Is Teacher Stigma Associated with the Delivery of Instructional Supports to Students with Disabilities?

by

Alexandra Aquilina

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Department of Educational Psychology

University of Alberta

Abstract

The present study is exploratory and was conducted to investigate teachers' beliefs about the academic potential of students with disabilities (SWD) based on their attributions and potentially stigmatizing views. In addition, the association between these attributions and teachers' reported likelihood of implementing instructional supports was investigated. Controllability, as described in Attribution Theory, is associated with stigmatizing views and was a variable of focus in the present study. Seven neurodevelopmental disorders were investigated and vignettes were used to depict each hypothetical student. A convenience sampling method was employed and thirty-seven practicing teachers within Canada participated by responding to questions following the vignettes. One-way within-subjects ANOVAs were conducted, using post-hoc comparisons to further investigate significant main effects. The results revealed that when teachers were asked if they believed that the student would demonstrate significant improvement to their academic ability if they received instructional supports, ratings were significantly different depending on the disability. Teacher ratings revealed that when asked about their own likelihood of implementing instructional supports to SWD, there was not a significant difference depending on the disability depicted. Teacher ratings were also found not to be significantly different when asked if each student was not succeeding academically due to lack of effort. However, they were significantly different depending on the disability when asked if they believed that the student was in control of their academic success. Implications for training, practice, and research are discussed.

Preface

This thesis is an original work by Alexandra Aquilina. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board under the Study Title: “Is Teacher Stigma Associated with the Delivery of Instructional Supports to Students with Disabilities?”, No. Pro00066553, November 18, 2016.

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Is Teacher Stigma Associated with the Delivery of Instructional Supports to Students with Disabilities?

Historically, students with disabilities (SWD) have demonstrated poorer educational outcomes than their peers without disabilities (Haber et al., 2015). Educational supports for SWD have primarily focused on instructional supports but, even with supports, a significant achievement gap continues to exist between SWD and students without disabilities (Haber et al., 2015). Classroom instruction involves far more than teachers simply delivering curricular content. Teachers may be differentiating their instruction to match the individual instructional needs of SWD to ensure that they are providing an inclusive educational environment; however, the extent to which this is occurring has yet to be established empirically. The Alberta Teachers' Association's guidelines for an inclusive education system suggest that teacher instruction meet the learning needs of all students, including those with various learning difficulties (Alberta Teachers' Association, 2014). Similarly, Ontario's Equity and Inclusive Education Strategy outlines the expectation of schools to provide effective instructional practices that account for the various needs of all students, which includes the use of differentiated instruction (The Ontario Public Service, 2014).

Student outcomes are significantly influenced by teacher characteristics, such as their interpersonal styles (Alvidrez & Weinstein, 1999). Despite the importance of interpersonal variables, research has not evaluated the relationship between attributions made by teachers about student ability on the likelihood that teachers will differentiate their instruction and provide instructional supports to SWD. If teachers are making misattributions regarding the difficulties of SWD, their likelihood of providing

instructional supports to them may be influenced. The purpose of this study is to investigate teachers' beliefs regarding SWD, specifically those with various neurodevelopmental disorders. Information regarding teachers' beliefs is based on the attributions they make, as well as the stigmatizing views they hold, regarding various disability types. In addition, the association between these attributions and teachers' reported likelihood of implementing instructional supports, their beliefs regarding the potential for SWD to respond to instructional supports, as well as their attributions regarding why SWD may not be succeeding academically will be investigated. Teacher attributions and stigmatization regarding SWD, as well as the associated behaviours or reactions, may be explained by Attribution Theory.

Attribution Theory

Attribution Theory, formulated by Bernard Weiner (1985, 1995), describes the processes by which individuals assign explanations (i.e., *attributions*) about the causes of outcomes (e.g., events, behaviors) that they experience or witness. As outlined in Figure 1, when individuals experience or witness an outcome, they attribute responsibility based on their understanding of the locus of causality, stability, and controllability of the outcome, which in turn will impact how they react (Weiner, 1985; Weiner, 1995).

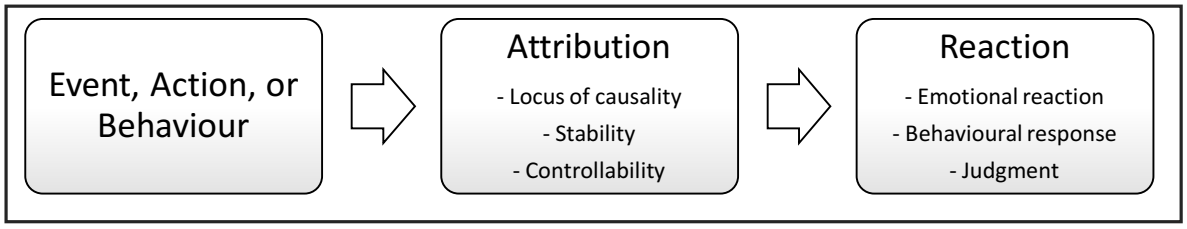

Figure 1. Outline of Attribution Theory.

Locus of causality refers to the extent to which one believes that the cause of an event is internal or external to the individual. Stability reflects how much an individual believes

that the event or outcome will evolve over time or can be changed. Controllability reflects the extent to which one believes that the outcome is controlled by the person experiencing the event. The attributions that individuals make about others based on these three dimensions will not only impact their emotional reaction and judgments of others, but will also determine the behavioural response toward them (Pickens, 2005). Attribution Theory suggests that when people make *misattributions* about others, they are often due to negative inferences or assumptions (Weiner, 1985; Weiner, 1995). These negative inferences or assumptions would be based on the three aforementioned dimensions, and may result in negative emotions and behaviours. Attribution Theory would predict that individuals' actions, beliefs, and expectations are primarily influenced by the inferences generated from these three dimensions. This theory may be useful in understanding teachers' assumptions, beliefs, and expectations regarding SWD, as well as their resulting behaviour towards them.

Influence of Teacher Expectations and Attributions

Rosenthal and Jacobson (1965) conducted a ground-breaking study to investigate the impact of teacher expectations on the achievement of students. They administered a standardized IQ test, Flanagan's Test of General Ability, to each student but disguised it as a fabricated test, labeled the 'Harvard Test of Inflected Acquisition'. Teachers were informed that the test results would predict which students would demonstrate a substantial IQ growth in the coming years. Following the test administration, children from each classroom were randomly selected to be characterized as students who would experience a large IQ growth. It was discovered that when teachers *expected* students to experience substantial IQ growth, the students would in fact *demonstrate* growth. The effect of the

expectations on the growth in IQ was attributed to a difference in treatment by the teachers. The results from this study are significant because they demonstrated that teacher beliefs, even when based on false information, had a substantial impact on the ability and performance of their students. The impact of teacher beliefs in this study resulted in positive outcomes for students when teachers had high expectations of them. However, the association between negative teacher attributions and various SWD has yet to be investigated.

Teacher attributions and SWD. Attributions made by teachers regarding various SWD, particularly neurodevelopmental disorders, have not been investigated thoroughly. Research conducted thus far has investigated limited subpopulations of SWD, such as students with learning disabilities (Clark, 1997; Woodcock and Vialle, 2011) and those with FASD (Atkinson, 2012).

Teachers in the Western world have been found to frequently view learning disabilities as internal, stable, and uncontrollable, which may lead them to have lower expectations of students with learning disabilities (Clark, 1997). Clark (1997) developed a measure that included eight vignettes about hypothetical male students with and without learning disabilities who failed a test. Teachers were given the measure and asked to provide evaluative feedback, rate their level of anger and pity towards the student, and rate their expectations following each hypothetical student's failure. The purpose was to determine the expectations and responses of teachers, depending on whether or not the hypothetical student had a learning disability. In most cases, it was found that teachers were more likely to reward the student with a learning disability compared to their peers without a learning disability. Further, they felt less anger and more pity toward them, and their

expectation of future failure was higher. These results suggest that teachers make causal attributions toward their students and will respond to students with a learning disability in a way that is based on the belief that these students will fail more. In addition, they believe that these students are more deserving of pity, are less deserving of anger, and that they should be provided with more rewards and less punishment than students without a learning disability. Teachers are a crucial source of information about a student's personal competence and these attributions are likely to send students with learning disabilities the message that they are less competent, and that less is expected from them, compared to their peers without a learning disability. Woodcock and Vialle (2011) conducted a study to build upon the findings of Clark (1997), which resulted in similar findings. This study determined that teachers held negative attributional beliefs toward students with learning disabilities and considered them to be lacking in ability compared to students without a learning disability.

Atkinson (2012) investigated pre-service teachers' attributions toward students with FASD. It was determined that when pre-service teachers attributed the difficulties that children with FASD experience to a combination of various factors, such as biological, environmental, and lack of education factors, they believed their difficulties to be out of their control. The finding that teachers believe their difficulties to be out of their control is concerning, as it indicates that pre-service teachers may not believe that the difficulties experienced by students with FASD can be improved through intervention (Atkinson, 2012).

