How Inclusive is Postsecondary Education: Over- and Under-Representation of Individuals with an Intellectual Disability

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Abstract

Postsecondary education (PSE) programs now provide opportunities for individuals with an intellectual disability (ID). However, it is necessary to evaluate whether inequities exist within this population. The 2018 Vocational Rehabilitation Case Service Report (RSA-911) was analyzed to determine the over- or under-representation of minoritized PSE students with ID. Results indicated that women, Asian and American Indian or Alaska Native students were significantly over-represented, and students from low socio-economic backgrounds, Black or African American, homeless, or foster care students were all significantly underrepresented. Implications for research, policy, and practice are provided based on these results.

Keywords: inclusive postsecondary education, intellectual disability, equity, multiply marginalized

Plain Language Summary

- Individuals with an intellectual disability (ID) are going to college more often than in years past.
- However, we do not know if all individuals with an ID are going to college at similar rates. We do not know if all students, regardless of background, have the same opportunity for postsecondary education.
- **What we did in this study**: The author used a data set from Vocational Rehabilitation to compare the rates of students going to college across different backgrounds.
- **Findings:** The author found that women, Asian, and American Indian or Alaska Native students were likelier to attend college. The study also found that students who are poor, Black or African American, homeless, were in foster care were less likely to go to college.
- **Conclusion:** Postsecondary programs serving students with ID should consider their enrollment practice to ensure that all students with ID can attend college if they are interested.

Postsecondary education (PSE) in the United States has consistently reinforced existing inequalities (Harris, 2021). For individuals from multiply marginalized communities, interacting within the higher education environment may be more difficult due to the unique systems of oppression and discrimination they may encounter (Crenshaw, 1990). Students with an intellectual disability are enrolling in PSE programs across the United States; however, little is known about how institutional and systematic

discrimination impacts the postsecondary enrollment of multiply marginalized students with an intellectual disability (ID).

Discrimination in Postsecondary Education

Disparities in PSE have existed throughout the history of the United States educational system. The financial capital needed to enroll in postsecondary education is a common barrier to many marginalized communities (Destin et al., 2021), and discriminatory postsecondary enrollment practices persist (Jones, 2013). While legislation has been enacted to promote equity for higher education students, progress has not always been linear (Harper et al., 2009). For example, institutions of higher education have utilized multiple strategies for increasing the enrollment of historically marginalized groups in postsecondary education, most notably the practice known as affirmative action. While critics have argued that practices such as affirmative action provided access to unprepared and underqualified students, research highlights that these students often fare better than their peers at these institutions (Fischer & Massey, 2007). However, due to the Supreme Court decision of Fair Admissions, Inc. (SFFA) v. University of North Carolina and President and Fellows of Harvard College, many of these admissions practices have been repealed or will be repealed (Carnevale et al., 2023).

Discrimination against marginalized groups exists throughout higher education, and research has highlighted numerous examples. There is a long history of the exclusion and discrimination of African American students in higher education, and a discrepancy remains in the enrollment of this population (Walter et al., 2018). Similarly, the exclusion of women from opportunities in higher education has a long history; however, this inequity of access is beginning to be ameliorated, with women today making up more than half of total undergraduate enrollment (National Center for Education Statistics, 2021). Research additionally suggests that socioeconomic status (SES) plays a role in postsecondary access (Cahalan et al., 2020; Torraco, 2018), and students with high SES enroll in more selective institutions at higher rates than their peers (Andrew, 2017). Additional factors such as homelessness (Rosenberg & Kim, 2017) and foster care (Sarubbi et al., 2016) have been identified as potential factors that limit access to PSE.

PSE programs are now beginning to include a population of historically marginalized postsecondary students: individuals with disabilities. Starting in the 1960s with the advocacy of Edward V. Roberts (Stroman, 2003), disability inclusion in PSE has continued to grow to a level where now 19% of undergraduate students report having a disability (U.S. Department of Education National Center for Education Statistics, 2019). While individuals with disabilities can be found in a variety of degree-granting programs, a more recent push has expanded opportunities that provide opportunities to those who may not meet the academic requirements for a degree.

