THE PROPEL PROGRAM: AN EXPLORATORY STUDY OF

AN INCLUSIVE HIGHER EDUCATION MODEL

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THE PROPEL PROGRAM: AN EXPLORATORY STUDY OF

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ABSTRACT

Higher education opportunities were previously scarce for individuals with intellectual and developmental disabilities (IDDs), but are steadily becoming more common. The Propel Program, a two-year certificate program, provides students with IDDs an accessible higher education option to earn college credit and work experience. The purpose of this study is to provide quality improvement data to the Propel Program concerning their admissions process. This study seeks to understand what demographic variables were associated with first-semester GPA, also specifically examining the reliability of the Post-Secondary Readiness Rubric (PSRR) and whether it predicts first-semester GPA. The results suggest some evidence for reliability for the PSRR, though the subscale with the strongest association with GPA included both PSRR items and items designed by the Propel Program. Demographic variables such as race and access to a computer and laptop at home also provided unique insights into first-semester GPA. The implications of this data for the Propel Program and directions for further research are discussed.

APPROVAL PAGE

The faculty listed below, appointed by the Dean of the College of Arts and Sciences, have examined a thesis titled "The Propel Program: An Exploratory Study of An Inclusive Higher Education Model," presented by Sally Stratmann, candidate for the Masters of Arts degree, and certify that in their opinion it is worthy of acceptance.

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DEDICATION

For Josh, my beloved partner, for getting me through.

CHAPTER 1

OVERVIEW

The population of students with disabilities in higher education is growing. Roughly 19% of

college students in the 2015-2016 school year had a disability (U.S. Department of Education, 2019),

more than double the statistics from 2004 (Synder, Tan, & Hoffman, 2004). A tiny estimated .5 – 1%

includes individuals with intellectual and developmental disabilities (IDDs; Thurlow, Albus, Lazarus,

& Vang, 2014). Research has shown that students with disabilities, particularly students with IDDs,

are significantly less likely to graduate than students without disabilities (deFur, Getzel, & Trossi,

1996; Wessel, Jones, Markle, & Westfall, 2009).

Higher education can be a gateway to better outcomes such as employment, higher

earnings, and increased independence (Carnevale, Rose, & Cheah, 2011; Sannicandro, 2019;

Sannicandro, Parish, Fournier, Mitra, & Paiewonsky, 2018), yet it often does not accommodate the

unique needs of individuals with IDDs. The Propel Program, a postsecondary education certificate

program for individuals with intellectual and development disabilities, is seeking to change this

narrative by providing students with an accessible and accommodating higher education experience.

This exploratory study seeks to evaluate aspects of this program's application process and how they

are associated with academic performance.

Defining Disability

In 2014, it was estimated that over 85 million Americans had a disability (United States

Census Bureau, 2018). This and other estimates are, however, based on varying conceptualizations

of what it means to be disabled. Domestically and internationally, the term "disability" has proven

difficult to define, but often includes what an individual *cannot* do. For example, disability is

described in the Oxford Dictionary as "a physical or mental condition that limits a person's

movements, senses, or activities" ("Disability," 2020). Similarly, the Americans With Disabilities Act

defines it as "a person with a disability as a person who has a physical or mental impairment that

substantially limits one or more major life activity" (ADATA, 2019). Because of the range of abilities

in general, the stark dichotomy of "disabled" versus "non-disabled" has seen pushback from activists

who want a more nuanced paradigm (Shakespeare, 2006).

The World Health Organization ([WHO], 2001) has made an effort to move towards a

person-centered view of disability that deviates from the notion of individual defects. While the

WHO, in its International Classification of Functioning, Disability, and Health, classifies disability as

"impairments, activity limitations, and participation restrictions," steps are being taken to broaden

this paradigm (WHO, 2004). The International Statistical Classification of Diseases and Related

Health Problems (ICD-10), also published by WHO, is moving towards a somewhat sociopolitical

view of health classifications, including "health hazards related to socioeconomic and psychosocial

circumstances" like having a difficult or dangerous job, being impoverished or homelessness,

acculturation, and other stressful or traumatic life events (WHO, 2004). Another WHO publication,

"Towards a Common Language for Functioning Disability, and Health," gives a differentiation

between classifying disability as a product of the individual's lack of health (the medical model) and

the environment one lives in as a series of impediments to one's ability to function healthfully (the

social model; WHO, 2004). Perhaps the WHO's understanding of disability as an "umbrella term"

provides the most all-encompassing view of disability as a whole, as it takes into account "the

interaction between a person's body and features of the society in which he or she lives" (WHO,

2020). Taken together, this literature represents a shift by a major medical entity to redefine what it

is to be disabled.

The social model of disability alleviates the need for individuals with disabilities to orient their life around a society that makes engaging in basic rights inaccessible. Rather this model demands that the society build accessible physical and social infrastructures conducive to the abilities of all people (Oliver, 1990). This shift scrutinized the original paradigm of judging an individual as "unable" to work due to their impairment. The social model recognizes that the expectation that an individual will perform a certain amount or type of work, possibly also in an environment made without their needs in mind, is not conducive to the individual's success. As stated in the WHO report (2018), "people are disabled by environmental factors as well as by their bodies."

Intellectual and Developmental Disabilities

The focus of this research study is on individuals diagnosed with cognitive disability known as *intellectual disabilities* and *developmental disabilities*, which are often classified together as "ID/Ds" or "IDDs". Developmental disabilities are classified as such because they manifest early in development and impair various domains of functioning. For example, research indicates that autism spectrum disorder develops during the first trimester of pregnancy, and symptoms of autism can be seen as early as one year of age (Briggs, 2017; U.S. Department of Health and Human Services, 2017).

Intellectual disability, a stand-alone diagnosis previously known as *mental retardation*, involves "significant limitations in intellectual functioning and adaptive behavior" (American Association of Intellectual and Developmental Disabilities {AAIDD}, 2020). It may be caused before birth, by an illness or inherited disease after birth, or by a traumatic brain injury (MentalHelp.net, 2019). Significant limitations are categorized in three domains: conceptual (such as difficulty with language), social (such as difficulty interacting with others within established social norms), and practical skills (day-to-day skills such as personal care; AAIDD, 2020). Some cognitive disabilities may

combine this low intellectual functioning with other features. For example, Down syndrome, an IDD

caused by a genetic abnormality, is often characterized by intellectual disability, specific phenotypic

characteristics, and increased incidence of certain medical conditions such as cardiac or

gastrointestinal issues (Rutter, 2002).

Other cognitive disorders may involve a developmental component but not necessarily an

intellectual component. Autism spectrum disorder (ASD) involves difficulties with interpersonal

interactions and communication, as well as repetitive actions (Autism Speaks, 2020), and can both

involve an intellectual disability or be diagnosed independently. Approximately 38% of individuals

with ASD have a comorbid intellectual disability (CDC prevalence of ASD). Another developmental

disability, attention deficit/hyperactivity disorder (ADHD), is characterized by difficulties focusing,

hyperactivity or "extreme restlessness," and impulsivity, or making decisions without considering

potential consequences (National Institute of Mental Health [NIMH], 2019). Some of these

disabilities, such as ADHD and ID, are hard to differentiate, as symptoms may overlap between

disorders, or behaviors that may be attributed to low-functioning ID may actually be symptoms of

ADHD (Fuller & Sabatino, 1998).

The social model of disability is especially relevant for individuals with IDDs, whose

particular disabilities may be considered less socially desirable than other disabilities, such as being

physically disabled (Wang, 2003). A survey by Werner (2015) found significantly greater public

stigma towards individuals with intellectual disabilities than individuals with physical disabilities,

such as an assumption of low ability levels or dangerousness. This increase in stigma was correlated

with a decrease in support for the rights of individuals with ID, such as voting and having children

(Werner, 2015). In a Swedish qualitative study by Broberg (2011), parents of children with

intellectual disabilities described their children being "objectified" by medical professionals (p. 414).