Stigma

Research that has been conducted in the area of stigma is extensive. The first definition of stigma was generated by Goffman (1963), and it was described as a characteristic that discredits and taints a person. Since Goffman, theories have been created with the intent of explaining stigma, such as the Labeling Theory, which states that stigmatization is a sequential process and begins with someone being negatively labeled by others, followed by estrangement and devaluation, which leads to discrimination (Corrigan, Watson, & Barr, 2006). Link and Phelan (2001) hypothesized that stigma occurs when there is a unity of labeling, stereotyping, separating a group of "us" from "them", status loss, and discrimination.

Stigmatization of children with disabilities. Stigma research that is child-focused has demonstrated that stigmatization by the general public is determined by the condition, which means that people will respond differently depending on the disability that the child allegedly has (Pescosolido, Fettes, Martin, Monahan, & McLeod, 2007; Walker, Coleman, Lee, Squire, & Friesen, 2008). Pescosolido et al. (2007) have determined that if information presented in a story about a child depicts them as being dangerous or having a mental disability that impacts their emotions and behaviours, rather than having a physical disability, people are more likely to respond negatively to the child. They were found to prefer to keep a social distance from the child and their family, wanted the child to be separated from other children, and preferred that the child receive a severe treatment procedure, such as treatment in a restrictive setting.

Stigma and teachers. Regardless of whether or not an individual knows someone with a disability or has sufficient knowledge of, or experience with, individuals with

disabilities, stigmatizing beliefs are held by a wide-range of individuals in society (Moses, 2010). This knowledge is concerning, considering that teachers may be among the individuals who hold stigmatizing beliefs. Stigma is a natural reaction and because it exists in the general population, it may also be occurring in the classroom among teachers. Given that there are no known studies in this area, it is not known if this is the case. Teachers are friendly individuals who have flexible viewpoints (Eryilmaz, 2014) and therefore, they may not demonstrate the same level of stigmatization as the general population. However, given that there are no previous studies in this area, it remains an empirical question.

Stigma and Attribution Theory. Weiner (1995) explained that some stigmatized illnesses are considered to be more controllable than others and because of this, these individuals will be considered more in control or more responsible compared to those with illnesses that are considered to be less controllable. Beliefs about another's responsibility and thus, the resulting feelings of pity or anger, are based on such perceptions of controllability (Weiner, 1995). In this way, Weiner's Attribution Theory helps to explain stigmatization of others.

Present Study

After an extensive literature search, no published research was found that examined how teacher attributions or feelings of stigma are associated with the delivery of instructional supports to students with various neurodevelopmental disorders. It is thought that when people make misattributions about others, they are often based on assumptions, which frequently result in negative emotions and behaviours. With this knowledge, it follows logically that stigma, and any resulting stigma-related behaviours, may be explained by Attribution Theory.

It is important to first identify if misattributions are being made, which is of particular interest in the classroom in terms of misattributions made by teachers regarding students' disabilities and behaviours. Given that misattributions are classroom variables that can be altered with an intervention such as Attributional Retraining (Haynes Stewart, Clifton, Daniels, Perry, Chipperfield, & Ruthig, 2011), it follows that stigmatizing views can be altered as well. Altering potential misattributions regarding students' disabilities may improve teacher beliefs and delivery instructional supports, which may consequently improve educational outcomes for SWD.

The purpose of this exploratory study is to investigate teachers' beliefs about the academic potential of SWD, particularly those with neurodevelopmental disorders, based on their attributions and stigmatizing views. Further, the association between these attributions and teachers' reported likelihood of implementing instructional supports will be investigated. As explained by Weiner (1995), stigmatized illnesses are considered to be more controllable than illnesses that are not stigmatized. Because controllability is associated with stigma, the controllability aspect of Attribution Theory will be the variable of focus in the present study, rather than locus of causality or stability. In addition, to further investigate the role of control, teachers' perception of whether each SWD's academic difficulty is due to lack of effort will be investigated. Controllability has been examined and explained in terms of perceptions of effort, as effort is viewed as a controllable factor (Harvey, Madison, Martinko, Crook, & Crook, 2014).

Seven neurodevelopmental disorders taken from the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013) will be investigated, and vignettes will be used to depict hypothetical students with one of

each of the seven disabilities. The present study is exploratory and meant to provide insight into the educational environments of SWD. Specifically, the results will examine potential teacher misattributions regarding SWD based on assumptions about their disability and whether these assumptions are associated with teachers' instructional practices for SWD. The results may be used to implement teacher intervention based on the implications associated with misattributions regarding SWD, thereby improving upon these misattributions.

The following research questions were developed to examine how misattributions might be associated with teachers' instructional practices for SWD:

1. *To what extent do teacher beliefs about the student's potential for improvement with instructional supports differ as a function of a student's disability type?*
2. *To what extent do teachers' likelihood of implementing instructional supports differ as a function of a student's disability type?*
3. *To what extent do the attributions made by teachers regarding each student's level of controllability over their academic success differ as a function of the disability type?*

Method

This study uses quantitative methods and was conducted using cross-sectional data from a survey examining the attitudes, beliefs, and opinions of participants (Appendix A). Surveys were administered to a convenience sample drawn from the population of practicing teachers in Canada. This study employed several one-way within subjects analyses of variance (ANOVA) to investigate each of the three research questions. The responses of teachers were investigated and compared in terms of their opinions and

attributions regarding SWD; particularly, students with various neurodevelopmental disorders. It is assumed that the analyses will result in a distinguished difference in teacher beliefs about each students' ability and their reported likelihood of implementing instructional supports, depending on the disability being depicted. It is further assumed that because the survey design is completely confidential, all participants will answer honestly and not edit their responses based on what they believe others would expect of them. Finally, in using one-way within subjects ANOVAs, it is assumed that each participant's score on one variable is independent of the scores from other participants on the same variable.

Participants

Thirty-nine teachers from a variety of provinces and schools within Canada participated in this survey. This study employed a convenience sampling method to study the responses from practicing teachers in Canada. Participants included thirty-nine full-time elementary and high school teachers. Participants ranged from 24- to 61-years old (M = 35.41 years, SD = 10.75 years) and their years of service as teachers ranged from one to 25 years (M = 8.77 years, SD = 7.62 years). Exclusion criteria included pre-service or retired teachers, supply teachers, those who were not teaching in kindergarten to Grade 12 classrooms, and teachers who are otherwise not currently practicing. Consequently, the data from two participants was omitted from the analysis, as they are university professors. The thirty-seven teachers that were included in analyses are from Alberta (n = 10), British Columbia (n = 2), Manitoba (n = 2), New Brunswick (n = 2), Nova Scotia (n = 3), Ontario (n = 14), Prince Edward Island (n = 1), Quebec (n = 1), or did not disclose (n = 2).

Measure

The survey was created to align with the research questions, as no survey of this sort currently exists within the literature. The survey included seven vignettes, each depicting a hypothetical student with one of the seven neurodevelopmental disorders of interest. The gender of the students described in the vignettes was not specified, as gender was not a factor in the research questions and it may have impacted teachers' perception of the student. Teachers were asked to answer questions based on each of these fictitious students, as if they were students in their own classroom. Responses to each question required participants to rate their level of agreement or disagreement with each statement on 5-point rating scale. Finally, demographic information including age, gender, their primary role in school, grade(s) they teach, how long they have been teaching, province, as well as school board in which they teach were collected.

Procedure

Prior to contacting participants, approval to administer the survey and conduct the study was obtained from the University of Alberta Research Ethics Board. Data was collected between the months of October and December 2016, using a web-based electronic data collection. Google Forms was used to administer the survey, as security of the data is guaranteed through this program. To ensure that the data remained confidential, the data was kept on a password protected and encrypted computer, the data documents were password protected, and only the primary researcher had access to the password and responses. In addition, the participant names were separated from their responses upon completion of the survey. The Associate Superintendent of a suburban school district in Western Canada agreed to allow the implementation of the survey to teachers within that

school district. With this approval, an email containing the Information Letter and the link to the survey was sent to the Associate Superintendent, who forwarded it to the principals of each school in the district. Each of the principals then forwarded the email to all of the teachers within their school. A week later, a reminder email was sent, asking teachers to complete the survey if they had not done so already. The reminder email also contained the Information Letter and the link to the survey.

In addition to the Associate Superintendent of the school district in Western Canada, the vice principal of a private elementary and high school in Eastern Canada agreed to implement the survey within their school. The Information Letter and survey was sent to the vice principal of the school in Eastern Canada in the same way and on the same days that they were sent to the Associate Superintendent of the school district in Western Canada.

The survey took approximately 15-20 minutes to complete and began with the consent form, which participants had to complete if they wished to take part in the survey. The consent form included information regarding the rights that were guaranteed to each participant and stated that by providing their electronic signature on the form, they were acknowledging the protection of their rights and were agreeing to participate in the study. Participants were provided with the primary researcher's and supervisor's contact information, in the event that there were any questions or information needed. The survey remained open for teachers to complete for two weeks.