Inclusive Postsecondary Education

Advocacy, legislation, and research have expanded postsecondary access for individuals with intellectual disability (ID), a population of students who have historically been excluded from opportunities for PSE. While some students with ID enroll in

traditional college and university programs, a growing number of inclusive postsecondary education (IPSE) programs are specifically designed to support the development of students with ID. Today, inclusive postsecondary education (IPSE) programs can be found on many traditional two- or four-year degree-granting college or university campuses; however, they are typically non-degree programs of study (Grigal et al., 2013). IPSE programs allow the opportunity for the social and academic inclusion of students with ID in the general campus environment.

As of 2024, there were approximately 327 IPSE programs across the United States (Think College, 2024). The rapid expansion of IPSE programs over the last decade is likely the result of the Higher Education Opportunity Act (HEOA) of 2008 (Whirley et al., 2020) which introduced numerous catalysts for change. These include the introduction of the Transition and Postsecondary Programs for Students with intellectual disability (TPSID) competitive grants to either develop or expand IPSE programs, the creation of Think College's National Coordinating Center (NCC) for these TPSID programs, and new, yet limited, access to federal financial aid for students with ID (Madaus et al., 2012). The NCC is tasked with a range of activities for the various TPSID-funded sites, including technical assistance, training, and evaluation. IPSE programs can additionally apply to become a Comprehensive Transition and Postsecondary (CTP) Program through the US Department of Education. A CTP program can provide access to federal financial aid through the Free Application for Financial Student Aid (FAFSA) process upon completion.

While IPSE programs typically share common goals for their students, programs can vary significantly in their program development and implementation (Plotner & Marshall, 2015; Thoma, 2013). For example, only 126 IPSE programs have received federal TPSID funding over the three grant periods (Think College National Coordinating Center, 2023), while many others have done without federal funding and assistance. Similarly, while there are 153 programs that have successfully become a CTP program eligible for financial aid (Think College, 2023), many other programs cannot provide this opportunity to students. Additionally, while some CTPs are TPSID programs, not all programs must have received TPSID funding to become CTPs to provide access to federal financial aid.

In addition to the overall structure, the practices and services of IPSE vary greatly to provide academic access, career development, self-determination skill development, and campus membership (Domin, Taylor, et al., 2020; Grigal et al., 2022). Services are sometimes provided by both the program and external agencies, as some IPSE programs have partnerships with local entities such as the local education agency (LEA) or vocational rehabilitation (VR) service provider (Grigal et al., 2012, 2019). VR partnerships with IPSE programs typically include services such as direct service provision and program advisement, work on a person-centered planning team, and can occasionally support student tuition (Grigal & Smith, 2016; Grigal & Whaley, 2016). These partnerships with VR agencies are part of a continuum of services that IPSE programs provide to increase employment prospects for students (Domin, Haines, et al., 2020).

Research on PSE Programs for Students with ID

Research on students with an ID in PSE has rapidly expanded alongside the increase in programs. Research has moved from program descriptions (Thoma et al., 2011) to more nuanced analyses of program experiences and practices (Whirley et al., 2020). The literature has focused on a variety of topics such as program description, stakeholder perspective evaluation, service provision evaluation, and analysis of post-graduation outcomes (Papay & Grigal, 2019). This progression of research complexity has provided an opportunity for the field to continue to expand and improve practices as they relate to the education of individuals with ID in PSE.

However, investigations to date on the diversity of students with ID in PSE programs are lacking. There has been identified need for greater attention to diversity within the population of individuals with ID (Anderson et al., 2019; Havercamp et al., 2019; Johnson et al., 2021), and financial barriers persist for many individuals in this population, potentially reinforcing existing inequities. Because PSE presents a rapidly growing sector of ID supports and services, there is a need for analysis of the diversity of students with an ID in PSE programs and whether or not they provide their services equitably across individuals with ID (Avellone et al., 2021). Research is needed to identify the current diversity within the population of students with an ID enrolling in PSE programs and to analyze whether historically marginalized college students with an ID are underrepresented within the PSE population. Results could indicate that further work is needed to produce programs that benefit all students with ID.

Purpose

Students with ID are now provided more opportunity to enroll in PSE; however, evaluating and critiquing systems remains necessary to ensure that programs are being provided equitably. Research has demonstrated that practices at institutions of higher education can impact an individual's likelihood of enrolling in postsecondary education, and that these are often inequitably experienced by multiply marginalized populations. In the case of a historically marginalized group such as postsecondary students with ID, there remains a need for research that analyzes which individuals are accessing PSE (Grigal et al., 2014) and whether students with an ID with different backgrounds are benefitting equally from PSE experiences (Avellone et al., 2021). Research utilizing the Vocational Rehabilitation Case Service Report would provide a broad national perspective of students with an ID pursuing higher education through a PSE program. Results could indicate the current state of the field and where progress can be made in recruitment and retention strategies. Therefore, research questions include:

Research Questions

1. What are the characteristics of individuals with ID who attend PSE programs with the support of VR?
2. Are there any characteristics of individuals with ID who receive VR services that are over- or under-represented in PSE programs?