While many of these parents sought to humanize their children and represent them with more

nuance, some felt the need to emphasize the negative effects of their child's disability in order to receive government services (Broberg, 2011).

A lack of representation of thriving adults with IDDs has led to the infantilization of individuals with autism, who are almost exclusively depicted as children in various media formats (Stevenson et al., 2011). Infantilization of individuals with intellectual disabilities has led to limited political rights in Romania (Safta-Zecharia, 2018). This enmeshment of the disability with the person, coupled with the unsophisticated perception of and stigma against IDDS, is what the social model seeks to combat.

Disability and Inclusion

Human rights movements have illuminated how our paternalistic views of individuals with disabilities lie in direct contrast to their very needed liberation from stigma, as well as their equal and equitable treatment in society and their integration into able-bodied communities (Charlton, 1998). This is the idea that society continually restricts the rights and freedoms of individuals with disabilities, believing that we have their best interest in mind, when these restrictions are actually misguided and oppressive. While the outcomes of inclusion and accommodation for individuals with disabilities, particularly individuals with IDDs , are profound in terms of mitigating poverty and creating opportunities (see below), implementing an ideology based on the social model of disability and the promotion of equal rights has been only partially successful. The barriers that individuals with disabilities face to being integrated into society may be viewed as the direct result of governing bodies ignoring individual differences when it comes to policy (Quinn & Degener, 2002). Quinn and Degener (2002) emphasized that the movement towards the social model of disability ushered in international legislation that focused less on intrusive welfare programs and more on policy as it relates to disability as a human rights concern.

Several domestic policies were also put into place. These policies, such as the Americans

with Disabilities Act (ADA, 1990), subsequent amendments like the 1997 Amendments to the

Individuals with Disabilities Education Act (IDEA), and the United Nations' Standard Rules on the

Equalization of Opportunities for Persons with Disabilities detail equal opportunities in such areas as

employment and education. Despite these policy gains, individuals with disabilities are often viewed

as an "economic burden" (Parmenter, 2005, p. 53). Implementation of these policies has also been

painstakingly slow, likely due to the Western cultural notion that economic responsibility relies on

the impetus of the individual, rather than society at large (Parmenter, 2008).

Poverty and Disability

Even with attempts at social and legal empowerment for individuals with disabilities (ADA,

1990; United Nations General Assembly, 1993), disability is still heavily associated with poverty.

Since the ADA was put into place, the poverty gap between individuals with and without disabilities

has only widened (Erikson & von Schrader, 2019). In 2017, the poverty rate for individuals with any

disability was 29%, the employment rate was a meager 65%, and the completion of a bachelor's

degree was at 14% (Houtenville & Boege, 2019). In contrast, able-bodied individuals saw a poverty

rate of 13%, an employment rate of 76%, and a rate of bachelor's degree completion at 37% in the

same year (Houtenville & Boege, 2019). Poverty and disability have a cyclical relationship—the poor

healthcare, nutrition, and living and working conditions of the impoverished often lead to disability,

whereas the inability to work and increased expenses that often accompany a disability may lead to

poverty (Elwan, 1999). Compared to youth from wealthier families, students with disabilities from

households making less than $25,000 annually had poorer outcomes after high school (Newman et

al., 2009). These students were less likely to be involved in opportunities that may offset their

poverty, such as being enrolled in postsecondary education or job training, being employed, or

being able to drive, with even more bleak employment outcomes for African Americans (Newman et al., 2009).

The combination of poverty and disability is especially pessimistic when the disability is cognitive in nature. Statistics regarding employment outcomes with individuals with IDDs vary, but are even more grim than those of disabilities as a whole. Underemployment and unemployment are particularly rampant for individuals with intellectual disability (Newman et al., 2009). Only an estimated 14.7% of individuals with IDDs are employed, less than a quarter of the percentage of employment for individuals with all types of disabilities (Houtenville & Boege, 2019; Human Services Research Institute, 2012)

Education and Employment

While many adults support the hiring of individuals with intellectual disabilities (Burge, Ouellette-Kuntz, & Lysaght, 2007), stigma and stereotypes at both the public level (Werner, 2015) and the management level often prevent this from becoming a reality. Research has shown that adults without cognitive disabilities often view individuals with IDDs as less capable of engaging in basic tasks and interactions, and often believe that these individuals would cause problems when integrated into the larger society (Siperstein et al., 2003). Individuals hiring people with disabilities appear to feel similarly, though research on this topic often doesn't specifically focus on IDDs. Research on barriers to employment mostly focuses on individuals with either physical or cognitive disabilities, in which employers cite concerns such as worrying about the individual's safety, or their interpersonal skills (Unger, 2002). In a survey of companies, the biggest "challenge" to hiring individuals with disabilities was concerns as to whether the individual could effectively perform the required work (Domzal et al., 2012). Unfortunately, these biases appear to be even stronger towards individuals with intellectual disabilities (Ju et al., 2013).

Employers are more likely to hire individuals with IDDs, who have already held jobs (Carter et al., 2012; Simonsen & Neubert, 2013). They are also more likely to hire individuals with IDDs when they have already had experience with them (Unger, 2002). For example, employers who had experience with individuals with ASD were more likely to say that they would hire individuals with ASD (Nicholas et al., 2019) and employers who had previously hired individuals with IDDs had more positive perceptions of them and what strengths they bring to a work environment (Morgan & Alexander, 2005). These findings pose the question—how do we make individuals with IDDS prepared and competitive for employment, and then connect them with employers willing to hire them? This is where postsecondary education (PSE) programs come in.

A report by the College & Career Readiness & Success Center at the American Institutes for Research ([AIR], 2013) suggests that opportunities for work experience and postsecondary education are critical to increase the employment rates of individuals with IDDs. As of 2010, surveys seeking to assess the number of PSE programs for individuals with IDDs received a response from 149 programs in 37 states nationwide (Hart et al., 2010). A little under half of these programs, known as Transition and Postsecondary Education Programs for Students with Intellectual Disability (TPSIDs), cater to individuals with IDDs. Due to the nature of the survey, it is unclear whether this is an accurate representation of programs, as it is only a tiny percentage of the total 4,298 postsecondary institutions currently operating (National Center for Education Statistics, 2017-2018). More recently, Hart (2017) found that there are more than 260 programs nationally specifically tailored to the enrollment of students with IDDs. Legislation is encouraging the expansion of such programs. The Higher Education Opportunities Act of 2008 seeks to create more accessible, inclusive higher education opportunities for individuals with IDDs. Think College, an organization dedicated to expanding higher education opportunities for individuals with IDDs, lists 295 programs across the

nation catering to individuals with IDDS—63 of which are connected with TPSID (Think College, 2020).

While ideally these government initiatives will raise the rate the enrollment (a meager 23%) of individuals with IDDs in two-year and four-year degree programs (Grigal et al., 2011), the success of this integration already reverberates to many domains. In a study of students and non-students with intellectual disabilities in Kentucky, students with intellectual disability enrolled in PSE were almost three times as likely to be employed while in school compared to young adults with intellectual disability not enrolled in PSE (Butler et al., 2015). Postsecondary education is heavily implicated in employment and independence for this population (Sannicandro et al., 2018). Earnings increase and reliance on social security benefits decreases (Carnevale et al., 2013; Sannicandro, 2019). While the employment rate of individuals with IDDs aged 16-21 is 18% (Butterworth et al., 2013), some research has shown that this number doubles with the completion of postsecondary education (Sannicandro, 2019). Grigal et al. (2018) found even more promising numbers, with employment rates at 65% after program completion, and Moore and Schelling (2015) found current employment rates of 73% and even 91% for the two programs the authors surveyed.

