



What are the Social Implications of Dyslexia?

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Background

- **What is Dyslexia:** A specific reading disability in which a child with normal sensory perception and intelligence levels experiences learning deficits with reading (Chaux, Demonet, & Taylor, 2004).
- **Dyslexia and Self-Esteem:** Dyslexics have reported having lower competence in behavioral conduct as well as perceptions of social acceptance and physical appearance in addition to having higher scores in self-blame and anxiety (Boetsch, Green, & Pennington, 1996). Overall, dyslexics perceive their competence in reading, writing, spelling, math, as well as their general abilities as low compared to non-dyslexics (Boetsch et al., 1996). Dyslexics' confidence may be so compromised in school as a result of learning challenges that this carries over into non-academic related aspects of life.
- **Dyslexia and Overall Well-Being:** Individuals with dyslexia may struggle with attention difficulties, depressive symptoms, acting out behaviors, conflict with others about schoolwork and grades, and low self-esteem about academic abilities, all of which may indirectly impact mental well-being (Boetsch et al., 1996).
- **Dyslexia and Social Functioning:** Those with dyslexia tend to have more challenges in psychosocial functioning, specifically with social skills and peer relations (Ahonen et al., 2015).
- **Dyslexia and Anxiety/ Worry Levels:** Reading challenges that dyslexic students experience can lead to significant discouragement, which may in turn lead to anxiety (Liebel & Nelson, 2018). This may lead to a vicious cycle in which the literacy difficulties caused by dyslexia may predispose people to have higher anxiety, and this anxiety may make dyslexics more sensitive to any negative feedback that is associated with reading challenges, leading to more anxiety (Farmer Morgan, Riddick, & Sterling, 1999).

Methods

Participant Characteristic Variables

	Dyslexic Group (n=54)	Non-Dyslexic Group (n=52)
Average Age	21.3 (SD=2.4)	20.5 (SD=1.65)
Gender	68.5% Female (n=37) 31.5% Male (n=17)	88.8% Female (n=42) 13.5% Male (n=7)
Ethnicity	88.9% White (n=48) 1.9% Black or African American (n=1) 1.9% Middle Eastern (n=1) 3.7% Asian or Asian American (n=2) 3.1% "Other" (n=2)	5.8% Gender Queer/ Non-Binary (n=3) 86.5% White (n=45) 3.9% Black or African American (n=2) 1.9% Middle Eastern (n=1) 3.9% Asian or Asian American (n=2) 3.9% "Other" (n=2)
High School Type	42.6% Public High School (n=23) 50% Private High School (n=27) 1.9% Special Education High School (n=1) 5.6% "Other" (n=3)	59.6% Public High School (n=31) 40.4% Private High School (n=21)
College Degree Status	74.1% Currently Enrolled in College Program (n=40) 24.1% Graduated From College (n=13) 1.9% Did Not Attend College (n=1)	86.5% Currently Enrolled in College Program (n=45) 9.6% Graduated From College (n=5) 1.9% Did Not Attend College (n=1) 1.9% Attended College Program for Some Time But Did Not Receive Degree (n=1)
Psychiatric Disorder Diagnosis	55.6% Have Been Diagnosed with Psychiatric Disorder (n=30) 44.4% Not been Diagnosed with Psychiatric Disorder (n=24)	38.5% Have Been Diagnosed with Psychiatric Disorder (n=20) 61.5% Not been Diagnosed with Psychiatric Disorder (n=32)
Rosenberg Self-Esteem Scale score	29.0 (SD=4.4)	27.9 (SD=3.5)
Well-Being Scale Score	5.1 (SD=0.7)	5.0 (SD=0.5)
Social-Functioning Questionnaire Scores	6.8 (SD=3.0)	7.3 (SD=2.3)
The Penn State Worry Questionnaire Score	55.2 (SD=14.0)	58.8 (SD=13.2)