The method of recruiting participants from the school district in Western Canada and the school in Eastern Canada did not yield enough participants (n = 8); thus, an additional data collection procedure was developed. After an amendment to the ethics

application was approved, the survey was posted to a social media site, Facebook, for voluntary participation by teachers within Canada who are currently practicing and teaching students in kindergarten to Grade 12 classrooms. Participation was completely voluntary, as no one was contacted directly to be recruited to participate in the study. The survey remained open for completion from November 18th, 2016 until December 31st, 2016 and yielded an additional thirty-one participants.

Design and Analysis

Preliminary analyses were conducted to provide some validity evidence for the items related to Attribution Theory. In addition to being asked about each student's level of controllability, participants were also asked about each student's locus of causality and stability. Locus of causality was assessed by asking teachers the extent to which they believe that each student's academic difficulty is due to their disability. This question is intended to determine the extent to which they believe that the students' academic difficulty is internal to them and an outcome of their disability, as disabilities have been considered internal attributions (Harvey et al., 2014). Stability was assessed by asking teachers whether they believe each student's disability is stable (i.e. something that will remain unchanged over time) or dynamic (i.e. something that will change over time) and determining if these classifications will influence how likely they are to provide supports. A large correlation matrix will be generated to examine the correlations among the variables.

One-way within-subjects ANOVAs were conducted to determine if there was a difference in teacher perceptions depending on the presenting disability type. The disability types (i.e. the independent variable), included Down Syndrome, FASD, a Language

Disorder, Autism Spectrum Disorder (ASD), Attention-Deficit/Hyperactivity Disorder (ADHD), Specific Learning Disorder with Impairment in Reading, and Tourette's Disorder. The dependent variables were a variety of teacher attributions and intentions that are thought to vary according to specific student characteristics. The specific teacher attributions and intentions of interest were: (1) the student's likelihood of academic improvement if they received instructional supports; (2) the teacher's reported likelihood of implementing instructional supports to the student; (3) the extent to which the student had control over their academic success; and (4) the extent to which the student's lack of academic success was due to lack of effort.

Results

Teacher Attributions and Locus of Causality

A one-way within-subjects ANOVA revealed that there was not a significant main effect in terms of teacher perception of each SWD *not succeeding academically because of their disability*, $F(6, 216) = 1.06$, $p = 0.39$, within-subjects $\eta^2 = .03$. Partial eta squared suggests that there is a small effect and that the type of disability accounts for 3% of the total variance. The descriptive statistics are outlined in Table 1.

Table 1

Descriptive Statistics for Not Succeeding Academically Due to Disability

	M	*SD*	Min	Max	Skew	Kurtosis
Down Syndrome	3.43	1.17	1.00	5.00	-0.60	-0.37
FASD	3.49	1.28	1.00	5.00	-0.51	-0.59
Language Disorder	3.49	1.28	1.00	5.00	-0.51	-0.59
ASD	3.57	1.32	1.00	5.00	-0.65	-0.64
ADHD	3.30	1.22	1.00	5.00	-0.32	-0.56
SLD – Reading	3.65	1.27	1.00	5.00	-0.65	-0.54
Tourette's Disorder	3.43	1.30	1.00	5.00	-0.48	-0.80

Note. 1 = strongly disagree; 5 = strongly agree. FASD = Fetal Alcohol Spectrum Disorder; ASD = Autism Spectrum Disorder; ADHD = Attention Deficit Hyperactive Disorder; SLD—Reading = Specific Learning Disorder with Impairment in Reading.

Teacher Attributions and Stability

An independent samples *t*-test revealed that there was not a significant difference in teacher ratings in terms of their likelihood of implementing instructional supports depending on whether they thought the disability to be *stable* (M=4.849, SD=4.11) or dynamic (M=4.799, SD=0.455), $t(270) = -0.73$, $p > 0.05$.

Survey Reliability and Validity

Appendix B shows the raw correlation matrix, which summarizes the correlations among all survey questions. The correlations provide some support for the reliability and validity of the measure. Internal consistency of the results within the measure are demonstrated, as the majority of the same question are correlated to each other (i.e. question A is correlated with question A, question B is correlated with question B, etc.) when asked regarding each of the disabilities. Further, questions A (i.e. I believe that this student is not succeeding academically due to lack of effort [motivation]) and D (i.e. I believe that this student is in control of their academic success) are both related to the

student's perceived level of control over their academic success (i.e. controllability). The responses to questions A and D were moderately to highly correlated in multiple cases and this demonstrates internal consistency and convergent validity. Because both question A and D measure a similar construct, this correlation was anticipated. Finally, locus of causality and controllability are expected to be correlated to one another, as there is an overlap between locus of causality and controllability (Harvey et al., 2014). The results of the correlation demonstrate that questions A (i.e. controllability), D (i.e. controllability), and B (i.e. locus of causality) are moderately to highly correlated in multiple cases. Finally, this measure demonstrates face validity, as it asks questions regarding all aspects of the theories and constructs that it intended to measure.

Improvement with Instructional Supports

A one-way within-subjects ANOVA revealed a significant main effect in terms of teacher perception of the likelihood that each SWD will *demonstrate significant improvement in their academic ability if they received instructional supports*, $F(6, 216) = 3.47$, $p < 0.01$, within-subjects $\eta^2 = .09$. Partial eta squared suggests that there is a moderate effect and that the type of disability accounts for 9% of the total variance. Post-hoc pairwise comparisons were conducted, using a Bonferroni correction to maintain an alpha level of .05, which revealed that students with ASD were rated as significantly *more* likely to improve academically if they received instructional supports compared to students with ADHD ($p = .05$). The descriptive statistics are outlined in Table 2.

Table 2

Descriptive Statistics for Improvement with Instructional Supports

	M	*SD*	Min	Max	Skew	Kurtosis
Down Syndrome	4.46	0.80	3.00	5.00	-1.05	-0.57
FASD	4.27	1.07	1.00	5.00	-1.73	2.91
Language Disorder	4.27	1.07	1.00	5.00	-1.73	2.91
ASD	4.49	0.87	2.00	5.00	-1.43	0.72
ADHD	4.05	1.08	1.00	5.00	-0.95	0.27
SLD—Reading	4.24	0.98	1.00	5.00	-1.45	2.15
Tourette's Disorder	4.05	1.05	2.00	5.00	-0.72	-0.77

Note. 1 = strongly disagree; 5 = strongly agree. FASD = Fetal Alcohol Spectrum Disorder; ASD = Autism Spectrum Disorder; ADHD = Attention Deficit Hyperactive Disorder; SLD—Reading = Specific Learning Disorder with Impairment in Reading.

Likelihood of Implementing Instructional Supports

A one-way within-subjects ANOVA revealed that there was not a significant main effect in terms of teacher reported *likelihood of implementing instructional supports*, depending on the disability, $F(6, 216) = 0.35$, $p = 0.91$, within-subjects $\eta^2 = .01$. Partial eta squared suggests that there is a small effect and that the type of disability accounts for 1% of the total variance. Descriptive statistics are outlined in Table 3.

Table 3

Descriptive Statistics for Likelihood of Implementing Instructional Supports

	M	*SD*	Min	Max	Skew	Kurtosis
Down Syndrome	4.81	0.46	3.00	5.00	-2.50	6.08
FASD	4.78	0.48	3.00	5.00	-2.20	4.48
Language Disorder	4.78	0.48	3.00	5.00	-2.20	4.48
ASD	4.84	0.37	4.00	5.00	-1.91	1.75
ADHD	4.81	0.46	3.00	5.00	-2.50	6.08
SLD—Reading	4.76	0.49	3.00	5.00	-1.95	3.27
Tourette's Disorder	4.78	0.48	3.00	5.00	-2.20	4.48

Note. 1 = very unlikely; 5 = very likely. FASD = Fetal Alcohol Spectrum Disorder; ASD = Autism Spectrum Disorder; ADHD = Attention Deficit Hyperactive Disorder; SLD—Reading = Specific Learning Disorder with Impairment in Reading.

Teacher Attributions and Controllability

Control. A one-way within-subjects ANOVA revealed a significant main effect in terms of teacher perception of each SWD *being in control of their academic success*, $F(6, 216) = 5.53$, $p < 0.01$, within-subjects $\eta^2 = .13$. Partial eta squared suggests that there is a moderate effect and that the type of disability accounts for 13% of the total variance. Post-hoc pairwise comparisons were conducted, using a Bonferroni correction to maintain an alpha level of .05, which revealed that students with Down Syndrome were rated as significantly *less* in control of their academic success compared to students with FASD ($p = .04$), a Language Disorder ($p = .04$), and ADHD ($p = .001$). Students with ASD were rated as significantly *less* in control of their academic success compared to students with ADHD ($p = .02$). The significant pairwise comparisons are presented in Table 4. The descriptive statistics are outlined in Table 5.