Postsecondary Education, Retention, and Academic Success

Even with burgeoning support for postsecondary programs and the opportunities they create, current data demonstrate that only a certain percentage of students with IDDs will graduate from these programs, and only a certain percentage will obtain employment (Butterworth et al., 2013; Grigal et al., 2018; Sannicandro, 2019). Research has shown that students with disabilities, particularly students with IDDs, are significantly less likely to graduate than students without disabilities (deFur et al., 1996; Wessel et al., 2009). The numbers of students with any given disability in higher education are rising (Henderson, 2001), but their graduation rates have not matched this pace (Durham et al., 2001). Using a nationally representative sample, Mamiseishvili

and Koch (2011) found a persistence rate of 76% for students with various disabilities, and students with developmental disabilities were one of the subpopulations with the highest risk of attrition.

These findings may be due to the nature of the program in which the student is enrolled. Coursework and other requirements for graduation for individuals with disabilities vary from state to state, and may be less rigorous than students without disabilities, affecting graduation rates (NCEO, 2016). Some states offer diplomas specific to individuals with disabilities that are different than the standard diplomas, and these may not be counted in overall graduation statistics (NCEO, 2016). Students with disabilities may also be completing certificate programs instead of degree-granting programs, and these graduation rates are not included in national statistics (NCEO, 2016).

While it is clear that there are difficulties in assessing retention for individuals with disabilities, factors at the individual level may also be at play. Individuals with any given disability may be less likely to thrive because of unaccommodating curricula and unfriendly faculty (Seymour & Hunter, 1998; Kalivoda & Higbee, 1998). Concerning factors that may contribute to thriving in PSE's, Belch (2004-2005) compiled a list of necessary ingredients known in the current literature to foster retention in college students with disabilities, such as a sense of belonging within the culture of the institution and trainings on self-advocacy and self-determination (see Belch, 2004-2005). GPA may also play a role in persistence and attrition. Mamiseishvili and Kock (2011) found GPA to be a significant positive predictor of persistence in the first year of college for students with disabilities (broadly). These elements, however, are not specific to individuals with IDDs, which is a part of the literature this study hopes to expand.

CHAPTER 2

A QUALITY IMPROVEMENT STUDY

The Propel Program

The Propel Program, a 2-year certificate program based in the University of Missouri-Kansas City's (UMKC) Department of Psychology, is one initiative seeking equitable higher education and employment opportunities for individuals with IDDs is. The Propel Program seeks to dismantle the stigma around the lack of competence in individuals with IDDs (Siperstein et al., 2003) experientially by incorporating students not only into college classrooms, but the broader community as well. Students participate in college coursework, have the opportunity to live on campus, put in hours at local businesses and organizations through Propel's work-based learning, and have the opportunity after completing the Propel Program to put some of their credits towards a 4-year degree or to pursue employment.

Students accepted into the Propel Program begin with Propel-specific courses focusing on general skills such as finances, staying organized, and narrowing down their career goals. They transition into a mix of Propel courses and UMKC's courses in their second semester. The students are guided to engage in UMKC's community and services, interacting with campus resources such as Student Disability Services, campus organizations and clubs, as well as in the context of their courses. Equally important, students are engaged in work-based learning through the duration of their time in the program and have to earn a certain number of hours at a different community site each semester, gaining experience with at least three different organizations by the time they graduate. This component is supported by research suggesting employers are more likely to hire individuals with IDDs when they have had prior interactions with this population in their work setting (Carter et al., 2012; Simonsen & Neubert, 2013).

The majority of the staff at Propel either have a disability themselves or have a loved one with a disability. Propel's work force consists of academic advisors, volunteer tutors, graduate assistants, AmeriCorps VISTAS, and peer mentors to support each student's individual academic, social, and emotional needs. These various supports are in line with Think College's standards of quality in inclusive higher education (Grigal et al., 2012). One major component of student support is Propel's House system. Students are put in small groups that meet throughout the academic year with an assigned staff member. Students meet briefly in their Houses each morning to go over their schedules, check their email, and make plans for completing upcoming assignments. Once a week, each House meets for a longer activity. This may involve games or competitions, calming activities such as art or meditation, learning about campus resources such as Counseling Services, or trainings on relevant topics such as stress-management, study skills, or roommate etiquette.

Propel's Theoretical Foundations

Three specific ideologies inform the Propel Program's values and training system. First, as described earlier, the Propel Program adopts the WHO's social model of disability and believes that their students can flourish when given the right environment and supports. In this view, the student with the disability is not a "burden on society," but rather society hinders the student's ability to thrive by catering only to neurotypical individuals. Utilizing this paradigm may look like many things: helping a student seek opportunities to work with animals if that is more of a strength for the student than working with people, allowing a student to focus on writing assignments if that is what is more conducive to the student's cognitive processing speed than speaking, or aiding students in understanding their unique learning style and how they can include or advocate for this in the classroom.

The second ideology is based on Carol Dweck's conceptualization of intelligence and ability, known as the *growth mindset* (Dweck, 2006). Dweck's theory proposes that individuals with a

growth mindset believe that the extent of their abilities depends on how hard they work. These individuals are more likely academically to ask questions, take risks, and to view error and failure as a part of their learning process (De Castella & Byrne, 2015). Because of their paradigm that anyone can achieve anything through effort, they do just that (Yeager et al., 2019). Conversely, individuals with a *fixed mindset*, or those who believe abilities are innate and unwavering, are often paralyzed by shame and perfectionism because they feel that there is nothing to be done to improve their skills (Dweck, 2006). Incorporated into the Propel's educational philosophy, students of the Propel Program are taught to emphasize striving and problem-solving over talent.

The third ideology guiding the Propel program is that of Think College, an organization dedicated to promoting higher education opportunities for students with IDDs. Think College provides resources for both programs that serve individuals with IDDs, such as providing trainings and information on helping students transition and how to help them succeed, as well as the students themselves, with tips on things like paying for college (Boyle, 2012). Propel has adapted a number of Think College's tips and tricks, such as utilizing peer mentors, coordinating with families, and preparing students for employment (Kelley & Westling, 2019; Trowbridge, Carlson, & Cusack, 2013).

Propel's commitment to inclusivity means that cohorts are very diverse—most recent demographic data shows that over half of Propel's students (52%) are first-generation college students, and 71% are students of color. Students may have been diagnosed with Down syndrome, intellectual disability, pervasive developmental disorder, ADHD, ASD, and potential comorbid psychopathologies such as anxiety disorders and learning disabilities. Because Propel emphasizes serving students from Kansas City's urban core, 34% of Propel students experience food insecurity, 34% do not have access to the internet in their homes, and 22% are considered unaccompanied

and/or housing insecure. Despite these difficulties, upwards of 88% of Propel's students are employed or continue their education after graduation.

The Current Study

As of 2020, Propel has graduated four cohorts—a total of 55 students. This is cause for celebration as well as reflection. One major challenge the Propel Program faces is knowing which students will thrive academically, and which will need more support. As part of Propel's application process and Propel's intensive partnerships with "student supports," which may include family, friends, mentors, and social workers, staff do their best to determine what a student will need to do well at Propel. For example, the application has space for the student and their supports to write about accommodations the student may need while in Propel and assesses whether the student has access to a computer or the internet at home. Advisors assess the best way a student learns and how to help students advocate for their needs. Even with these structures in place, it is difficult to surmise which students will be do well, and which students will struggle with their grades. This study seeks to understand how the Propel Program can better assess preparedness and likelihood of succeeding in higher education in their application procedures, so that staff can be prepared to support students at higher risk of low grades.

