

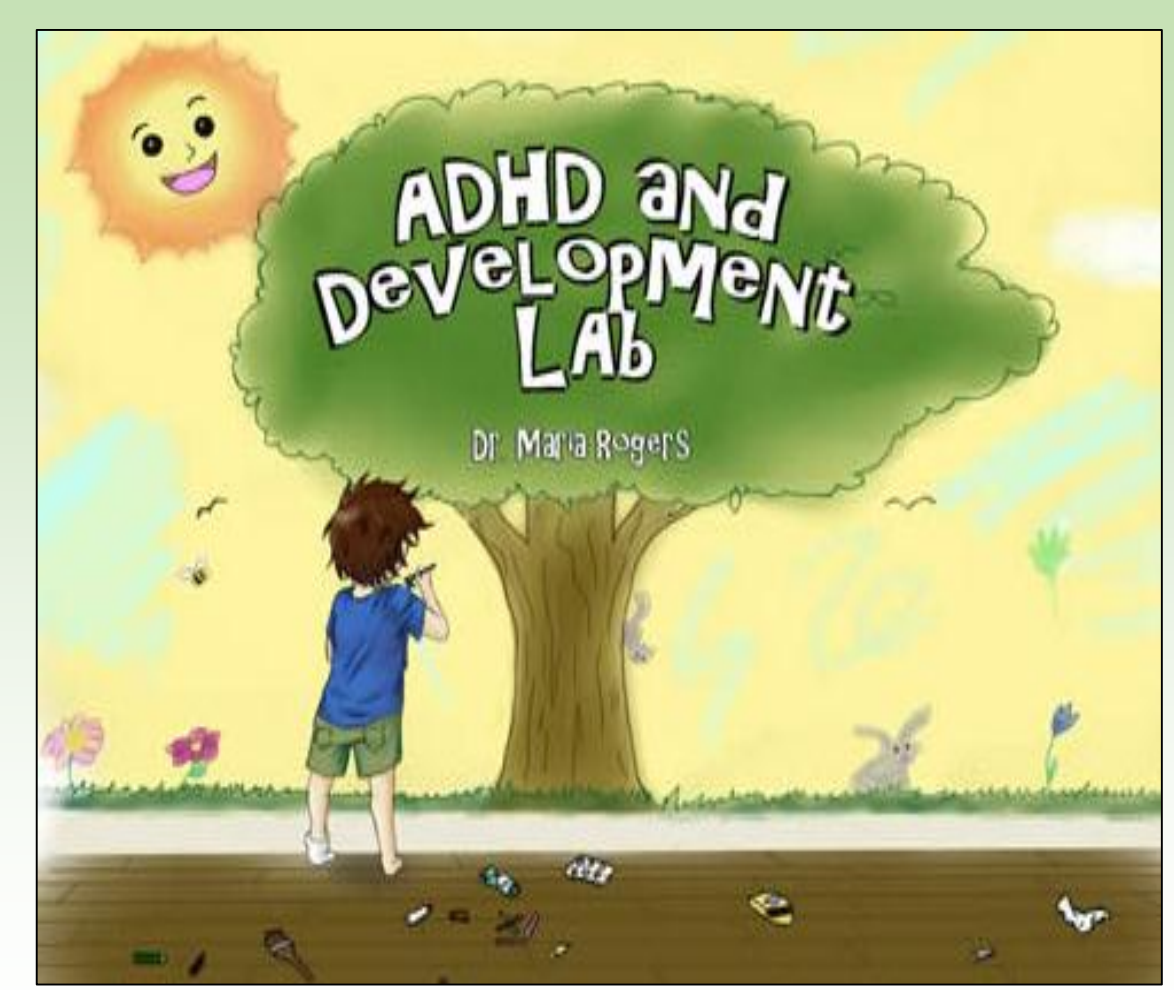


# Characteristics of undergraduates with previous ADHD diagnosis

Adrian Brown

Supervisors: Dr. Maria Rogers and Julia Ryan, PhD. Candidate

University of Ottawa, UROP - Winter 2018



uOttawa

## INTRODUCTION

- ADHD is characterized by symptoms of inattention, hyperactivity, and impulsivity, such as trouble concentrating, forgetfulness, or disorganization (Barkley, 2006).
- These symptoms can be problematic in the classroom context. In children and adolescents in educational contexts, prevalence in North America is at an estimated 5.9 to 7.1% (DuPaul, Weyandt, Odell, & Varejao, 2009; Willcutt, 2012).
- Although previously speculated that ADHD symptoms decline with age, ADHD symptoms in childhood may, in fact, persist (Newton-Howes, 2004). Recent figures suggest that up to two thirds of those diagnosed as children continue to display symptoms in adulthood (Barkley, 2006; Wender, Wolf, & Wasserstein, 2001)
- As young adults with ADHD transition to demanding environments, such as post-secondary education, their maladaptive and distressing symptoms may become more apparent (Montano & Young, 2012; Weiss & Hechtman, 1993).
- The crucial first step in providing the support networks for undergraduates struggling with ADHD is better understanding their characteristics. Since very little research has been done on this population, we are interested in the following information: gender, diagnosis type, current symptomology, and medication usage.