Table 4

Significant Bonferroni Comparisons for Control Over Academic Success

Comparisons	Mean Difference	Std. Error	95% CI Lower Bound	95% CI Upper Bound
Down Syndrome vs. FASD	-.57*	.17	-.91	-.23
Down Syndrome vs. Language Disorder	-.57*	.17	-.91	-.23
Down Syndrome vs. ADHD	-.68*	.15	-.97	-.38
ASD vs. ADHD	-.57*	.16	-.89	-.25

* $p < 0.05$

Table 5

Descriptive Statistics for Being in Control of their Academic Success

	M	*SD*	Min	Max	Skew	Kurtosis
Down Syndrome	2.35	0.72	1.00	4.00	0.32	0.14
FASD	2.92	0.98	1.00	5.00	-0.02	-0.82
Language Disorder	2.92	0.98	1.00	5.00	-0.02	-0.82
ASD	2.46	0.77	1.00	4.00	0.14	-0.19
ADHD	3.03	0.99	1.00	5.00	0.31	-0.42
SLD—Reading	2.73	0.96	1.00	5.00	0.19	-0.38
Tourette's Disorder	2.76	0.93	1.00	5.00	0.52	0.48

Note. 1 = strongly disagree; 5 = strongly agree. FASD = Fetal Alcohol Spectrum Disorder; ASD = Autism Spectrum Disorder; ADHD = Attention Deficit Hyperactive Disorder; SLD—Reading = Specific Learning Disorder with Impairment in Reading.

Lack of effort. A one-way within-subjects ANOVA revealed that there was not a significant main effect for teacher perception of each SWD *not succeeding academically due to lack of effort*, $F(6, 216) = 2.05$, $p = 0.06$, within-subjects $\eta^2 = .05$. Partial eta squared suggests that there is a small effect and that the type of disability accounts for 5% of the total variance. The descriptive statistics are outlined in Table 6.

Table 6

Descriptive Statistics for Not Succeeding Academically Due to Lack of Effort

	M	*SD*	Min	Max	Skew	Kurtosis
Down Syndrome	1.49	1.07	1.00	5.00	2.48	5.53
FASD	1.63	1.01	1.00	5.00	1.87	3.21
Language Disorder	1.63	1.01	1.00	5.00	1.87	3.21
ASD	1.41	0.83	1.00	5.00	2.77	9.17
ADHD	1.84	1.09	1.00	5.00	1.55	2.20
SLD—Reading	1.65	0.95	1.00	5.00	1.81	3.63
Tourette's Disorder	1.46	0.65	1.00	3.00	1.12	0.21

Note. 1 = strongly disagree; 5 = strongly agree. FASD = Fetal Alcohol Spectrum Disorder; ASD = Autism Spectrum Disorder; ADHD = Attention Deficit Hyperactive Disorder; SLD—Reading = Specific Learning Disorder with Impairment in Reading.

Discussion

Improvement with Instructional Supports

The first research question investigated the extent to which teacher beliefs about a student's potential for response to instructional supports would vary, depending on the student's disability type. When teachers were asked if they believed that the student would demonstrate significant improvement to their academic ability if they received instructional supports, ratings were significantly different depending on the disability. Teachers regarded students with ASD as being significantly more likely to improve academically if they received instructional supports compared to students with ADHD. This suggests that teachers do not believe that students with ADHD will benefit from instructional supports to the same extent as a child with ASD.

As found by Rosenthal and Jacobson (1965) in their ground-breaking study, when a teacher has certain expectations of their students, the students' performance will be substantially impacted as a result of how they are treated by their teacher. Clark (1997) and Woodcock and Vialle (2011) found that teachers will make causal attributions toward their students and expect less from their students with learning disabilities compared to their students without learning disabilities. In the case of the current study, if teachers do not expect students with ADHD to improve with instructional supports, it is possible that they may be less likely to implement them with these students. It has been supported by previous research that teachers may be treating students differently depending on their beliefs (e.g. Rosenthal & Jacobson, 1965; Clark, 1997; Woodcock & Vialle, 2011; Atkinson, 2012). It is likely that a teacher will treat a student who they believe will not benefit from instructional support differently than they would treat a student without a

disability, or one with a disability that they believe would benefit, such as one with ASD. In a more recent study, Mulholland, Cumming, and Jung (2015) investigated teacher knowledge and attitudes toward students with ADHD. The results demonstrated that teachers had negative feelings regarding teaching students with ADHD, found the behaviours that are associated with ADHD to be irritating within a classroom, and that such behaviours caused teachers stress. Based on these teacher attitudes, there are likely negative classroom dynamics between teachers and students with ADHD. The negative feelings and attitudes that teachers feel toward students with ADHD may be connected to their beliefs regarding how likely these students are to benefit from instructional supports, particularly compared to SWD that teachers may not have such negative attitudes toward. Kos, Richdale, and Hay (2006) demonstrated that teachers have negative attitudes toward students with ADHD and believe that when teaching these students, increased time and effort is required from the teacher. This belief about increased time and effort may partially account for why teachers believe that students with ADHD will not benefit from instructional supports as easily as other SWD.

Likelihood of Implementing Instructional Supports

The second research question investigated whether teacher likelihood of implementing instructional supports would differ as a function of a student's disability type. Teacher ratings revealed that when asked about their likelihood of implementing instructional supports, there was not a significant difference depending on the disability depicted. This suggests that teachers are willing to implement instructional supports to students, regardless of the disability that they have.

The results of the second research question are unexpected given the results related to the first research question. Teachers revealed a belief that students with ASD are significantly more likely to show academic improvements if they received instructional supports compared to students with ADHD. This is not reflected in the results when asked their likelihood of implementing instructional supports depending on the disability, as there was not a significant difference depending on the disability depicted. Pickens (2005) explained that the attributions that individuals make about others will impact their emotional reactions and judgments of others and, as a result, these attributions will further determine the behavioural response toward others. Because attributions and beliefs about others determine the resulting behavioural responses towards them, it would be expected that if a teacher does not believe that a student with ADHD will benefit from instructional supports to the same extent as a student with ASD, they will be less likely to implement the supports. Contrary to this assumption, the results demonstrate that teachers report a likelihood of implementing instructional supports, regardless of how much they believe that the student will benefit from them.

Teacher Attributions Regarding Controllability

The final research question investigated teacher attributions regarding controllability, in terms of why each student was not succeeding academically. It sought to determine if attributions related to controllability differed as a function of the disability type. Teacher ratings were found not to be significantly different when asked if each student was not succeeding academically due to lack of effort. However, teacher ratings were significantly different depending on the disability when asked if they believed that the student was in control of their academic success.

Results demonstrated that students with Down Syndrome were thought to be significantly less in control of their academic success compared to students with FASD, a Language Disorder, and ADHD. Further, teachers believed that students with ADHD were significantly more in control of their academic success compared to students with ASD. Clark (1997) explained that students with learning disabilities are frequently viewed as not being in control, which causes their teachers to have lower expectations of them. The attributions demonstrated in this study regarding each students' level of control may be associated with not only teachers' expectations of various SWD, but also how they behave toward SWD (Rosenthal & Jacobson, 1965; Woodcock & Vialle, 2011; Atkinson, 2012). Atkinson (2012) explained that when teachers believed that the difficulties faced by students with FASD were out of the students' control, they would be less likely to believe that these difficulties could be improved through intervention. Based on the results of the current study, it is likely that when teachers believe that some SWD are more in control than others, they will treat those students differently, and may have higher expectations of them.

Although the questions concerning lack of effort and control were meant to gain insight into the participants' attributions regarding each SWD's level of controllability, the responses resulted in dissimilar results. It is possible that participants did not consider effort to be related to the level of control that the fictitious students had over their academic ability.

Attribution Theory

The results of the present study did not demonstrate that teachers believe that they will treat students differently depending on the disability depicted, as shown by their

reported likelihood of implementing instructional supports (Figure 2). Though ratings were not found to be significantly different when asked if the student's academic difficulty was related to lack of effort, teacher ratings were found to differ depending on the disability in other areas. The first significant difference was in terms of teacher ratings of each students' ability to benefit from instructional supports, particularly when comparing students with ASD and those with ADHD. Further, teachers were found to view students with Down Syndrome as being significantly less in control of their academic success compared to many of the other disabilities investigated, and students with ADHD were thought to be more in control compared to students with either Down Syndrome or ASD. These attributions are likely to impact the way that teachers act toward their students with these disabilities, as well as their expectations of them (Rosenthal & Jacobson, 1965; Clark, 1997; Woodcock & Vialle, 2011; Atkinson, 2012).

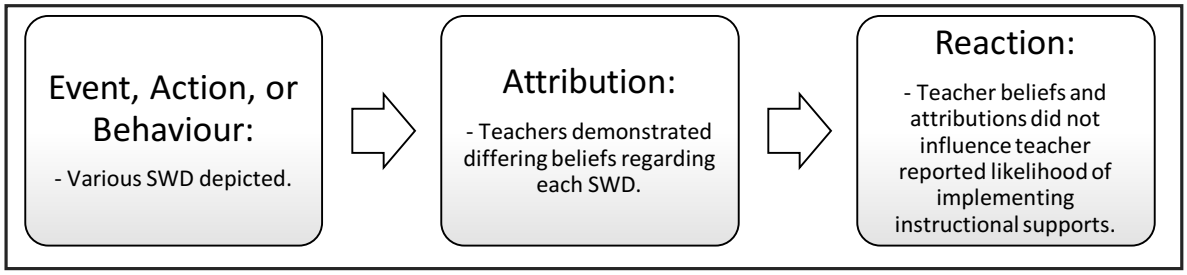

Figure 2. Outline of results in relation to Attribution Theory.