Method

Data Source and Population

Analyses were conducted utilizing the 2018 Vocational Rehabilitation (VR) Case Service Report (RSA-911), which provides the opportunity to analyze a large population of individuals with ID utilizing postsecondary supports while additionally providing the ability to disaggregate the data by race, gender, ethnicity, socioeconomic status, and other demographic characteristics which have been historically marginalized in postsecondary education. The RSA-911 presents one of the few opportunities to conduct large-scale analysis on individuals with an ID in postsecondary education. While this dataset is not specific in programmatic structure for each individual (i.e., not all students with an ID are in an IPSE program; not all IPSE programs are associated with a VR program), it provides the opportunity to analyze a significant portion of the population of students with an ID who are attending postsecondary education programs as a whole, including IPSE programs specifically.

VR programs partner with many postsecondary programs, including IPSE programs, to provide employment support and services to students. While the VR program is independently run in each state, the Rehabilitation Services Administration (RSA) congregates state reporting on supports and services provided to individuals and provides annual data products highlighting the services which are provided across the nation. The RSA-911 is an administrative dataset which monitors the delivery of services to individuals within the VR system, and specifically tracks all individuals who exit the program. Each year, state VR agencies provide information to the RSA to ensure that data is tracked on subjects such as individual demographics, services and supports, employment outcomes, and many other topics (Dutta et al., 2008).

Sample Selection

The RSA-911 includes all individuals who receive services through each state's VR program. The RSA-911 reports both an individual's "type of impairment" and the "source of impairment." For example, an individual may have a cognitive impairment as their primary "type of impairment," and the "source of impairment" is an intellectual disability. Additionally, the RSA-911 provides responses for both a primary and secondary disability. After data cleaning and assessment of assumptions, including checks for normality, homogeneity, and linearity, a sample size of 29,246 individuals was returned of individuals with ID as either their primary or secondary disability.

Measures

The following variables were utilized as general measures of individual level characteristics. Table 1 includes variables that align with RSA-911 survey items about individual characteristics, including demographic, education, and support service variables.

Analytic Method

A series of statistical analyses were conducted in order to answer the research questions. Research question 1 was analyzed with descriptive statistics while chi-square tests of association was used to answer research question 2.

Descriptive Statistics

Descriptive statistics will be utilized to answer research question 1. Descriptive statistics describe the sample of individuals in the study by estimating central tendency and other attributes of the population (Tabachnick & Fidell, 2013). The aforementioned variables for analysis will be reported on, which will include sample size and proportion of the population. Three groups of descriptive statistics will be reported via a table highlighting overall population descriptives and another depicting both those who did and did not enroll in PSE.

Chi-Square Test of Association

In order to analyze research question 2, chi-square tests of association were used to analyze categorical characteristics of individuals with ID who do and do not utilize postsecondary supports. Chi-square tests of association are used to analyze potential associations between two categorical variables (Tabachnick & Fidell, 2013) particularly to determine a difference in the proportions of a population when there are two or more different groups (or categorical variables). In this case, the research is determining whether or not the demographic makeup of the students with ID who attended PSE programs is similar or different from the demographic makeup of the non-PSE group. Therefore, the null hypothesis in chi-square testing is that the two variables are independent of one another, indicating that there would be no difference in the demographic makeup of the two groups. However, if the null hypothesis is rejected in chi-square testing, it can be concluded that the two variables are associated with one another (Tabachnick & Fidell, 2013), indicating that the differences between the PSE group and non-PSE group are determined to be related to PSE enrollment.

Results

Both sample sizes and percentages were used to describe the demographic characteristics of the population of individuals with ID in the total sample. Chi-square tests of association were utilized to highlight significant differences across the population of individuals with ID both in and out of PSE.