## OBJECTIVES

The goal of this study was to examine the diagnostic characteristics of undergraduates with a previous ADHD diagnosis in order to obtain fundamental information about this population.

### Research Question #1:

- To what degree do undergraduates with ADHD continue to display impairing symptoms of ADHD, and does this differ based on when the diagnosis was made?  
– Hypothesis: Uncertain, arguments for either direction.

### Research Question #2:

- Does current symptom level displayed by undergraduates with ADHD differ based on their medication usage history?  
– Hypothesis: Those with current medication usage will show lower symptom levels

## MATERIALS & METHODS

### Participants

Participants consisted of a total of 46 undergraduate students taking an introductory psychology course. The mean age of our participants was 19.5, the gender distribution was 60% female, and the subtypes of ADHD were evenly distributed.

### Materials

- ADHD Symptoms:** The Adult ADHD Self-Report Scale Symptom Checklist, also called the ASRS-v1.1, is an eighteen question checklist used to self-report ADHD symptomology (Adler, Kessler, & Spencer, n.d.). A score was determined from the Likert scale values from 0 = Rarely to 4 = Very Often.
- Diagnostic and Medication information:** A questionnaire asked participants a series of questions related to their diagnostic characteristics, including (1) their time since diagnosis, (2) the subtype of ADHD, (3) medication usage of the participant.

## RESULTS

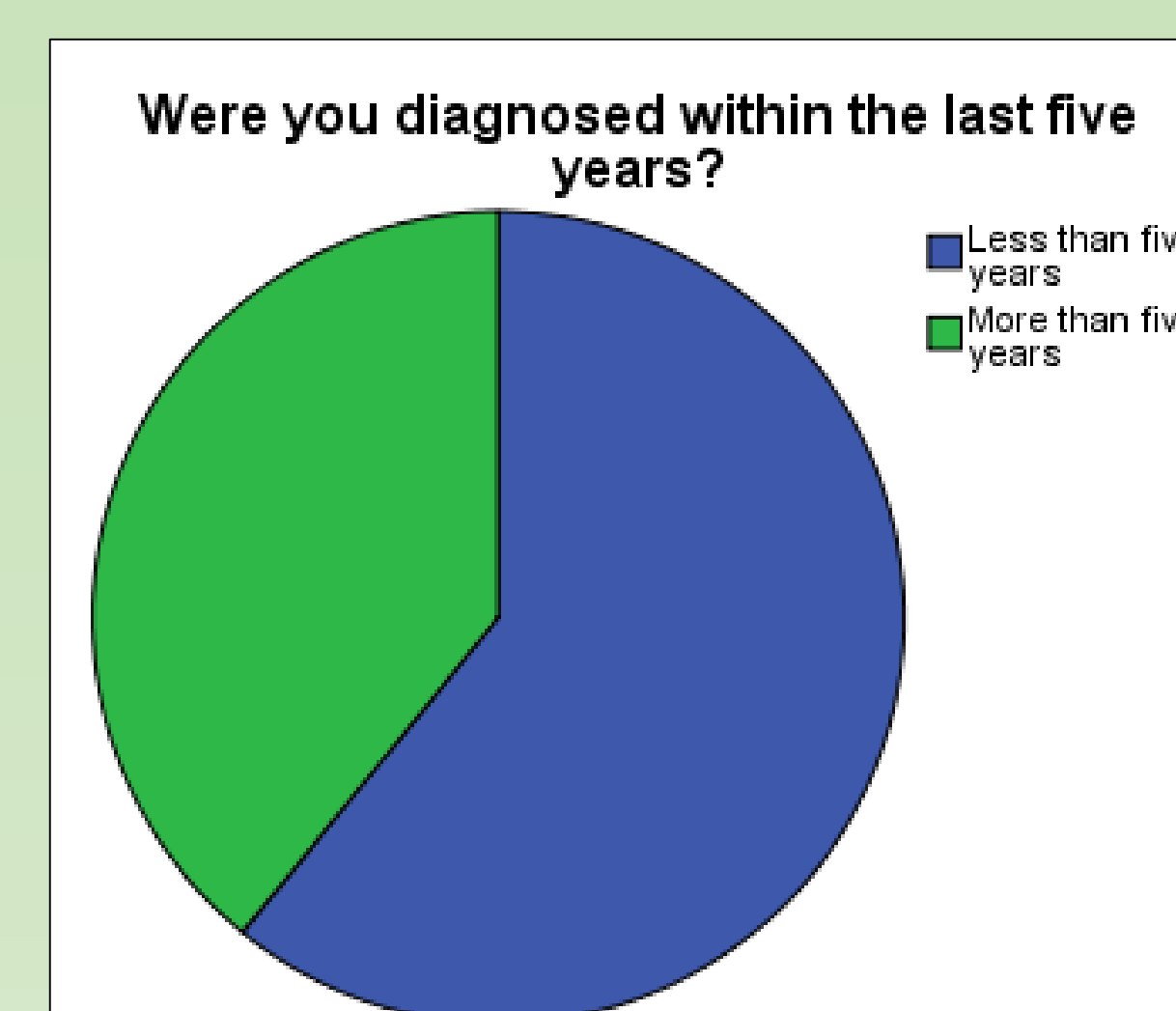
Scores of participants on Part A of Adult ADHD Self-Report Scale. A total result of 9 or higher indicates a level of symptoms highly consistent with an adult ADHD diagnosis:

Variable	Minimum	Maximum	Mean	Std. Deviation
ASRS Scores	4	22	15.50	4.06

### Research Question #1:

Independent Samples *t*-test:

Comparing mean differences of ASRS scores between participants who were diagnosed less than five years ago with participants diagnosed more than five years ago.



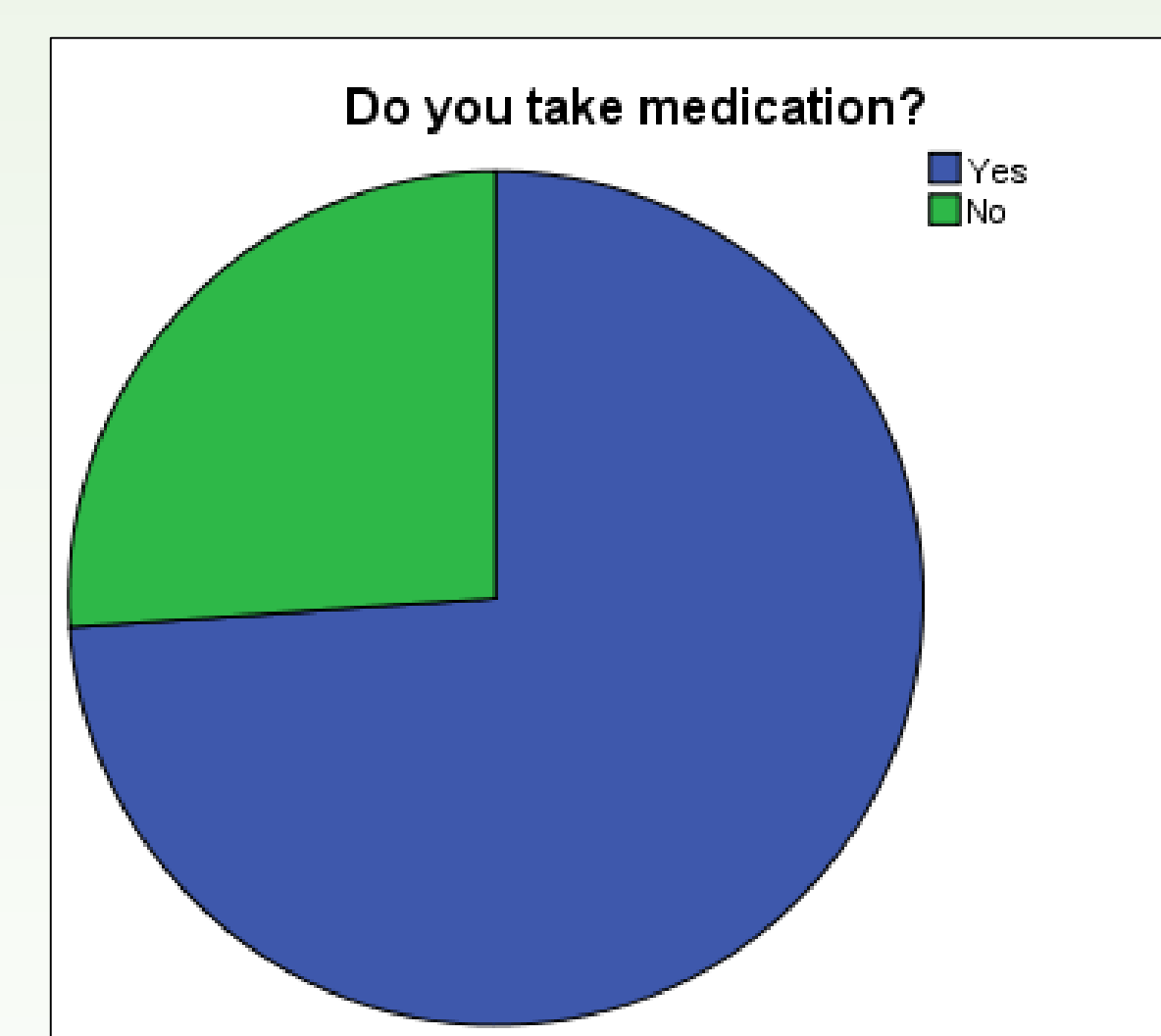
Group statistics	Time since diagnosis	N	Mean	Std. Deviation
ASRS Scores Part A	Less than five years ago	28	15.85	4.32
	More than five years ago	18	14.94	3.67