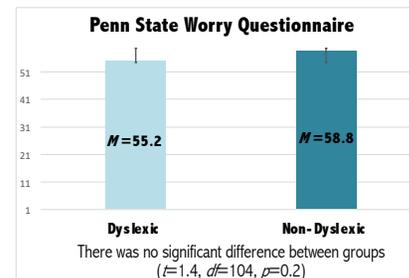
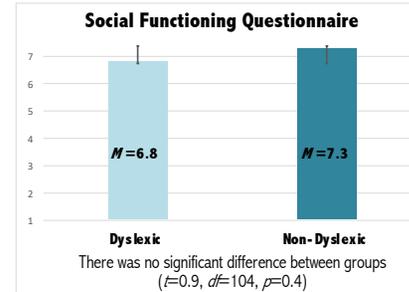
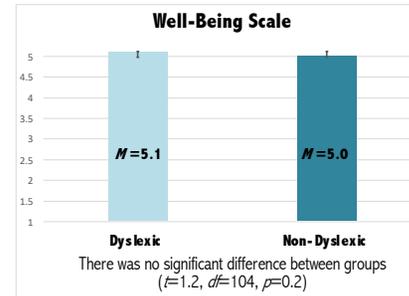
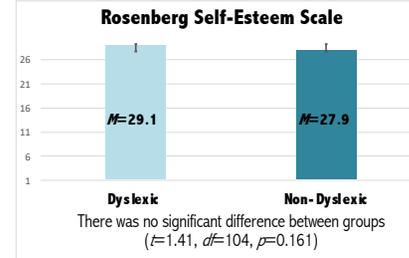
Measures

- The Rosenberg Self-Esteem Scale, The Well-Being Scale, The Social Functioning Questionnaire, and The Penn State Worry Questionnaire

Data Analysis Plan

Question	Hypothesis	Predictor Variable	Outcome Variable	Analysis Plan
Do people with dyslexia have lower self-esteem than those without dyslexia?	Those with dyslexia will have lower self-esteem than those without dyslexia.	Dyslexic clinical group membership	Rosenberg Self-Esteem Scale score	We conducted an Independent-Sample t-test to compare the means between the clinical group and the control group.
Do people with dyslexia report their overall well-being as being lower than those without dyslexia?	Those with dyslexia will self-report their overall well-being as being lower than those without dyslexia.	Dyslexic clinical group membership	Well-Being Scale Score	We conducted an Independent-Sample t-test to compare the means between the clinical group and the control group.
Do people with dyslexia have worse social functioning skills than those without dyslexia.	Those with dyslexia will have worse social functioning skills than those without dyslexia.	Dyslexic clinical group membership	Social-Functioning Questionnaire Scores	We conducted an Independent-Sample t-test to compare the means between the clinical group and the control group.
Do people with dyslexia have higher anxiety and worry more than those without dyslexia?	Those with dyslexia will experience higher levels of anxiety and worry more than those without dyslexia.	Dyslexic clinical group membership	The Penn State Worry Questionnaire Score	We conducted an Independent-Sample t-test to compare the means between the clinical group and the control group.

Results



Discussion

There were no significant differences between our dyslexic and non-dyslexic groups on a variety of mental wellness measures. **Possible Explanations:**

- Some research has shown that dyslexia may only effect academic mental health (Minnis, Terras, & Thomas, 2009) which our measures did not assess for → it is possible that our sample has normal mental well-being, but their academic wellness is lower.
 - Our sample reported having strong family and teacher support, which is a protective factor for mental well-being.
 - A large portion of our sample were alumni from an all-dyslexic middle school where they received comprehensive intervention and their strengths were emphasized.
 - Dyslexics may feel a stronger sense of pride and accomplishment when they succeed, increasing self-esteem and overall well-being.
- Clinical Impactions:**
- This goes to show that with early, intensive, and comprehensive intervention it can have a true and lasting impact on individuals. Disabilities do not always need to be disabling — clinicians must work to find individuals strengths and emphasize them.

Limitations

- Most participants were found through word of mouth, meaning they had similar demographics:
 - Majority of participants were Caucasian and females.
 - Many participants were alumni from a specific middle school where they received targeted intervention.
- All of the above lead to a sampling bias, meaning these results may not be generalizable to most adults with dyslexia.
- Future studies may look at academic mental health since that may be the area of mental well-being most affected by dyslexia.

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