Weiner's (1985, 1995) theory explains that if a teacher believes that the academic difficulty that a student is experiencing is due to an internal cause, they will not feel responsible for the outcome, which could be academic failure. On the other hand, if a teacher believes that the academic difficulty is due to external causes, they will more likely modify their instruction and provide instructional supports (Woodcock & Jiang, 2016). Woodcock and Vialle (2016) investigated the beliefs of pre-service teachers in terms of SWD and their level of perceived control over an academic outcome. They demonstrated

that those surveyed had greater expectations for future failure of SWD when the cause was thought to be within the students' control. Further, they confirmed that the most frustration, least sympathy, and most negative feedback was felt toward students who were thought to have the most control over their academic performance. The results of the current study demonstrate that there is a significant difference in teacher beliefs regarding the level of control that some students have over their academic success, compared to other students. This is of concern, because if SWD are attributed differing levels of internal control by their teachers depending on their disability, they may be provided with differing levels of instructional support.

Stigma

Based on the results of this study, it is likely that, under specific circumstances, teachers hold stigmatizing views toward students with particular disabilities. One such view was demonstrated by the finding that teachers believe that students with ASD will benefit from instructional supports significantly more than students with ADHD. It is possible that the difference in scores was influenced by the characteristics and symptoms that are associated with each disability, rather than the outcome of whether or not they would benefit from instructional supports. The instructional supports that teachers provide will look different for each student, depending on the disability. It may be the case that teachers consider providing instructional support to students with ADHD to be a more difficult task because of the symptoms and behaviours associated with ADHD, while providing instructional support to students with ASD may not be viewed as a task that is as challenging. A student with ASD will likely be considered one who has more difficulty with social and emotional understanding, which would impact classroom interactions, and

as having stereotypical behaviours (Chung, Edgar-Smith, Palmer, Chung, DeLambo, & Huang, 2015). A student with ADHD may be seen as one who cannot, or will not, pay attention, is easily distracted and distracts others, forgets details, and has difficulty processing information. Kos et al. (2006) explained that teachers often have negative beliefs about the externalizing behaviours associated with ADHD, tend to be pessimistic about teaching these children, and feel that extra time and effort is required to teach them. Because of these associated symptoms and behaviours, teachers may believe that the instructional supports that would be employed to assist a student with ASD are easier to implement within their classroom and that these students may be more receptive to them. On the other hand, teachers may believe that the instructional supports that would be required to assist a student with ADHD would require a large amount of consistent effort and time for a child who may not benefit as much. Further, as demonstrated by Mulholland et al. (2015), teachers frequently find the behaviours of students with ADHD to be irritating and stressful to deal with, which would make it more difficult for them to be patient and open to supporting the student. Because these assumptions are not necessarily based in reality, they are likely caused by stigmatizing views of students with various disabilities, particularly those with ADHD. Weiner (1995) explained that individuals who have particular illnesses or disabilities may be considered more in control and responsible than individuals with other illnesses or disabilities. The beliefs that are held about an individual's level of controllability or responsibility will result in a certain level of pity or anger felt toward them, which is a factor in stigmatization (Weiner, 1995). It is possible that the beliefs held by teachers regarding the level of control that students with ADHD

have, has resulted in stigmatizing views about their likelihood of benefiting from instructional supports.

Theory of Planned Behavior

Results demonstrated that although teacher beliefs regarding students' ability to respond to instructional supports are related the type of student disability depicted, their reported likelihood of implementing them is not. This result does not definitively demonstrate that teachers will implement instructional supports to all students who have a disability and may benefit from them, nor does it definitively demonstrate that teachers believe all students will benefit from them to the same extent.

The theory of planned behaviour (TPB), devised by Icek Ajzen (1991), addresses the relationship between one's attitudes and behaviour. This theory proposes that in order to predict behaviour, many things need to be taken into consideration, such as attitudes, subjective norm, perceived behavioural control, and behavioural intention (MacFarlane & Woolfson, 2013). Attitudes consist of a cognitive dimension (beliefs) and an affective dimension (feelings) and can be a good predictor of behaviour if both the attitudes and behaviours are specific rather than general. Subjective norm refers to one's perception of how others will view their behaviour. Perceived behavioural control is the perception of how easy or difficult it will be to perform the behaviour and behavioural intention is one's willingness to carry out a behaviour (MacFarlane & Woolfson, 2013). If each of these components is viewed as positive, the individual will be more likely to perform the behaviour.

McFarline and Woolfson (2013) investigated the application of the TPB on teacher attitudes and behaviour toward students with special needs in an inclusive classroom

setting. They determined that teachers who had a more positive attitude and higher levels of perceived behavioural control had a higher level of behavioural intention to employ inclusive practices with children who have special needs. While this is a noteworthy finding, one's behavioural intention does not necessarily translate to one's actual behaviour. The difference between behavioural intention and actual behaviour is an important distinction, particularly when considering the results of the current study. Teacher ratings regarding likelihood of implementing supports may help to explain their behavioural intention or attitudes, while their actual behaviour is still unknown.

Armitage and Conner (2001) conducted a meta-analysis that focused on current TPB research. They found that intentions and self-predictions were good predictors of behaviour. Further, they found that an individual's attitudes are the weakest predictors of behaviour. This finding is particularly of note, as the findings of the present study investigated teacher attributions and beliefs, as well as their reported likelihood of implementing instructional supports. Many of the findings demonstrated that teacher attributions did not differ significantly depending on the disability depicted. Further, teacher reported likelihood of implementing instructional supports to SWD resulted in an insignificant difference depending on the disability depicted. Based on TPB, a teacher's attitude toward SWD and their stated likelihood of implementing instructional supports does not necessarily predict their actual behaviour.

Implications for Training and Practice

It is important to note that while these results demonstrate that the type of disability was not associated with the stated likelihood of teacher implementation of instructional supports in the classroom, it was associated with teacher beliefs about different SWDs'

ability to respond to instructional supports, as well as their perceived level of control over their academic outcome. The findings of this exploratory study have important implications for future education of teachers regarding SWD. Teachers are a critical source of information about a student's personal competence. Teacher attributions, which are expressed toward their students, are likely to provide students with information about how they are perceived by others and what is expected of them (Clark, 1997). Research has demonstrated that there is a positive impact of teacher education, rather than teaching experience, on teacher attitudes in terms of their optimism and enthusiasm in teaching SWD (Brady & Woolfson, 2008). Attributional Retraining is an intervention that has been used to encourage students to make attributions that are controllable, such as effort, rather than attributions that are not controllable, in order to change their causal explanations of why they demonstrated poor performance (Haynes Stewart et al., 2011). It is possible that such an intervention could be used with teachers to encourage attaching appropriate attributions to SWD.

Teachers were found to have significantly different ratings of each students' level of control over their academic success depending on the disability depicted. Woodcock and Jiang (2016) explained that teachers are less likely to provide instructional supports for the students that they feel have more control. If teachers are taught about the academic difficulties that SWD experience, how instructional supports can benefit SWD, and in turn, develop a positive attitude toward SWD, students will benefit to a greater extent.

The results of this study may also be used by policy makers to implement teacher intervention programs based on the misattributions regarding particular disabilities. Such intervention programs could alter the delivery of supports by teachers, which may

consequently improve educational outcomes for SWD. With an understanding of the association between teacher attributions and their delivery of instructional supports to SWD, researchers can develop specified intervention programs designed to change attitudes regarding student ability. It may also be of interest to parents of SWD, who would be able to better assess the educational supports that their child is receiving, and determine if any modifications need to be made.

Limitations and Implications for Future Research

While the present study was theoretically based in Attribution Theory and not TPB, this may be an avenue for future research. Of the four factors that TPB claims to contribute to an individual's behaviour, only one, attitude, was investigated in this study. Future research may consider the relationship between the attributions made by teachers about various SWD and the remaining three factors explained by TPB: subjective norm, perceived behavioural control, and behavioural intention. Additionally, though Attribution Theory was the theoretical model used for this study, only controllability was investigated. Future research may consider investigating locus of causality and stability as additional factors.

Pickens (2005) explained that the attributions individuals make about others often lead to a behavioural response. Based on the results of this study, not all of the attributions that were investigated resulted in significant findings. There was not a significant difference in responses in terms of teacher likelihood of implementing instructional supports to students. This finding does not definitively mean that teachers are going to implement instructional supports to all students that would benefit from them, regardless of their disability, as explained by Ajzen's (1991) TPB. Rather than asking teachers their

likelihood of implementing instructional supports to SWD, future research might involve an observational study. By doing this, teachers could be examined in practice to determine if they provide instructional supports to their SWD and a comparison can be made between each disability type.