There is no statistically significant difference in the ASRS scores between participants who were diagnosed less than or more than five years ago  $t(44) = 0.739, p > 0.05$ .

### Research Question #2:

Independent Samples *t*-test:

Comparing mean differences of ASRS scores for participants who answered 'Yes' to current medication usage and participants who answered 'No' to current medication usage.



Group statistics	Currently taking medication?	N	Mean	Std. Deviation
ASRS Scores Part A	Yes	34	15.85	3.86
	No	12	14.50	4.62

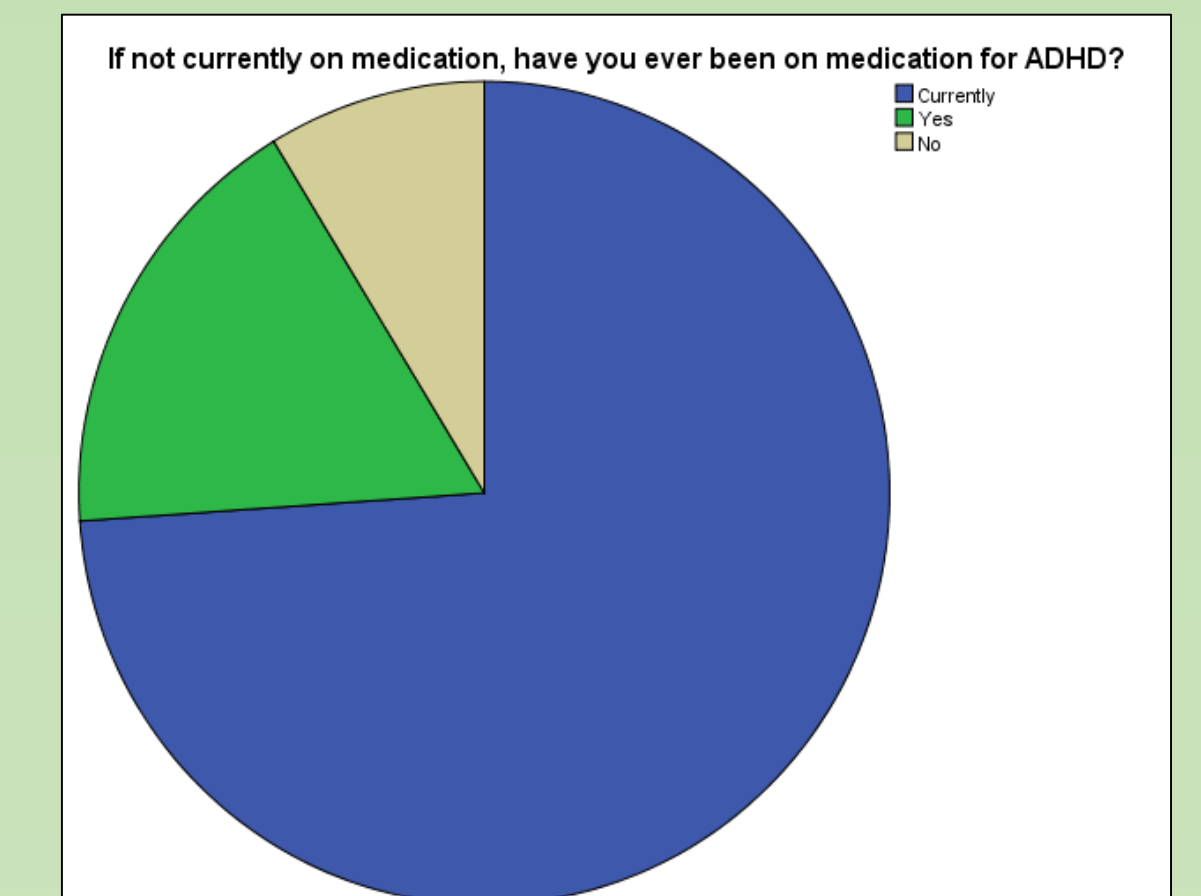
There is no statistically significant difference in the ASRS scores between participants who currently take medication and participants who do not currently take medication;  $t(44) = 0.991, p > 0.05$ .