Research Questions

This study is specifically designed to evaluate the psychometric properties of the PSRRv4 and its utility as an admission tool in differentiating students who will thrive at Propel versus those who will struggle, specifically pertaining to GPA. A secondary purpose is to determine whether these potential associations relate to other demographic variables, which can further assist Propel with examining which types of students are fair better or worse than others and create interventions to support these students.

The following research questions will be examined:

(a) What evidence of reliability is there for the Post Secondary Readiness Rubric (PSRR) or any

     of its subscales in measuring Propel students?

(b) What is the strength of association between PSRR subscales and GPA?

(c) Are there are any demographic differences between students of different genders or

students or different racial and ethnic backgrounds?

 (d) What is the PSRR score profile and PSRS scores of students with the lowest GPA's?

(e) What is the PSRR score profile and PSRS scores of students with the highest GPA's?

CHAPTER 3

METHOD

Participants

The data originally had 57 participants. Three participants were removed from the data

because they were not retained during their first semester and a GPA was not recorded. Incomplete

surveys were removed from the data. Four Teacher Surveys and one Parent Survey had duplicate

entries, meaning that the person rating the student took the survey twice. In all cases, ratings

increased on the second survey. Only the first survey was used to prevent inflation of scores. Propel

previously did not require that students, their teachers, and their parents fill out the PSRRv4 as a

part of their application materials. As such, Student Surveys, Parent Surveys, and Teacher Surveys

were not evenly collected. The final sample consisted of 49 participants. There was overlap for

students for whom multiple types of surveys were submitted (Student Surveys, n = 32; Teacher

Surveys, n = 40; Parent Surveys, n =16).

As shown in Table 1 (see Appendix A), participants ranged in age from 18-28 (M = 19.71, SD

= 2.11), though the majority of participants were age 20 or younger (75.5%; n = 37). Cohort 4 held

65.3% of participants (n = 32), whereas Cohort 3 held 34.7% (n = 17). A larger percentage (59.2%) of

participants identified as male (n = 29), versus the 40.8% who identified as female (n = 20). Roughly

a third (31.3%) of students have held paying jobs prior to starting at Propel. The average first-

semester GPA was 2.65 (SD = 1.01). Propel students represent a variety of backgrounds, much of

which can be described by questions taken from the application materials. In this sample, 57.1% of

students reported receiving support or services from an agency (n = 28), 20.4% reported receiving a

Medicaid Waiver (n = 10), and 32.7% reported receiving Social Security benefits (n =16). In terms of

in-home computer and internet accessibility, 85.7% of students reported having access to a

computer or laptop at home (n =42) and all but one student (98%, n = 48) reported having access to

the internet at home. When asked whether one or both parents had graduated from college, 83.7% (*n* = 41) of students said yes.

Measures

Demographic Data

Demographic data includes race, gender, age, previous educational experience, previous work experience, and services utilized that are specific to individuals with disabilities (see Table 1, Appendix A). This data was collected via Propel's Admissions Application. The application also requests information concerning accessibility to a home computer and internet as well as whether one or more of the applicant's parents attended college.

College Readiness Survey

The Postsecondary Readiness Rubric, Version 4, was used in the present study as part of the quality improvement analysis for the Propel Program's application process. The first version was originally created by Hudson Valley Transition Coordination Site at Southern Westchester BOCES, with funding from the New York State Department of Education's Vocational and Educational Services for Individuals with Disabilities (VESID now ACCES-VR). The current version, used as a part of this study, was updated and made available by K3 Transition Resources, LLC. According to the User's Guide, the Postsecondary Readiness Rubric (PSRRv4) is a resource to be utilized by students with disabilities (no particular category of disability is specified) who are interested in higher education, as well as the individuals that support those students (guidance counselors, parents, teachers, or other mentors familiar with the student). The User's Guide describes the PSRRv4 as intended to assess whether a student has the necessary skills to succeed in higher education, as well as to create dialogue around the student's life goals. As it was meant to be a conversation and not a formal psychometric instrument, the authors do not provide analyses for evidence of reliability and validity.

The PSRRv4 consists of 10 subscales (with item ranges from 2-8) of skills deemed important for success in college. PSRRv4 uses an ordinal Likert-type scale, ranging from 1 to 4, with higher scores indicating more student strength in that area (1 = "Student does not meet basic requirement in this area; intensive remediation or change is necessary to lead to successful outcomes"; 4 = "Student is strong in this area; has all the elements"; K3 Transition Resources, LLC, 2017, p. 2). These Likert type ratings have specific instructions for each subscale. For example, a score of 1 for the Resilience subscale is described as "Student requires consistent external support to perform these indicators (totally dependent upon others)" whereas a score of 1 for the Motivation subscale is described as "The student cannot articulate why they wish to attend college or a postsecondary program or how it will impact their life goals."

The 10 subscales are as follows: (a) Self-Awareness includes four items, such as "Is knowledgeable of their disability and the supports needed to address it. It appears designed to measure how well a student knows themselves and has realistic expectations of themselves, (b) Resiliency includes eight items, such as "Ability to manage negative outcomes and experiences effectively." It appears designed to measure how well a student navigates stressful situations, (c) Connections includes five items, such as "Individual interacts in a variety of environments throughout the day." It appears designed to measure a student's involvement in communal activities and organizations, (d) Social Skills: Personal includes five items, such as "Resolves conflicts peacefully." It appears designed to measure a student's efficacy in personal relationships, (e) Social Skills: Academic includes five items, such as "Attends class on time." It appears designed to measure a student's efficacy in participating effectively in the academic environment, (f) Motivation includes five items, such as "Feels they have the resources to achieve goals." It appears designed to assess a student's desire to pursue and be successful in both college and work, (g) Study Skills: Acquiring and Manipulating Information includes 3 items, such as "Possesses sound time management and

organization skills." It appears designed to measure a student's effectiveness in managing the information and workload in school, (h) Study Skills: Using and Producing Information includes two items, such as "The student knows the conditions that lead to optimal studying and production of school work." It appears designed to measure how effective a student is at monitoring the quality of their work and preparing for upcoming assignments, (i) Literacy includes five items, such as "Does the student read books assigned by the school?" It appears designed to measure the student's reading ability, and (j) Legal Framework is a quiz with 14 true/false items, designed to test a student's understanding around their rights as an individual with a disability in higher education. It includes questions such as, "If the Disability Services Office approves an accommodation, the professors must allow it." This final subscale, Legal Framework, is intended for student who plans to pursue accommodations related to their disability at their place of higher education.

Propel utilizes specific subscales within the PSRRv4. In their admissions materials, Propel includes an online format of portions of the PSRRv4. When the Propel Program adapted this instrument to an online format, they labeled the Likert ratings identically on each item for each subscale, with a rating of 1 = "Student needs a lot of support do this" and a rating of four being and 4 = "Student does this regularly and on their own." For the student PSRR, these ratings are phrased in the first-person. The subscales Propel chose to utilize in its application materials include the full Self-Awareness, Resiliency, Social Skills: Personal subscale, Social Skills: Academic, Motivation subscales. There is also a single-item from the Study Skills: Acquiring and Manipulating Information subscale ("I have time management skills"), a single item from the Study Skills: Using and Producing Information subscale ("I know how and when I study best"), and a single item from the Literacy subscale ("I read my textbooks"). Two items were added by Propel staff unrelated to the PSRRv4, including "I have a way of keeping track of my assignments" and "I can keep my school papers organized." At face value, these single items appear to measure academic organizational skills. As

such, they were combined to create a seventh subscale, which I named the Academic Organizational

Skills subscale. Current literature suggests that combining items produces more accurate evidence

of reliability than drawing inferences from single-items (Gliem & Gliem, 2003).