To better investigate the role of stigmatizing views, it may be beneficial to conduct a study in which vignettes are not used to describe each disorder. Teachers could simply be told to answer each question based on a student with a particular disability that is named, but not explained. In the current study, each neurodevelopmental disorder was depicted using a vignette so that teachers were provided with information regarding how each students' disability impacted them in the classroom. By simply naming each disability and not explaining them, the assumptions and stigmatizing views that are naturally associated with each disability may result.

A limitation of this study was the small sample size. Though multiple attempts were made to increase the sample size, the sample remained relatively small. It would be beneficial to conduct a study with a larger sample. Not only would this add strength to the findings, but it would also allow for additional analyses do be done based on the demographic information of the participants. For example, it would be of interest to compare the responses of participants based on the province in which they teach, those of different ages, or those with differing years of practice. Further, a larger sample size will aid in the external validity of results. The target population is practicing teachers in Canada and responses came from teachers in eight of the ten Canadian provinces. Because the sample size was relatively small, and because participants were recruited through a

convenience sample, it is difficult to generalize the results to the target population, which are K-12 teachers within Canada.

An additional limitation is that the measure was created for the purpose of this study and was not tested previously or shown to be a valid and reliable measure. Further, the participants' interpretation of the survey question regarding each students' level of "control over their academic success" may be a limitation. Because the definition of "control" was not specified in the survey question, it is possible that participants could have interpreted the question differently than it was intended. This question was intended to have participants rate the extent to which they believe that each student could succeed academically if they wanted to. If participants rated that they "strongly agree" that the student was in control of their academic success, that would suggest that they believe that the student could do well academically if they wanted to and put in the required effort. If they rated that they "strongly disagree" that the student was in control of their academic success, that would suggest that they believe that the student may be trying hard to do well academically but is struggling because of their disability.

Finally, it may have been helpful to measure the general social desirability of each participant who took part in this study. Future research may consider measuring the social desirability of participants, as a means of controlling for that variable. The current study did not control for social desirability so it is not known if participants' responses were modified because of their wish to appear socially desirable.

Conclusion

The results of this exploratory study did not demonstrate significant findings for all of the research questions investigated. Results demonstrated that ratings were significantly

different depending on the disability when teachers were asked if the student would demonstrate significant improvement to their academic ability if they received instructional supports. When asked about their own likelihood of implementing instructional supports to SWD, there was not a significant difference in teacher ratings depending on the disability depicted. Teacher ratings were also found not to be significantly different when asked if each student was not succeeding academically due to lack of effort. However, they were significantly different depending on the disability when asked if they believed that the student was in control of their academic success.

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Appendix A

Are Teacher Attributions Associated with the Delivery of Educational Supports to Students with Disabilities?

Vignettes: Please read the following scenario and answer each question honestly and to the best of your ability.

1) You have a student in your classroom with Down Syndrome, which is a neurodevelopmental disability. Down Syndrome is associated with many cognitive and learning difficulties. This student may have difficulty gaining new knowledge, delayed language and speech development, trouble processing information, and a short attention span.

    a. I believe that this student is not succeeding academically due to lack of effort (motivation).

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

    b. I believe that this student is not succeeding academically because of their disability.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

    c. I believe that there would be a significant improvement in this student's academic ability if they received instructional supports.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

    d. I believe that this student is in control of their academic success.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

e. I believe that this student's disability is...
    a. Stable (something that will remain unchanged over time)
    b. Dynamic (something that will change over time)

f. How likely would you be to implement instructional supports for this student if recommendations for supports were provided to you?

|_____|_____|_____|_____|
1 Very unlikely | 2 Unlikely | 3 Neutral | 4 Likely | 5 Very likely

2) You have a student in your classroom with Fetal Alcohol Spectrum Disorder (FASD), which is a neurodevelopmental disability. FASD is associated with a range of physical, brain, and central nervous system disabilities, as well as cognitive, behavioural, and emotional issues, and is caused by the fetus being exposed to alcohol during the mother's pregnancy. This student may have frequent behavioural outbursts, difficulty learning new concepts, and difficulty remembering information.

a. I believe that this student is not succeeding academically due to lack of effort (motivation).

|_____|_____|_____|_____|
1 Strongly disagree | 2 Disagree | 3 Neutral | 4 Agree | 5 Strongly agree

b. I believe that this student is not succeeding academically because of their disability.

|_____|_____|_____|_____|
1 Strongly disagree | 2 Disagree | 3 Neutral | 4 Agree | 5 Strongly agree

c. I believe that there would be a significant improvement in this student's academic ability if they received instructional supports.

|_____|_____|_____|_____|
1 Strongly disagree | 2 Disagree | 3 Neutral | 4 Agree | 5 Strongly agree

d. I believe that this student is in control of their academic success.

|_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

e. I believe that this student's disability is...
    a. Stable (something that will remain unchanged over time)
    b. Dynamic (something that will change over time)

f. How likely would you be to implement instructional supports for this student if recommendations for supports were provided to you?

|_____|_____|_____|_____|

1	2	3	4	5
Very unlikely	Unlikely	Neutral	Likely	Very likely

3) You have a student in your classroom with a Language Disorder, which is a neurodevelopmental disability. Language Disorders are associated with a range of difficulties related to using and understanding spoken and written language, as well as deficits in learning and memory. This student may have consistent and clear delays in reading comprehension abilities, confusion when reading long passages, difficulty recalling information, and trouble encoding and recalling information.

a. I believe that this student is not succeeding academically due to lack of effort (motivation).

|_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

b. I believe that this student is not succeeding academically because of their disability.

|_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

c. I believe that there would be a significant improvement in this student's academic ability if they received instructional supports.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

d. I believe that this student is in control of their academic success.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

e. I believe that this student's disability is...
    a. Stable (something that will remain unchanged over time)
    b. Dynamic (something that will change over time)

f. How likely would you be to implement instructional supports for this student if recommendations for supports were provided to you?

1	2	3	4	5
Very unlikely	Unlikely	Neutral	Likely	Very likely

4) You have a student in your classroom with Autism Spectrum Disorder (ASD), which is a neurodevelopmental disability. ASD is associated with varying levels of difficulty in social interactions, with verbal and nonverbal communication, as well as repetitive behaviours. This student may have notable language and developmental delays, atypical social behaviour (e.g. preferring to play by themselves), become noticeably upset if there is an unexpected change in routine, and may be very literal in thinking and reasoning and frequently misunderstand social interactions.

    a. I believe that this student is not succeeding academically due to lack of effort (motivation).

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

b. I believe that this student is not succeeding academically because of their disability.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

c. I believe that there would be a significant improvement in this student's academic ability if they received instructional supports.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

d. I believe that this student is in control of their academic success.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

e. I believe that this student's disability is...
    a. Stable (something that will remain unchanged over time)
    b. Dynamic (something that will change over time)

f. How likely would you be to implement instructional supports for this student if recommendations for supports were provided to you?

1	2	3	4	5
Very unlikely	Unlikely	Neutral	Likely	Very likely

5) You have a student in your classroom who has been diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), which is a neurodevelopmental disorder. ADHD is associated with inattention, hyperactivity, and impulsivity. This student may have difficulty maintaining focus in class, may become easily distracted, forget details, have difficulty processing information, and may often be a distraction to others in class. Further, this student may misplace homework or not complete it, perform inconsistently on academic tasks, and have difficulty following and understanding verbal information.

a. I believe that this student is not succeeding academically due to lack of effort (motivation).

|_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

b. I believe that this student is not succeeding academically because of their disability.

|_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

c. I believe that there would be a significant improvement in this student's academic ability if they received instructional supports.

|_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

d. I believe that this student is in control of their academic success.

|_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

e. I believe that this student's disability is...
    a. Stable (something that will remain unchanged over time)
    b. Dynamic (something that will change over time)

f. How likely would you be to implement instructional supports for this student if recommendations for supports were provided to you?

|_____|_____|_____|_____|

1	2	3	4	5
Very unlikely	Unlikely	Neutral	Likely	Very likely

6) You have a student in your classroom with a Specific Learning Disorder in Reading, which is a neurodevelopmental disability. This disability is associated with difficulty in terms of their reading development and progress. This student may have weak

decoding skills, read more slowly (i.e., less fluently) than other students in their grade, and have relatively poor reading comprehension.

a. I believe that this student is not succeeding academically due to lack of effort (motivation).

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

b. I believe that this student is not succeeding academically because of their disability.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

c. I believe that there would be a significant improvement in this student's academic ability if they received instructional supports.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

d. I believe that this student is in control of their academic success.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

e. I believe that this student's disability is...
    a. Stable (something that will remain unchanged over time)
    b. Dynamic (something that will change over time)

f. How likely would you be to implement instructional supports for this student if recommendations for supports were provided to you?