Research Question 1

Table 2 presents demographics of the entire sample, including individuals who both used and did not use postsecondary supports through VR. Overall, the demographics of the states were predominantly male (56.7%), white (65.9%), and non-Hispanic (88.3%). The second largest racial category reported was Black or African American (30.9%), while Asian (2.3%), American Indian or Alaska Native (1.9%), and

Native Hawaiian or Other Pacific Islander (0.8%) were all reported much less regularly. In regard to the socioeconomic profile, a slim majority of individuals in the sample were reported in the category of "low-income status" (53.6%), while both SSI utilization (44.4%) and long-term unemployment (36.5%) were also commonly reported. The sample additionally included individuals who reported being English language learners (10.6%), previously in foster care (2.8%), and homeless or runaway youth (2.3%). Of the sample, 1081 individuals with ID received some form of PSE support through VR, constituting 3.7% of the sample.

Research Question 2

Table 3 presents the results of the chi-square tests of association. The results of the analysis indicated that multiple categories were significantly associated with PSE enrollment. Females were significantly more likely to be enrolled in PSE, X^2 (1, N = 29,230) = 24.879, p < .000, where 50.6% of the PSE population were female in contrast with 42.9% of the non-PSE population. Multiple racial categories were significantly overrepresented in the PSE population. Individuals who identified as American Indian or Alaska Native, X^2 (1, N = 29,238) = 7.821, p = .005, were 3.1% of the sample in PSE and 1.9% of the non-PSE sample. Those who reported Asian as their racial category, X^2 (1, N = 29,238) = 6.591, p = .010, were 3.4% of the PSE population and only 2.2 percent of the non-PSE population. In addition, Native Hawaiian or Other Pacific Islander, X^2 (1, N = 29,234) = 3.933, p = .047, was significantly associated with PSE enrollment, where they constituted 1.3% of the PSE population, in contrast with 0.8% of the non-PSE population. The only category related to race and ethnicity which was underrepresented in the PSE population was Black or African American, X^2 (1, N = 29,238) = 8.571, p = .003, where 31.0% of the non-PSE population was Black or African American, in contrast to 26.9% of the PSE population.

The three SES indicators included in the analysis were all statistically significant in the analysis. Individuals who received SSI were less likely to be enrolled in PSE, X^2 (1, N = 29,246) = 59.579, p < .000, making up only 32.9% of the PSE population in contrast with 44.8% of the non-PSE group. Similarly, long term unemployment was reported less often in the PSE population, X^2 (1, N = 28,585) = 6.403, p = .011, constituting 33.7% of the PSE population and 37.5% of those who did not attend. Low-income status was similar, X^2 (1, N = 28,585) = 23.884, p < .000, where 55.1% of the non-PSE population was low-income and only 47.5% of the PSE population reported low-income. The relationship between PSE and both foster care, X^2 (1, N = 28,575) = 9.263, p = .002, and homeless or runaway, X^2 (1, N = 28,585) = 7.346, p = .007, were statistically significant, with both being found less often in the PSE population. Foster care was underrepresented 1.4% to 3.0%, while homeless or runaway was underrepresented 1.1% to 2.4%.

Discussion

The purpose of this study was to gain a better understanding of the demographic makeup of students with an ID in PSE and how multiply marginalized groups may be over- or underrepresented in these programs. Specifically, the results of this research intended to highlight the differences between the populations of individuals attending PSE

programs and those who are not. In order to answer these research questions, descriptive statistics and chi-square tests of association were used. Statistically significant results were found to highlight the differences between the populations.

The results of this research provide supporting evidence that there are certain limiting factors to access for students with an ID pursing higher education. There are four key findings from this research. First, results indicated that women were overrepresented in PSE. Second, multiple racial categories were overrepresented in the PSE population, while Black or African American students were underrepresented. Third, individuals who were from low SES backgrounds were significantly less likely to be enrolled in PSE programs. Fourth, both foster care youth and homeless or runaway youth were underrepresented in the PSE population.

Gender and PSE

The results of the study indicated that there were higher rates of female students with ID in PSE programs than the non-PSE group of individuals with ID. This finding may be explained by the fact that the college enrollment rate, overall, has been higher for females than males since 2001 (National Center for Education Statistics, 2020). While historically this was not the case, women now make up the majority of undergraduate students (National Center for Education Statistics, 2021). In contrast, it has long been established that school-aged male students are more likely to be identified for special education services (Wehmeyer & Schwartz, 2001) and that male special education students outnumber female students by almost a 2-to-1 margin (National Center for Education Statistics, 2022). Similarly, the latest report on the TPSID grant program schools indicated that only 39% of the students identified as female (Grigal et al., 2021). Further research may be needed to determine the cause of this discrepancy.