Propel's admissions documents asks that this scale be completed by the student and at least

one "student support," typically a parent, teacher, or other close member of the student's life. The

questions are phrased in the first person for the student applicants and third person for the student

supports. We have split the survey types into categories labeled Student Survey, Teacher Survey,

and Parent Survey. However, participants taking the survey weren't ask what their relationship is to

the student whom they are rating. For the Parent Surveys, Propel staff identified parents and

guardians. For the Teacher surveys, email addresses identified school teachers, but other names

could not be identified by the email address or by the Propel Staff. As such, the title "Teacher" may

also apply to other individuals in the student's life other than parents or guardians. The limitations

of this are discussed in the Limitations section.

Procedures

The data utilized for this study was taken from the first semester of Cohorts 3 and 4 of the

Propel Program, more specifically the fall semesters of 2017 and 2018. This includes application

materials, GPA information, and attrition information. As a part of the admittance to the Propel

Program, students sign FERPA waivers, allowing access and use of their personal information by staff

in order to best serve the students. The author of this study has completed FERPA training at the

Propel Program graduate assistant and is able to access and utilize data for research (see Ethical

Concerns section for other details)--The Propel Program utilizes the PSRR as a part of their

admissions process in an informal manner, without scoring the entries of the students and their

supports. As detailed above, the User's Guide for the PSRR gives details about how the Likert-scale

ratings may be interpreted within an individual subscale. It is unclear, however, how these scores

might be related to outcomes when the student enters college. While this assessment may help

students, mentors, and institutions make decisions about which students are more equipped to

succeed, it currently lacks psychometric data, including evidence for reliability and validity. The

subscales, while based on the knowledge of experts in the field of higher education and disability,

are proxies for psychological constructs. To expand the ways in which Propel interprets the scores in

order to select students who are socially, emotionally, and academically ready for college, our

analysis sought to find relationships between PSRR ratings and how students faired in their first

semester in the Propel Program.

Ethical Considerations

This is a review of existing data from years 2017-2018 and 2018-2019. All of our applicants

are over 18 and do not have legal guardians because we have screened for and removed any

participants with a guardian from the data. The data being utilized is from students who have

already been admitted and have graduated or are about to graduate, and will have no bearing on

student outcomes. Furthermore, this study is intended to help Propel staff understand

preventatively which students are more at-risk of struggling in the Propel Program and more in need

of support, rather than an intention to not accept students requiring extra support. Because the

following analyses are only for use within the Propel Program, this project is considered to be a

quality improvement project and is exempt from IRB review.

CHAPTER 4

RESULTS

Preanalysis

Normality for the seven subscale score distributions, as well as first-semester GPA, was examined through histograms and skewness. Because of the small data set, a threshold of +3 or -3 was used to determine whether skewness and kurtosis constituted a non-normal distribution (Kline, 1999). The majority of variable scores were within this range (see Tables 2, 3, and 4 in Appendix B). First-semester GPA, the only scale variable that is not a PSRRv4 subscale, was unimodal and somewhat negatively skewed (skewness = -.792, SE = .340). The majority of subscale scores were also negatively skewed (this is further interpreted in the Discussion section). Because all subscale distributions were considered normal, I utilized parametric analyses.

Research question A: Reliability

Evidence for reliability was first demonstrated by calculating Cronbach's alpha for each of the 7 subscales on Propel's version of the PSRRv4 within the Student, Teacher, and Parent Surveys. A Cronbach's alpha coefficient above .70 is considered sufficient proof of reliability for a construct, though there may be variation below .70 due to diversity in the sample (Kline, 1999). As seen in Table 5 (Appendix C), alpha is sufficient for all subscales, except for the Student Survey – Motivation subscale (α = .69). For the Student Survey subscales, Cronbach's alpha ranged from a low of α = .74 for the Self-Awareness subscale to a high of α = .86 for the Motivation subscale. For the Teacher Survey subscales, Cronbach's alpha ranged from α = .69 for the Motivation subscale to α = .92 for Academic Organizational Skills. The Parent Survey subscales had a range of Cronbach's alpha spanning α = .71 for Social Skills: Academic and α = .84 for Motivation (see Table 5 in Appendix C).

To further assess reliability, subscale scores were correlated between subscale types (Student and Teacher Surveys, Teacher and Parent Surveys, and Student and Parent Surveys) in a

Multi-Trait Multi-Method Matrix (Campbell & Fiske, 1959). The correlations in Table 6 (see Appendix D) provide some evidence of reliability and validity of the PSRR subscale and full scale measurements. It is noteworthy all of the weakest ($p < 2.0$) coefficients involve Teacher survey pairs, whereas all Student-Parent coefficients are considered moderate ($2.0 < p < 5.0$) to strong correlations ($p \geq 5.0$). The consistency of this trend suggests convergent validity for the Student and Parent scales and discriminant validity for Student-Teacher and Parent-Teacher subscales.

This pattern is also visible in what are known as the "heterotrait, monomethod triangles," or the comparison of all survey types (Student to Parent to Teacher) within the same subscale, for the Resilience, Social Skills, Personal, and Social Skills, Academic subscales. For the Resilience subscale, Teacher scores are actually weakly negative correlated with Parent ($p = -.17$) and Student ($p = -.17$) scores. Parent and Teacher scores show almost no correlation for Social Skills, Personal ($p = .013$). Student and Teacher scores on Social Skills, Academic are also weakly correlated ($p = .18$). This demonstrates poor evidence of reliability between the Teacher subscale and the Student and Parent subscales.

The heterotrait, monomethod triangle with the overall highest coefficients is Academic Organizational Skills, with a moderate Student-Teacher association ($p = .498$), and strong Student-Parent ($p = .84$) and Teacher-Parent ($p = .77$) associations. This suggests a strong "method factor," or strong evidence for reliability and convergent validity for Academic Organizational skills. Motivation and the Full Scale show moderate to strong coefficients in their heterotrait, monomethod triangles, though some coefficients are relatively small (see Table 6). The Academic Organizational Skill subscale appears to show the strongest evidence for reliability when looking at both Cronbach's alpha and between-survey type correlations.

Unfortunately, some findings in the present study violate Campbell and Fiske's (1959) principles for demonstrating discriminant validity in MTMM matrices. Several different subscales

with different survey participants show strong correlations—for example, the Parent scores for the

Full Scale have a very strong (p = .94) association with the Student scores for Motivation. Also,

coefficients in the validity diagonals (see Table 6), which correspond to survey pairs in which the

survey type is the same, should be greater than the heterotrait coefficients in the surrounding block.

There are several examples in which this is not true for all subscales, though it should be noted that

the difference between validity coefficients and heterotrait coefficients for the Full Scale blocks is

noticeably smaller. These results suggest that evidence for reliability and discriminant validity

between different subscales and different subscale types is poor. However, the previously discussed

trend in which coefficients for subscale pairs involving Teacher surveys are consistently smaller than

those of Student-Parent survey pairs boosts evidence for validity. Overall, these results suggest that

evidence for validity and reliability for the PSRR and its subscales is mixed.

Research question B: Associations with GPA

Pearson's r was calculated to determine which PSPR subscales correlated significantly with

GPA. Using the Bonferroni correction for the 7 subscales (.007), only one subscale from the

Teacher's Survey was significantly associated with GPA: Academic Organizational Skills (r = .337, p =

.003), which would be considered a moderate correlation. The association was slightly stronger

when calculated using Spearman's Rho, r = .431, p = .006, explaining 19% of the variance. Without

using the Bonferroni Correction, the Social Skills, Personal subscale from the Student Survey was

significantly associated with GPA when using Spearman's Rho (r = .358, p = .044), as was the

Motivation subscale from the Teacher survey (r = .337, p = .033).