## RESULTS, CONT'D

### Research Question #2, cont'd:

One-way ANOVA:

Comparing mean differences of ASRS scores between participants who currently take medication, who haven't taken medication in the past, and who have never taken medication.



	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	46.61	2	23.31	1.438	0.249
Within Groups	696.89	43	16.21	-	-
Total	743.50	45	-	-	-

There is nonsignificant effect of the ASRS scores across participants who currently take medication, who took medication in the past but do not currently, and who never took medication;  $F(2, 43) = 1.438, p = 0.249$ .

## LIMITATIONS

- The use of self-reports may produce a bias in undergraduates self-reporting their symptoms.
  - The implementation of a structured interview may serve well in verifying the validity of the symptom levels of the students
- The sample of undergraduates from an introductory psychology class may have served as a misrepresentation of the undergraduate ADHD population.

## CONCLUSIONS & FUTURE RESEARCH

- Undergraduates with a previous diagnosis of ADHD continue to exert clinical levels of ADHD.
- Medication usage as well as time since diagnosis do not appear to be significant variables in mitigating the symptoms of ADHD among undergraduates diagnosed.
- The addition of another variable may uncover the mediators of ADHD persistence among undergraduates.
  - For example, asking participants about the use of behavioural management strategies as a form of treatment for ADHD may be involved in the mitigation of symptoms of ADHD.

## REFERENCES

- Advokat, C. (2010). What are the cognitive effects of stimulant medications? Emphasis on adults with attention-deficit/hyperactivity disorder (ADHD). *Neuroscience & Behavioral Reviews, 34*(8), 1256-1266.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Barkley, R. A. (2006). *Attention Deficit/Hyperactivity Disorder: A Handbook For Diagnosis and Treatment*. (3rd ed.). New York, NY: Guilford Press.
- Barkley, R. A. (2006). The Nature of ADHD. In *Attention-deficit hyperactivity disorder. A handbook for diagnosis and treatment* (Vol. 1, pp. 3-75).
- Bogle, K., & Smith, B. (2009). Illicit Methylphenidate Use: A Review of Prevalence, Availability, Pharmacology, and Consequences. *Current Drug Abuse Reviews, 2*(2), 157-176.
- Currie, J., Stabile, M., & Jones, L. (2013). Do Stimulant Medications Improve Educational and Behavioral Outcomes for Children with ADHD? *Journal of Health Economics, 37*, 58-69.
- DuPaul, G. J., Weyandt, L. L., Odell, S. M., & Varejao, M. (2009). College Students With ADHD. *Journal of Attention Disorders, 13*(3), 234-250.
- Montano, C. B., & Young, J. (2012). Discontinuity in the Transition from Pediatric to Adult Health Care for Patients with Attention-Deficit/Hyperactivity Disorder. *Postgraduate Medicine, 124*(5), 23-32.
- Newton-Howes, G. (2004). What happens when children with attention deficit/hyperactivity disorder grow up? *Jrsm, 97*(11), 531-535.
- Weiss, G., & Hechtman, L. T. (1993). *Hyperactive children grown up: ADHD in children, adolescents, and adults*, 2nd ed. New York: Guilford Press.
- Wender, P. H., Wolf, L. E., & Wasserstein, J. (2001). Adults with ADHD. An overview. *Annals of the New York Academy of Sciences, 931*, 1-16.
- Willcutt, E. G. (2012). The Prevalence of DSM-IV Attention-Deficit/Hyperactivity Disorder: A Meta-Analytic Review. *Neurotherapeutics, 9*(3), 490-499.