	-0.245493	-0.368611	-0.122375	***	ADD - VIA	-0.009990	-0.132988	0.113008	

# Are There Character Strengths Associated with Adult ADHD?: Comparison of ADHD Adults and Controls on the VIA Inventory of Strengths

#### GRATITUDE

#### HOPE

#### HUMOR

#### PERSEVERANCE

#### JUDGMENT

#### **KINDNESS**

Comparisons significant at the 0.05 level are										
	indicated	by ***.								
	Difference									
Group	Between	Simultan	eous 95%							
Comparison	Means	Confiden	ce Limits							
ADD - No	0.008754	-0.202949	0.220458							
ADD - VIA	0.355189	0.229406	0.480973	***						
No - ADD	-0.008754	-0.220458	0.202949							
No - VIA	0.346435	0.176131	0.516739	***						
/IA - ADD	-0.355189	-0.480973	-0.229406	***						
VIA - No	-0.346435	-0.516739	-0.176131	***						

#### LEADERSHIP

Comparisons significant at the 0.05 level are										
indicated by ***.										
	Difference	Difference								
Group	Between	Simultan	eous 95%							
Comparison	Means	Confiden	ce Limits							
No - ADD	0.119529	-0.099386	0.338443							
No - VIA	0.246871	0.070767	0.422976	***						
ADD - No	-0.119529	-0.338443	0.099386							
ADD - VIA	0.127343	-0.002725	0.257411							
VIA - No	-0.246871	-0.422976	-0.070767	***						
VIA - ADD	-0.127343	-0.257411	0.002725							

#### LEARNING

Comparisons significant at the 0.05 level are									
indicated by ***.									
	Difference								
Group	Between	Simultan	eous 95%						
Comparison	Means	Confiden	ce Limits						
ADD - No	0.088889	-0.182408	0.360186						
ADD - VIA	0.294994	0.133803	0.456185	***					
No - ADD	-0.088889	-0.360186	0.182408						
No - VIA	0.206105	-0.012138	0.424349						
VIA - ADD	-0.294994	-0.456185	-0.133803	***					
VIA - No	-0.206105	-0.424349	0.012138						

#### PERSPECTIVE

Comparisons significant at the 0.05 level are									
indicated by ***.									
	Difference								
Group	Between	Simultan	eous 95%						
Comparison	Means	Confiden	ce Limits						
No - VIA	0.215841	0.043736	0.387946	***					
No - ADD	0.266667	0.052724	0.480610	***					
VIA - No	-0.215841	-0.387946	-0.043736	***					
VIA - ADD	0.050826	-0.076288	0.177940						
ADD - No	-0.266667	-0.480610	-0.052724	***					
ADD - VIA	-0.050826	-0.177940	0.076288						
No - VIA No - ADD VIA - No VIA - ADD ADD - No	0.215841 0.266667 -0.215841 0.050826 -0.266667	0.043736 0.052724 -0.387946 -0.076288 -0.480610	0.387946 0.480610 -0.043736 0.177940 -0.052724	*					

#### **SELF-REGULATION**

Comparisons significant at the 0.05 level are									
indicated by ***.									
	Difference								
Group	Between	Simultan	eous 95%						
Comparison	Means	Confiden	ce Limits						
VIA - No	0.073103	-0.130790	0.276997						
VIA - ADD	0.689265	0.538672	0.839857	***					
No - VIA	-0.073103	-0.276997	0.130790						
No - ADD	0.616162	0.362703	0.869620	***					
ADD - VIA	-0.689265	-0.839857	-0.538672	***					
ADD - No	-0.616162	-0.869620	-0.362703	***					

#### SOCIAL IQ

Comparise	ons significat	nt at the 0.0	5 level are					
	indicated	by ***.						
	Difference							
Group	Between	Simultan	eous 95%					
Comparison	Means	Confiden	ce Limits					
No - ADD	0.261953	0.041886	0.482019	**:				
No - VIA	0.457659	0.280628	0.634691	**:				
ADD - No	-0.261953	-0.482019	-0.041886	**:				
ADD - VIA	0.195706	0.064954	0.326459	**:				
VIA - No	-0.457659	-0.634691	-0.280628	**:				
VIA - ADD	-0.195706	-0.326459	-0.064954	**:				

## SPIRITUALITY

Comparisons significant at the 0.05 level are								
	indicated	by ***.						
	Difference							
Group	Between	Simultane	eous 95%					
Comparison	Means	Confiden	ce Limits		С			
No <sup>-</sup> VIA	0.162067	-0.126435	0.450569		U			
No - ADD	0.353535	-0.005100	0.712171					
VIA - No	-0.162067	-0.450569	0.126435					
VIA - ADD	0.191468	-0.021615	0.404551					
ADD - No	-0.353535	-0.712171	0.005100					
ADD - VIA	-0.191468	-0.404551	0.021615					

**One-way between subjects ANOVAs were conducted to compare scores on the 24** VIA Character Strengths for each comparison group. There was a significant effect of group on Character Strength for 20 out of 24 domains at the p < .05 level. Post hoc analyses between groups were performed on each of the 20 Character Strengths for which there were significant group effects (see Table 1).

There were no Character Strengths in which the ADD group scored significantly higher than both comparison groups. Thus, there were no Character Strengths in which adults with ADHD described themselves as being more "gifted" than both other groups. At best, there were Character Strengths in which there was no significant difference between the ADD and NO ADD groups, including Creativity, Curiosity, and Kindness. (The ADD group scored significantly higher than the VIA group on Creativity and Kindness.)

As hypothesized, the ADD group scored significantly lower than both the NO ADD and VIA groups on Character Strengths associated with intact self-control. That is, the NO ADD group scored significantly higher than the ADD group on measures of Perseverance, Prudence, and Self-Regulation, with strong effect sizes for Perseverance and Prudence (d= 1.13, .94, respectively) and a moderate effect size for Self-Regulation (d=.75). (There was no difference between NO ADD group and VIA group on Perseverance and Self-Regulation.)

There was no support for the hypothesis that adults with ADHD would score higher than non-ADHD adults on Character Strengths associated with "gifts" of ADHD, specifically Creativity, Curiosity, and Kindness (there were no differences compared with non-ADHD group). On the other hand, as predicted, the non-**ADHD** group scored significantly higher than the ADHD group on Character Strengths reflecting intact self-control skills. The finding of significantly low scores on Hope for the ADHD group is clinically relevant.

**ADHD** is an impairing condition that interferes with the expression and implementation of skills and competencies among diagnosed adults but these "gifts" are not necessarily associated with the clinical syndrome. In addition to any impairments stemming from the core symptoms of ADHD, the low levels of hope described by the ADHD group in this study also would interfere with efforts and attempts to develop strengths and skills.

Limits of the study include that diagnostic status relied on self-report or was not known. The VIA is not designed to necessarily assess the types of "gifts" that have been attributed to ADHD. Moreover, the VIA is a self-report scale; a possibility is that the ADHD "gifts" may have been under reported and might have been rated higher by blinded observers or by some objective assessment.

ZEST							
Comparisons significant at the 0.05 level are							
indicated by ***.							
	Difference						
Group	Between	Simultaneous 95%					
omparison	Means	Confidence Limits					
o - VIA	0.275907	0.067821	0.483992	***			
o - ADD	0.432323	0.173654	0.690993	***			
/IA - No	-0.275907	-0.483992	-0.067821	***			
A - ADD	0.156417	0.002728	0.310105	***			
DD - No	-0.432323	-0.690993	-0.173654	***			
DD - VIA	-0.156417	-0.310105	-0.002728	***			

# **Results**

## **Conclusions**