Research Questions C: Differences in Gender or Race

Because of the small sample size, Fisher's Exact Test (FET) was calculated to look for

differences in demographic variables based on race and gender (see Table 1 in Appendix A). Results

showed racial differences in access to a home computer or laptop (p < .001). Of White students,

Asian students, and Asian (Underrepresented) students, 100% reported having access to a computer or laptop at home. This is compared to the majority of African American/Black students (91.7%), and two-thirds Hispanic students (66.7%). The two students who identified as Two or More Races, as well as one student who did not specify a race, reported no access to home computers or laptops. Of the total students who identified as people of color, approximately one-fifth (21.7%) reported no access.

Another FET of demographic variables (see Table 1 in Appendix A) was calculated using First-Semester GPA as the dependent variable, wherein GPA was categorized into letter grades (GPA less than 1.00, 1.00 – 1.99, 2.00 – 2.99, 3.00 – 3.99, and 4.00). Of the students who reported not having access to a home computer, the majority had a first-semester GPA below 3.00 (83.7%). For students who reported having access to a home computer, approximately half had a first-semester GPA below 3.00 (52.4%). However, because there is not difference between Race/Ethnicity and First-Semester GPA, that implies that students who don't have access are somehow compensating for the lack of a home computer. This is discussed further in the Future Directions section.

Research questions D & E: PSRR profiles of GPA extremes

To better understand attributes of students with very high GPAs, in contrast to students with very low GPAs, categories were created for extremes of first-semester GPA. Because first-semester GPA had such a large standard deviation (M = 2.65, SD = 1.01), it would have been impossible to use + or -3 SD to create categories because the range would have been outside the 0.00 to 4.00 GPA scale. Instead, categories were created based on two criteria—to reflect extremes of GPA, and to have a similar number of students in each group. As such, a floor of GPA ≥ 3.5 (equivalent to a grade of at least 90% or A) was used for the high GPA group (n = 21) and a ceiling of GPA ≤ 2.0 (equivalent to a grade of less than 75% or C) was used for the low GPA group (n = 17), which also reflects the negative skew of first-semester GPA (see Preanalysis section, p. 23).

As detailed in Table 7, the vast majority of high-GPA scores were higher than low-GPA scores. There are only three instances in which low-GPA scores were higher than high-GPA scores were Social Skills, Academic on the Student Survey (M = 18.2), and Resilience (M = 22) and Social Skills, Personal (M = 17) on the Teacher Survey. The largest discrepancies between low-GPA and high-GPA are on the Academic Organizational Skills and the Full Scale Score. For Academic Organizational Skills, students with low-GPA's had subscale score averages of M = 11.8 (Student Survey), M = 9 (Teacher Survey), and 10.67 (Parent Survey), whereas high-GPA students had subscale score averages of M = 15.86 (Teacher Survey), M = 14.89 (Teacher Survey), and M = 14.33 (Parent Survey). For the Full Scale Score, students with low-GPA's had score averages of M = 99 (Student Survey), M = 87.56 (Teacher Survey), and M = 94.33 (Parent Survey). Students with high-GPAs had Full Scale Score averages of M = 111 (Student Survey), M = 95.44 (Teacher Survey), and M = 105.5 (Parent Surveys). Except for minor differences on the Social Skills, Personal subscale and the Academic Organizational Skills, Subscale, student participants consistently rated themselves with the highest scores, parent participants rated students with the second-highest scores, and teacher participants rated students the lowest.

CHAPTER 5

DISCUSSION

Summary of Findings

The purpose of this research was to provide quality improvement data for the Propel

Program's admissions process. The goal was to determine whether the PSRR demonstrated evidence

of reliability and validity, whether it was associated with GPA during the first-semester, and how

other data in Propel's admissions documents could help the Propel staff better understand the

needs of incoming students. This is particularly relevant to a program that prides itself on admitting

students of diverse backgrounds, with a wide array of privileges and abilities.

The PSRRv4 shows some evidence of reliability when used as an online Likert type scale. It is

important to note that its original purpose as a means of discussion of an applicant's strengths and

areas of growth in terms of college attendance. While the individual subscales appear reliable using

Cronbach's alpha, this reliability, the results of the multitrait-multimethod matrix, another measures

of reliability, are less supportive. These results are not surprising—the PSRR was not created to be a

psychometric instrument. The sample size and possible violations of independence in sampling (see

Limitations section) also likely contributed to inconsistencies in reliability.

These results, however, do not necessarily mean that using the PSRR as a Likert-type

measure is not useful. The Academic Organizational Skills subscale in the Teacher's Survey was

significantly correlated with First-Semester GPA. It also makes sense that a scale which measures (at

face value) a student's ability to navigate an educational environment strongly correlates with GPA.

However, it is still important to consider that this "scale" was created out of five stray items, only

three of which are formally questions on the original PSRR. While I reported two other associations

with GPA would have been significant without the Bonferroni correction, these associations may be

spurious. It is also important to consider that sample size affects the significance—for example, the

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correlations between GPA and subscale scores listed in Results section above are all very similar, but because of the varying sample sizes in the survey types, only some of them are significant. A larger sample size would likely have increased power and our ability to detect weaker relationships in the data. With more participants, we may have seen a greater number of significant associations. This may be an example of Type II error. For example, in the Results section, the strength of the relationship between the Motivation scores on Teacher scale with GPA and the Academic Organizational Skills scores on the Teacher scale with GPA are identical. However, the former p value is non-significant and the latter is moderately significant.

The results indicate that students of certain racial backgrounds (African American/Black, Hispanic, Two or More Races, as well as students who did not identify a race) have less access to home computers and laptops than students who identify as White, Asian, and Asian (Underrepresented), none of whom reported lack of access to a home computer. One recent study of such "digital inequalities" found that students of color were more likely to own less reliable devices, and this was associated with poorer grades (Gonzales et al., 2018). Fortunately, though, while the Fisher's Exact Test statistics demonstrated that students who reported no access to a home computer tended to have lower grades than students who reported access, distributions of first-semester GPA did not differ by race. This is an exciting finding, potentially demonstrating that the Propel Program is mitigating what might have otherwise been a digital divide between racial groups in the Propel Program. One reason for this might be the access to computers while students are o–campus. Propel requires its students to be on campus like a typical workday, with students arriving early in the morning and leaving around 5:00 PM. Students are encouraged to make use of Propel's computer lab, a computer lab within the building that houses Propel, as well as the library and other campus locations with computer access. This potential explanation demonstrates the

great care that Propel takes to promote inclusivity and accessibility among students of all

backgrounds, which has clearly extended to students who do not have at-home devices.

There is also the possibility that smartphones are bridging the digital divide for minority

students. While 12% of students reported no access to a home computer or laptop, 98% (all but one

student) reported access to the internet at home. A recent report on racial gaps in home-internet

use (Turner, 2016) found that structural racism heavily contributed to less access to home internet

in communities of color. One example of these mechanisms includes broadband companies

requiring credit checks, despite the fact that communities of color have been systemically denied

the ability to build credit. However, this study and a Pew Research Center Poll (Perrin &Turner,

2016) found that smartphones make up for some of the lack of access to both home computers and

home internet seen in Black and Hispanic communities. While there is no data available for the

current participants whether smartphone use accounts for the discrepancy between home

computer and internet access for Propel students, it is a possible explanation for both this

discrepancy and for the lack of differences in GPA for students who report that they do not have a

computer at home. Propel's staff have heavily utilized communication through smartphones as part

of their engagement with students, helping students to understand how to access resources like

email and online portals. This second potential also highlights Propel's ability to bridge gaps for

students of varying levels of access.