Race and PSE

These results suggest that individuals with ID from certain racial backgrounds are found in a higher proportion in PSE programs than they are in the general population. The college enrollment rate for individuals who identify as Asian is the highest of any race or ethnic group between the ages of 18 and 24 (De Brey et al., 2021). Research utilizing the Integrated Postsecondary Education Data System (IPEDS) indicated that while Asian students were not overrepresented in most universities, they were overrepresented in more selective institutions, as they were more likely to pursue bachelor's and more advanced degrees in their chosen majors in contrast with a certificate or associate's degree program (Monarrez & Washington, 2020). In addition, the same study found that American Indian students have been overrepresented in PSE since 2009 (Monarrez & Washington, 2020). The current research expands these findings to the population of individuals with ID.

The results of this research also found that Black or African American students with ID were underrepresented in PSE. This is consistent with research in race and postsecondary education which indicates that Black and African American students face systematic barriers to inclusion in the PSE setting (Cimera et al., 2018; Harper et al., 2009;

Monarrez & Washington, 2020; Walter et al., 2018). It is imperative that this finding is taken into context, understanding that racism, not race, is the contributing factor to this relationship (Johnson et al., 2021). A discrepancy remains in the enrollment of young African American students in postsecondary education (Walter et al., 2018), and this research expands these findings to the population of individuals with ID.

While some previous research was inconclusive about the relationship of race and PSE enrollment for individuals with ID (Newman et al., 2011; Sanford et al., 2011), the present research extends the work of Cimera et al. (2018), which found that the percentage of African American students decreased as education levels increased. However, research on Black or African American individuals with ID continues to need to be expanded and strengthened (Scott & Thoma, 2021). The present study begins to add additional evidence of the impact that race plays in PSE enrollment for students with an ID. While this relationship may be inherently tied to the systemic issues within K–12 schooling, the complicated relationship between PSE, racism, and race for individuals with ID warrants further investigation.

Socioeconomic Status and PSE

The results from this study indicate that SES indicators such as SSI receipt, low-income status, and long-term unemployment are all underrepresented in the population of individuals with ID in PSE. It is known that there is a relationship between socioeconomic status and postsecondary education. Past research has shown that socioeconomic privilege shares a relationship with increased likelihood of enrolling in a postsecondary program for the general population of students, and personal finances are instrumental to many students' decisions to pursue further schooling (Soria, 2018). The gap in enrollment based on SES is wide, with a 50-percentage point difference in postsecondary enrollment between the highest (78%) and lowest SES (29%) individuals (McFarland et al., 2019). For the general population, the research is established that socioeconomics impacts postsecondary enrollment.

The present research expands these findings into a new population, individuals with ID. Finances may be an even greater issue for this population, as families of individuals with disabilities are more likely to experience financial problems such as employment issues and bankruptcy (Eskow et al., 2011; Kogan et al., 2008). IPSE programs can be expensive, as shown by Grigal et al. (2022); total IPSE program costs for a single year are $14,689 on average annually, with one IPSE program charging over $70,000 for a single year. This financial burden may prove to be unreasonable for many families. While the introduction of federal financial aid through CTP programs provides economic relief for some students with ID, it remains limited in scope. The federal Pell Grant program, which students with ID can apply for, only covers $6,495 for the upcoming award year (Federal Student Aid, 2022). Economic barriers continue to present a problem for individuals interested in pursuing higher education, and current remedies cannot provide access to all individuals who could benefit from IPSE programs.

Foster Care, Homeless or Runaway, and PSE

The study also identified that individuals who had been in the foster care system were less likely to have enrolled in PSE. This result is consistent with the results for the general population of individuals in the foster care system, where bachelor's degree attainment is as low as 3% of the population (Sarubbi et al., 2016). Foster care youth encounter multiple barriers in their transitions into adulthood, including nonempathetic teachers, uninformative caseworkers, uninvolved foster parents, and fellow foster children and peers who are low-performing or abusive (Rios & Rocco, 2014). Results additionally highlighted that homelessness was underrepresented in PSE. Rosenberg and Kim (2017) have previously analyzed the relationship between foster care, homelessness, and PSE, finding that homelessness in the transition years out of foster care was related to a decreased likelihood of enrolling in higher education. These two factors warrant further analysis to determine causal factors in this relationship.