1	2	3	4	5
Very unlikely	Unlikely	Neutral	Likely	Very likely

7) You have a student in your classroom with Tourette's Disorder, which is a neurodevelopmental disability. Tourette's Disorder is associated with developmental delays, difficulty with fine- and gross-motor activities, and involuntary movements and/or vocalizations. This student may demonstrate involuntary facial movements that occur multiple times, every day. Further, this student may have prominent difficulties with tasks involving fine- and gross-motor activities and functions, such as skills related to coordination, and thus have difficulty with activities that involve handwriting, drawing and paper cutting, as well as those that involve running, balance, and movement.

    a. I believe that this student is not succeeding academically due to lack of effort (motivation).

    |_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

    b. I believe that this student is not succeeding academically because of their disability.

    |_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

    c. I believe that there would be a significant improvement in this student's academic ability if they received instructional supports.

    |_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

    d. I believe that this student is in control of their academic success.

    |_____|_____|_____|_____|

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

    e. I believe that this student's disability is...
        a. Stable (something that will remain unchanged over time)
        b. Dynamic (something that will change over time)

f. How likely would you be to implement instructional supports for this student if recommendations for supports were provided to you?

1	2	3	4	5
Very unlikely	Unlikely	Neutral	Likely	Very likely

Demographics

Age: _____

Gender Identification:
a. Male
b. Female
c. Other

What is your primary role in your school (e.g. classroom teacher, LSF, guidance counsellor, resource teacher, etc.): _____

What grade(s) do you teach?: _____

How long have you been teaching?: _____

What province and school board do you currently teach in?: _____

Appendix B

Table B.1

Correlation Matrix of All Survey Items with Down Syndrome Items

		Down Syndrome					
		A	B	C	D	E	F
Down Syndrome	A. Lack of effort (motivation)						
	B. Disability	-0.11					
	C. Significant improvement with supports	0.06	-0.04				
	D. In control of academic success	0.10	-0.02	0.00			
	E. Stable vs. dynamic disability	-0.25	-0.17	0.20	-0.21		
	F. Likelihood of implementing supports	-0.03	0.05	0.24	-0.13	0.02	
FASD	A. Lack of effort (motivation)	.546**	-0.10	-0.17	-0.09	-0.06	-0.02
	B. Disability	-0.09	.870**	-0.02	-0.03	-0.21	0.02
	C. Significant improvement with supports	0.09	-0.01	.640**	0.20	-0.01	0.17
	D. In control of academic success	0.08	-0.03	-0.07	.529**	0.20	-0.26
	E. Stable vs. dynamic disability	-0.24	-0.30	0.05	0.04	.613**	0.01
	F. Likelihood of implementing supports	-0.03	0.05	0.24	-0.13	0.02	1.000**
Language Disorder	A. Lack of effort (motivation)	0.28	0.17	0.02	0.27	-0.04	-0.04
	B. Disability	-0.08	.560**	0.10	-0.01	-0.21	-0.03
	C. Significant improvement with supports	-0.19	0.06	.466**	0.02	0.11	0.05
	D. In control of academic success	0.20	0.10	0.08	0.32	-0.18	-0.22
	E. Stable vs. dynamic disability	-0.12	-0.13	-0.17	-0.03	0.32	-0.16
	F. Likelihood of implementing supports	0.10	-0.08	0.19	-0.10	0.09	.814**
ASD	A. Lack of effort (motivation)	.427**	0.04	0.05	0.31	-0.06	-0.08

	B. Disability	-0.30	.628**	0.19	-0.10	-0.11	0.09
	C. Significant improvement with supports	-0.02	-0.13	.626**	0.16	0.15	0.03
	D. In control of academic success	.329*	0.05	-0.13	.558**	-0.30	-0.22
	E. Stable vs. dynamic disability	0.02	-0.06	0.01	-0.16	.558**	0.18
	F. Likelihood of implementing supports	-0.08	-0.03	0.16	-0.09	-0.07	.944**
ADHD	A. Lack of effort (motivation)	.568**	-0.05	0.12	0.22	0.03	0.05
	B. Disability	0.00	.669**	0.04	-0.10	-0.24	-0.04
	C. Significant improvement with supports	-.432**	-0.09	.420**	0.12	0.09	0.02
	D. In control of academic success	0.22	-0.01	-0.02	.498**	-0.20	-0.11
	E. Stable vs. dynamic disability	-.343*	-0.22	0.14	0.12	0.29	-0.10
	F. Likelihood of implementing supports	-0.03	-0.15	-0.06	-0.13	-0.22	.479**
Specific LD - Reading	A. Lack of effort (motivation)	0.31	0.12	0.07	0.15	0.04	-0.03
	B. Disability	-0.18	.628**	0.03	-0.17	-0.14	0.03
	C. Significant improvement with supports	-0.17	-0.12	.558**	0.15	0.04	-0.08
	D. In control of academic success	0.19	0.01	-0.02	.424**	-0.12	-0.24
	E. Stable vs. dynamic disability	-0.17	-0.24	-0.01	-0.07	.418*	-0.15
	F. Likelihood of implementing supports	0.02	-0.25	0.08	-0.07	-0.19	.401*
Tourette's Disorder	A. Lack of effort (motivation)	0.19	0.17	-0.04	-0.18	0.25	-0.07
	B. Disability	-0.26	.750**	0.15	-0.02	-0.07	0.05
	C. Significant improvement with supports	-0.27	-0.16	.463**	0.20	-0.01	0.02
	D. In control of academic success	.375*	0.15	-0.07	0.22	-0.22	-0.11
	E. Stable vs. dynamic disability	-0.19	-0.15	0.06	-0.02	0.24	0.21
	F. Likelihood of implementing supports	0.05	-0.23	0.12	-0.02	-0.15	0.31

Note. ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table B.2

Correlation Matrix of All Survey Items with Fetal Alcohol Spectrum Disorder (FASD) Items

		Fetal Alcohol Spectrum Disorder (FASD)					
		A	B	C	D	E	F
FASD	A. Lack of effort (motivation)						
	B. Disability	-0.25					
	C. Significant improvement with supports	-0.09	-0.05				
	D. In control of academic success	0.11	-0.06	0.09			
	E. Stable vs. dynamic disability	-0.04	-0.29	-0.19	0.30		
	F. Likelihood of implementing supports	-0.02	0.02	0.17	-0.26	0.01	
Language Disorder	A. Lack of effort (motivation)	.366*	-0.01	-0.09	0.28	0.20	-0.04
	B. Disability	-0.29	.734**	0.16	-0.09	-0.30	-0.03
	C. Significant improvement with supports	-.400*	0.10	0.28	-0.16	0.16	0.05
	D. In control of academic success	0.05	0.04	0.16	0.30	-0.05	-0.22
	E. Stable vs. dynamic disability	0.25	-0.25	-0.18	0.02	.472**	-0.16
	F. Likelihood of implementing supports	0.02	-0.10	0.13	-0.21	-0.02	.814**
ASD	A. Lack of effort (motivation)	.418**	-0.06	-0.08	.364*	0.23	-0.08
	B. Disability	-0.20	.697**	0.12	-0.12	-0.25	0.09
	C. Significant improvement with supports	-0.25	-0.08	.530**	0.06	0.27	0.03
	D. In control of academic success	0.16	0.13	0.06	.612**	-0.11	-0.22
	E. Stable vs. dynamic disability	0.14	-0.02	0.09	0.18	.364*	0.18
	F. Likelihood of implementing supports	-0.07	-0.02	0.17	-0.26	0.06	.944**
ADHD	A. Lack of effort (motivation)	.650**	-0.11	-0.01	0.28	0.13	0.05
	B. Disability	-0.12	.759**	0.17	-0.14	-.347*	-0.04
	C. Significant improvement with supports	-.388*	-0.13	0.20	-0.03	0.32	0.02

	D. In control of academic success	0.02	-0.08	0.13	.473**	0.02	-0.11
	E. Stable vs. dynamic disability	0.01	-0.17	-0.17	0.15	.393*	-0.10
	F. Likelihood of implementing supports	-0.02	-0.08	0.02	-0.26	0.01	.479**
Specific LD - Reading	A. Lack of effort (motivation)	.338*	-0.02	-0.19	0.15	0.23	-0.03
	B. Disability	-0.28	.780**	0.14	-0.20	-.364*	0.03
	C. Significant improvement with supports	-.353*	-0.08	.437**	0.00	0.15	-0.08
	D. In control of academic success	0.15	-0.14	0.06	.433**	0.08	-0.24
	E. Stable vs. dynamic disability	0.11	-0.32	-0.26	0.10	.373*	-0.15
	F. Likelihood of implementing supports	-0.14	-0.16	0.16	-.335*	-0.05	.401*
Tourette's Disorder	A. Lack of effort (motivation)	0.29	0.08	-0.10	0.04	0.15	-0.07
	B. Disability	-0.24	.797**	0.21	-0.03	-0.32	0.05
	C. Significant improvement with supports	-0.22	-0.20	.347*	0.04	0.15	0.02
	D. In control of academic success	-0.04	0.14	-0.11	0.21	-0.10	-0.11
	E. Stable vs. dynamic disability	0.03	-0.11	-0.03	-0.05	0.27	0.21
	F. Likelihood of implementing supports	-0.11	-0.14	0.20	-0.30	-0.02	0.31