In terms of the PSRR scores of students with very low or very high GPAs, the results suggest

that students with very low GPAs have lower scores overall on the PSRR. Specifically the Academic

Organizational Skills subscale appears to relate most directly to academic achievement. One

interesting finding within the data set was the hierarchy of scores by survey type, with teachers

consistently rating students the lowest, students rating themselves the highest, and parents falling

somewhere in-between. This may have been due to social desirability bias, or the phenomenon in

which individuals give responses they believe will be more socially well-received, as opposed to responses that are more honest or self-reflective (Edwards, 1953). Social desirability may also have affected the four teachers and one parent who submitted two surveys for the students they rated, with the second survey having higher scores in every case (see Sample section). As discussed in the Introduction, there are very limited opportunities for individuals with IDDs after high school. Though an introductory letter to the PSRR in Propel's application process reassures participants that "There is not a score you need to have to be admitted to Propel," it is certainly conceivable that students and their supports may feel pressured to give responses that portray a more college-ready applicant. The Propel Program may want to screen surveys for duplicates, as well as consider score differences between teachers, parents, and potential students.

Overall, it appears that the PSRR is a somewhat reliable measure that holds a certain amount of utility in Propel's admissions process by demonstrating relationships in academic skills and GPA. It also appears that concerns over whether students have access to home computers and laptops, which may be of concern in other college settings, are mitigated by the Propel Program. The number of applications Propel receives has grown exponentially since the inception of the program, creating the need for more insight into what makes a more helpful admissions process. These findings provide Propel with information on how staff might utilize their application data.

Future Directions

Evaluating an individual with one or more IDDs can require more thoughtfulness for a number of reasons. Specific to mental health, Costello and Bouras (2006) described how traditional assessments may not be conducive to the wide range of verbal abilities present in individuals with IDDs, as well how mental health concerns may manifest differently in this population. With constructs like those being measured in the PSRR (such as "motivation" or "resilience"), a cursory look at the research in IDD populations suggests mostly qualitative analyses. This lack of traditional

scales may mean a more time-consuming and conscientious approach to admissions. As the Propel Program seeks to refine its application process, it may be prudent to consider assessment materials that cater separately to potential students, parents, and teachers. While teachers and parents may still complete the PSRR in its online format, Propel may shift its student interview process to include the PSRR as a dialogue between Propel staff, and the potential applicant. A factor analysis with a large sample may also help the Propel Program to utilize PSRR items in a more effective way.

As detailed in the Propel Program section, Propel staff utilize various methods to support their students academically, such as mandatory study hours, tutors, academic advising, and accommodations through the Student Disability Services Office. It is helpful to the Propel staff to know as soon as possible which students will need extra support around succeeding academically, so that plans can be put into place for that student to receive assistance before the student has a very low GPA that they may have a hard time getting back up. Propel may want to further utilize the results of each admitted student's PSRR, particularly their Academic Organizational Skills score, to more quickly locate and help students at risk for low GPAs.

Limitations

There are several limitations to consider. It should first be noted that this is a quality improvement analysis for the Propel Program's application process. These results and their interpretations cannot be generalized outside of the Propel Program. The pre-existing data set I used for my analyses was very small. While several associations proved significant even with the conservative Bonferroni Correction used frequently to reduce the risk of Type I error, more findings may emerge with a larger sample size. In addition, non-normality on certain subscale measures may have attenuated coefficients on parametric tests. There is also the chance that using the Bonferroni Correction may have led to Type II error. In other words, the decision to be more conservative in the context of a small data set may have resulted in missing potential relationships in the data.

The Teacher Survey, though the largest proportion of our sample, was also the most problematic group in terms of homogeneity and independence. While it appears that a large proportion of teachers completed surveys for students, as addressed in the Measures section, some of the individuals who completed the survey were mental health counselors, social workers, or had unknown relationships to students. Because many Propel students come from the same high schools around Kansas City, 13 students from our sample were rated by the same 4 teachers. This overlap may have attenuated Teacher Survey scores and violated assumptions of independence of scores.

The Measures section describes in the makeup of the PSRRv4 and the intention of the authors for its questions to constitute a dialogue about the readiness of a student with an ID/D for the college environment. The subscale constructs were created with this population in mind—a population that is vastly understudied—created by experts in the field of cognitive disabilities. Though the PSRRv4 is clearly a thoughtful and much-needed tool for a heavily marginalized population, these constructs need to be further studied for evidence of reliability and validity if they are to be used in a scale format. By further researching and refining what constructs such as "self-awareness" look like in the postsecondary education ID/D community, the PSRRv4 will be able to better predict successful outcomes.

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TABLES

Table 1. Demographics

Characteristics	N (%)	Minimum	Maximum
Cohort	49		
Cohort 3	17 (34.7%)		
Cohort 4	32 (65.3%)		
Gender	49		
Male	29 (59.2%)		
Female	20 (40.8%)		
Age	49	19	28
18-20	37 (75.5%)		
21-23	9 (18.4%)		
24-26	2 (4.0%)		
27-29	1 (2.0%)		
Race			
White	43 (48.9%)		
Black/African American	26 (29.5)		
Hispanic	10 (11.4)		
Asian	3 (3.4%)		
Asian (Underrepresented)	1 (1.1%)		
Two or More Races	3 (3.4%)		
Unknown	2 (2.3%)		
Previous Paid Work Experience?	49		
Yes	25 (31.3%)		
No	13 (16.3%)		
Unknown	10 (12.5%)		
Receives Services from Agencies?	49		
Yes	28 (57.1%)		
No	17 (34.7%)		
Unknown	4 (8.2%)		
Receives a Medicaid Waiver?	49		
Yes	10 (20.4%)		
No	17 (34.7%)		
Unknown	5 (10.2%)		
Receives Social Security Benefits?	49		
Yes	16 (32.7%)		
No	30 (61.2%)		
Unknown	3 (6.1%)		
Access to a Home Computer?	49		
Yes	42 (85.7%)		
No	6 (12.2%)		
Unknown	1 (2.0%)		
Access to Internet at Home?	49		
Yes	48 (98.0%)		
No	0 (0.0%)		
Unknown	1 (2.0%)		

One Parent Graduated from College?	49
Yes	41 (83.7%)
No	8 (16.3%)
Unknown	0 (0.0%)

Table 2. Descriptive Statistics for Student Survey Subscales

Variable	*M*	Range	SD	*Skewness (SE)*	*Kurtosis (SE)*
1. Self-Awareness	10.59	4-16	2.85	-.20 (.41)	.27 (.81)
2. Resilience	23.5	8-31	4.996	-.96 (.41)	1.52 (.81)
3. Social Skills, Personal	17.66	7-20	2.88	-2.22 (.41)	5.64 (.81)
4. Social Skills, Academic	16.59	8-20	3.13	-1.15 (.41)	1.04 (.81)
5. Motivation	16.97	8-20	3.35	-1.46 (.41)	1.59 (.81)
6. Academic Organizational Skills	13.16	5-20	4.05	-.01 (.41)	3.77 (.81)
7. Full Scale	98.47	41-122	16.58	-1.35 (.41)	.85 (.81)

Table 3. Descriptive Statistics for Teacher Survey Subscales

Variable	*M*	Range	SD	*Skewness (SE)*	*Kurtosis (SE)*
1. Self-Awareness	10.05	4-16	3.19	-.13 (.37)	-.62 (.73)
2. Resilience	22.28	15-32	4.94	.18 (.37)	-.84 (.73)
3. Social Skills, Personal	16.85	10-20	2.83	-.63 (.37)	-.49 (.73)
4. Social Skills, Academic	16.20	9-20	2.86	-.55 (.37)	-.36 (.73)
5. Motivation	16.85	11-20	2.53	-.61 (.37)	-.62 (.73)
6. Academic Organizational Skills	12.68	5-20	4.82	-.06 (.37)	-1.12 (.73)
7. Full Scale	94.90	68-127	16.78	.34 (.37)	-1.17 (.73)

Table 4. Descriptive Statistics for Parent Survey Subscales

Variable	*M*	Range	SD	*Skewness (SE)*	*Kurtosis (SE)*
1. Self-Awareness	10.38	4-13	2.53	-.88 (.56)	1.07 (1.09)
2. Resilience	23.69	13-30	5.04	-.60 (.56)	-.57 (1.09)
3. Social Skills, Personal	17.25	13-20	2.65	-.33 (.56)	-1.82 (1.09)
4. Social Skills, Academic	16.63	11-20	2.70	-.84 (.56)	-.04 (1.09)

5. Motivation	16.75	9-20	3.26	-1.23 (.56)	.59 (1.09)
6. Academic Organizational Skills	13.19	9-20	3.29	.67 (.56)	-.59 (1.09)
7. Full Scale	97.88	61-120	16.71	-.74 (.56)	-.12 (1.09)

Table 5. Reliability Scores of PSRR Subscales

Characteristics	N	α
Student Survey	32	
Self-Awareness		.74
Resilience		.85
Social Skills, Personal		.80
Social Skills, Academic		.75
Motivation		.86
Academic Organizational Skills		.82
Full Scale		.93
Teacher Survey	40	
Self-Awareness:		.85
Resilience:		.84
Social Skills, Personal:		.81
Social Skills, Academic:		.75
Motivation:		.69
Academic Organizational Skills		.92
Full Scale		.94
Parent Survey	16	
Self-Awareness:		.73
Resilience:		.83
Social Skills, Personal:		.78
Social Skills, Academic:		.71
Motivation:		.84
Academic Organizational Skills		.75
Full Scale	.95	

Table 6. Multi-Trait, Multi-Method Matrix for Full Scale and Subscale Scores

		Self-Awareness			Resiliency			Social Skills, Personal			Social Skills, Academic			Motivation			Academic Organizational Skills			Full Scale		
		Student	Teacher	Parent	Student	Teacher	Parent	Student	Teacher	Parent	Student	Teacher	Parent	Student	Teacher	Parent	Student	Teacher	Parent	Student	Teacher	Parent
Self Aware	Student	.74																				
	Teacher	.441*	0.85																			
	Parent	0.689	0.43	0.73																		
Resiliency	Student	.563**	-0.032	0.59	0.85																	
	Teacher	0.146	.604**	0.217	-0.168	0.84																
	Parent	0.571	-0.038	.789**	.834*	-0.169	0.83															
Social Skill	Student	.427*	0.233	0.566	.608**	0.033	.775*	0.8														
	Teacher	0.281	.556**	0.087	0.032	.659**	-0.003	0.251	0.81													
	Parent	.731*	-0.118	.643**	.881**	-0.305	.856**	.833*	0.013	0.78												
Social Skill	Student	0.368	0.139	0.643	.473*	0.139	.781*	.628**	0.148	.873**	0.75											
	Teacher	0.249	.384*	0.339	0.074	.503**	0.325	0.329	.381*	0.518	0.18	0.75										
	Parent	.741*	0.28	.676**	0.593	0.224	.709**	.746*	0.309	.759**	.737*	.904**	0.71									
Motivation	Student	.506**	0.11	.753*	.470**	0.014	.795*	.775**	0.165	.863**	.615**	0.388	.910**	0.86								
	Teacher	0.239	.484**	-0.145	0.149	.565**	-0.122	0.361	.545**	-0.039	0.196	.597**	0.326	0.267	0.69							
	Parent	.778**	0.375	.823**	.735*	0.076	.892**	.792*	0.369	.813**	.830*	0.494	.768**	.917**	.272	0.84						
Academic	Student	.733**	-.401*	0.469	.470**	0.175	0.216	.411*	0.28	0.383	.448*	0.313	0.494	.472**	0.371	0.505	0.82					
	Teacher	.462*	.629**	0.599	0.161	.508**	0.362	0.244	0.276	0.252	0.069	.736**	.685*	0.269	.680**	0.462	.498**	0.92				
	Parent	0.7	.896**	.544*	0.308	.842**	0.43	0.624	0.627	0.339	0.553	0.531	.563*	0.685	0.522	.515*	.836**	.772*	0.75			
Full Scale	Student	.766**	0.261	0.692	.803**	0.053	.734*	.806**	0.239	.845**	.737**	0.321	.776*	.797**	0.343	.842**	.763**	0.69	0.37	0.93		
	Teacher	.402*	.781**	0.321	0.034	.837**	0.041	0.291	.695**	0.002	0.18	.757**	0.483	0.248	.798**	0.376	.445*	.831**	.861**	0.333	0.94	
	Parent	.796*	0.381	.868**	.756*	0.191	.930**	.833*	0.29	.862**	.843**	0.656	.859**	.939**	0.153	.943**	0.548	.688*	.654**	.873**	0.442	0.95

Note. The dark blue represents the reliability diagonal, the light gray represents the mono-method triangles, the light blue represents the validity diagonals, and the dark gray represents the heteromethod triangles; *p < .05. **p < .01. ***p < .001.

Table 7. Descriptive Statistics for GPA Extremes									
Subscale	Student			Teacher			Parent		
	n	*M*	*SD*	*N*	*n*	*SD*	*n*	*M*	*SD*
Self-Awareness (Low GPA)	5	11.4	1.52	9	9.33	2.50	3	10.0	2.65
Self-Awareness (High GPA)	7	12.57	2.44	9	10.22	2.86	6	11.0	1.55
Resilience (Low GPA)	5	24.2	1.30	9	22.00	5.24	3	24.0	3.61
Resilience (High GPA)	7	27.0	3.27	9	21.33	4.39	6	26.0	3.63
Social Skills, Personal (Low GPA)	5	16.6	1.52	9	17.00	2.12	3	17.33	2.89
Social Skills, Personal (High GPA)	7	19	.82	9	15.56	3.21	6	18.17	2.48
Social Skills, Academic (Low GPA)	5	18.2	1.64	9	14.89	3.14	3	15.67	2.31
Social Skills, Academic (High GPA)	7	17.71	2.69	9	16.11	2.52	6	17.67	1.86
Motivation (Low GPA)	5	16.8	2.59	9	15.33	2.96	3	16.67	3.21
Motivation (High GPA)	7	18.86	1.21	9	17.33	1.5	6	18.33	1.03
Academic Organizational Skills (Low GPA)	5	11.8	3.11	9	9.00	4.36	3	10.67	1.53
Academic Organizational Skills (High GPA)	7	15.86	4.22	9	14.89	2.57	6	14.33	3.78
Full Scale (Low GPA)	5	99.0	5.10	9	87.56	16.19	3	94.33	13.32
Full Scale (High GPA)	7	111.0	11.14	9	95.44	12.64	6	105.5	9.67

VITA

Sally Stratmann was born and raised in Austin, TX. She received her B.A. in psychology from The University of Texas at Tyler. Before and during her undergraduate career, she traveled to Ecuador, Argentina, Brazil, Uruguay, the Netherlands, France, Germany, the Czech Republic, England, and Cambodia, to learn more about globalism, political science, political oppression, and international psychology. Initially accepted into the doctorate program for counseling psychology at the University of Missouri – Kansas City, Sally transferred to the doctorate program for clinical psychology after her first year to remain with her advisor, who had taken a new position in that department. Her research interests include refugee and immigrant mental health and trauma, as well as issues of diversity and social justice.