Note. ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table B.3

Correlation Matrix of All Survey Items with Language Disorder Items

		Language Disorder					
		A	B	C	D	E	F
Language Disorder	A. Lack of effort (motivation)						
	B. Disability	-0.24					
	C. Significant improvement with supports	0.10	0.06				
	D. In control of academic success	.472**	-0.17	-0.08			
	E. Stable vs. dynamic disability	0.17	-.348*	-0.12	-0.12		
	F. Likelihood of implementing supports	-0.12	-0.05	0.06	-0.27	-0.18	
ASD	A. Lack of effort (motivation)	.849**	-0.14	0.09	.381*	0.20	-0.12
	B. Disability	-0.21	.700**	-0.03	-0.07	-0.19	0.02
	C. Significant improvement with supports	0.12	-0.02	.809**	0.11	-0.14	0.06
	D. In control of academic success	0.20	0.02	-0.12	.346*	-0.18	-0.18
	E. Stable vs. dynamic disability	-0.15	0.02	-0.15	-0.31	.329*	0.14
	F. Likelihood of implementing supports	-0.09	-0.06	0.04	-0.19	-0.17	.729**
ADHD	A. Lack of effort (motivation)	.698**	-0.20	-0.22	0.30	0.23	0.04
	B. Disability	-0.24	.705**	-0.03	-0.02	-0.23	-0.07
	C. Significant improvement with supports	0.02	-0.12	.684**	-0.02	-0.05	0.02
	D. In control of academic success	.485**	-0.08	0.10	.547**	-0.31	-0.11
	E. Stable vs. dynamic disability	0.03	0.09	-0.17	-0.14	0.26	-0.11
	F. Likelihood of implementing supports	-0.28	-0.03	0.05	-0.22	-0.16	.563**
Specific LD - Reading	A. Lack of effort (motivation)	.901**	-0.27	0.12	.415*	0.19	0.01
	B. Disability	-.344*	.787**	0.15	-0.11	-0.24	-0.04
	C. Significant improvement with supports	0.10	0.04	.806**	-0.01	-0.15	-0.06

	D. In control of academic success	.492**	-0.25	-0.09	.652**	-0.03	-0.19
	E. Stable vs. dynamic disability	0.13	-0.14	-0.25	0.07	.369*	-0.16
	F. Likelihood of implementing supports	-.356*	-0.03	0.08	-0.16	-0.20	.592**
Tourette's Disorder	A. Lack of effort (motivation)	.484**	-0.14	0.10	0.15	0.16	-0.12
	B. Disability	-0.17	.802**	0.05	-0.08	-0.24	0.02
	C. Significant improvement with supports	0.10	-0.06	.627**	0.00	-0.06	0.13
	D. In control of academic success	0.29	-0.09	0.21	.467**	-0.28	-0.12
	E. Stable vs. dynamic disability	-0.13	0.05	-0.11	-0.18	.369*	0.18
	F. Likelihood of implementing supports	-.346*	-0.05	0.12	-0.10	-0.18	.516**

Note. ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table B.4

Correlation Matrix of All Survey Items with Autism Spectrum Disorder (ASD) Items

		Autism Spectrum Disorder (ASD)					
		A	B	C	D	E	F
ASD	A. Lack of effort (motivation)						
	B. Disability	-0.24					
	C. Significant improvement with supports	0.14	-0.03				
	D. In control of academic success	0.31	-0.13	-0.01			
	E. Stable vs. dynamic disability	-0.10	-0.04	-0.12	-0.16		
	F. Likelihood of implementing supports	-0.14	0.08	0.08	-0.12	0.09	
ADHD	A. Lack of effort (motivation)	.655**	-0.15	-0.03	0.29	0.03	0.00
	B. Disability	-0.22	.701**	-0.02	-0.08	0.16	-0.07
	C. Significant improvement with supports	0.07	0.08	.682**	-0.13	-0.27	0.09
	D. In control of academic success	.461**	-0.12	0.24	.424**	-.373*	-0.06
	E. Stable vs. dynamic disability	0.12	0.10	-0.14	-0.01	0.14	-0.11
	F. Likelihood of implementing supports	-0.23	0.00	0.03	0.10	-0.10	.622**
Specific LD - Reading	A. Lack of effort (motivation)	.819**	-0.15	0.18	0.08	-0.15	-0.09
	B. Disability	-0.26	.764**	0.03	-0.09	0.09	-0.01
	C. Significant improvement with supports	0.11	0.02	.800**	-0.01	-0.31	-0.04
	D. In control of academic success	.384*	-0.07	0.06	0.32	-.361*	-0.20
	E. Stable vs. dynamic disability	0.17	-0.11	-0.22	-0.13	0.00	-0.16
	F. Likelihood of implementing supports	-0.29	0.01	0.09	0.01	-0.15	.532**
Tourette's Disorder	A. Lack of effort (motivation)	.365*	0.04	0.18	-0.27	0.21	-0.14
	B. Disability	-0.22	.885**	-0.04	-0.04	-0.01	-0.02
	C. Significant improvement with supports	0.13	0.06	.607**	0.00	-.334*	0.02

D. In control of academic success	.348*	-0.16	0.19	0.28	-.358*	-0.12
E. Stable vs. dynamic disability	-0.14	0.13	-0.09	-.375*	0.31	0.13
F. Likelihood of implementing supports	-0.26	0.02	0.13	0.05	-0.13	.419**

Note. ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table B.5

Correlation Matrix of All Survey Items with ADHD Items

		ADHD					
		A	B	C	D	E	F
ADHD	A. Lack of effort (motivation)						
	B. Disability	-0.30					
	C. Significant improvement with supports	-0.32	-0.08				
	D. In control of academic success	0.31	-0.27	0.10			
	E. Stable vs. dynamic disability	0.19	-0.24	0.12	-0.12		
	F. Likelihood of implementing supports	-0.17	-0.04	0.24	-0.11	-0.10	
Specific LD - Reading	A. Lack of effort (motivation)	.640**	-0.17	0.13	.337*	0.04	-0.16
	B. Disability	-.341*	.765**	-0.05	-0.15	-0.16	-0.07
	C. Significant improvement with supports	-0.12	-0.12	.747**	0.25	-0.06	0.04
	D. In control of academic success	.406*	-0.26	0.07	.623**	-0.07	-0.12
	E. Stable vs. dynamic disability	0.27	-.415*	-0.06	0.10	.686**	-0.15
	F. Likelihood of implementing supports	-0.23	0.00	0.23	-0.16	-0.12	.887**
Tourette's Disorder	A. Lack of effort (motivation)	0.26	0.20	-0.08	0.07	-0.20	-.443**
	B. Disability	-0.16	.723**	0.00	-0.12	-0.01	-0.05
	C. Significant improvement with supports	-0.11	-0.17	.805**	0.19	0.13	0.25
	D. In control of academic success	0.15	-0.05	0.01	.586**	-.457**	-0.11
	E. Stable vs. dynamic disability	0.04	0.03	-0.04	-0.19	.455**	-0.07
	F. Likelihood of implementing supports	-0.23	0.03	0.29	-0.11	-0.11	.814**

Note. ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table B.6

Correlation Matrix of All Survey Items with Specific Learning Disorder in Reading Items

		Specific Learning Disorder in Reading					
		A	B	C	D	E	F
Specific LD - Reading	A. Lack of effort (motivation)						
	B. Disability	-0.31					
	C. Significant improvement with supports	0.06	0.00				
	D. In control of academic success	.380*	-0.31	0.10			
	E. Stable vs. dynamic disability	0.15	-0.30	-0.18	0.09		
	F. Likelihood of implementing supports	-0.19	-0.10	0.13	-0.08	-0.18	
Tourette's Disorder	A. Lack of effort (motivation)	.584**	0.07	-0.09	-0.02	-0.03	-.421**
	B. Disability	-0.19	.797**	0.09	-0.08	-0.22	-0.05
	C. Significant improvement with supports	0.13	-0.11	.819**	0.21	-0.07	0.29
	D. In control of academic success	0.28	0.04	0.10	.548**	-0.09	-0.13
	E. Stable vs. dynamic disability	-0.13	0.06	-0.14	-0.22	.496**	-0.13
	F. Likelihood of implementing supports	-0.17	-0.08	0.17	-0.01	-0.16	.944**

Note. ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table B.7

Correlation Matrix of All Survey Items with Tourette's Disorder Items

		Tourette's Disorder					
		A	B	C	D	E	F
Tourette's Disorder	A. Lack of effort (motivation)						
	B. Disability	-0.04					
	C. Significant improvement with supports	-0.20	0.08				
	D. In control of academic success	0.15	-0.12	-0.02			
	E. Stable vs. dynamic disability	0.07	0.08	0.03	-0.28		
	F. Likelihood of implementing supports	-.386*	-0.02	.354*	-0.06	-0.10	

Note. ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).