Implications

The varied relationships found in this analysis provide an opportunity for further investigation. The results of this research provide implications for research, policy, and practice.

Implications for Research

These results have potential implications for research on students with an ID pursuing postsecondary education. The present study provided preliminary findings which highlight the possibility that the intersecting roles of gender, race, socioeconomic status, and disability share a relationship with the likelihood of PSE enrollment for individuals with ID. While the beginnings of intersectionality theory dealt with race, gender, and employment (Crenshaw, 1989), the field continues to expand, and research on ID with an intersectional lens is necessary to explore the inequities within this population (Johnson et al., 2021). Currently, the literature base lacks robust research with an intersectional lens. Further research is necessary to study the impacts that discrimination has on this multiply marginalized community.

In addition, the inclusion of the voices of individuals with ID in future research is imperative because, as commonly stated by the disability community, there should be "nothing about us, without us" (Franits, 2005). In-depth qualitative inquiry into this topic, utilizing the lived experiences of individuals with ID, would further illustrate the ways in which students navigate discrimination and barriers to PSE. Similarly, qualitative research investigating discrimination in PSE through the perspectives of students, program staff, directors, and faculty members could provide further value to a conceptualization of the causal mechanisms to the relationships found within this study.

Implications for Policy

Policymakers at the federal, state, local, and programmatic level could utilize the results of this research to begin to interrogate systems to ensure that PSE enrollment is

equitable for all individuals with ID. For example, this research provides preliminary findings that suggest that social privilege is predictive of PSE enrollment for individuals with ID, and policymakers must be aware of their role in ameliorating these inequities. When the federal government took a role in this program through the HEOA, they provided an opportunity to expand these programs. Future reauthorizations of the Higher Education Act may consider taking steps to increase equitable practices in admissions policies.

Similarly, to increase equitable practices, changes must be implemented at an organizational level, either programmatically at the NCC, or organizationally at individual programs. These changes could include the addition of guidance, regulations, resource generation, and idea sharing around equitable principles. These practices may come from pre-existing programs or may borrow from other large support systems. Local-level policymakers could consider forming working groups that can produce products which help the field create best practices for increasing equity.

In addition, this continued documentation of student populations is needed in order to inform families of the prospects of IPSE and encourage students to enroll and participate (Becht et al., 2020). Research has highlighted that identifying individuals with ID in large federal data sets is a difficult task (Havercamp et al., 2019), and the field of IPSE is no exception. While some datasets can provide approximations of the total population, currently there is no one data set which accurately captures all students involved in IPSE. Better data collection and sharing at the state and national level may prove beneficial for all stakeholders invested in the future of IPSE.

Implications for Practice

The results indicated that discrimination may influence the likelihood of some individuals with ID enrolling at PSE programs. Further practical steps can be taken to ensure that students and families have access to PSE programs regardless of their social privilege.

Financial barriers continue to exist for PSE for all students, influencing equity to collegiate access for marginalized communities (Destin et al., 2021). However, programs can take steps to decrease the financial outlay that families must make. For example, the federal or state government can proactively consider reducing additional costs that students with ID incur, such as student fees and textbooks, which compound financial burdens on families. These considerations have been shown to improve equitable college participation in other populations (Browman & Destin, 2016; Stephens et al., 2012). IPSE programs can make programmatic level decisions to increase accessibility in this way.

In addition, it is documented that IPSE is rarely included in high school transition goals (Grigal et al., 2011) and access to VR within IPSE varies from state to state and even program to program (Grigal et al., 2014). Disability service providers must be proactive in promoting IPSE as an option for all students with ID. Research has previously indicated that poor transition planning practices can be an issue for many students; parents note that a general lack of information and guidance can be a greater barrier to IPSE than even financial considerations (Griffin et al., 2010). However, there are many

individuals involved in the transition process for students with ID, providing an opportunity for multiple stakeholders to suggest IPSE as an option. For example, school psychologists are qualified to identify those who meet college admission requirements and can help with program and service planning (Roberts & Roach, 2018). In addition, high school counselors help to plan services and supports that can assist the student in this transition (Cook, 2017). As a whole, in order to increase equity, a collaborative effort is needed, with input needed from all members of the transition team, including students with ID, their families, and professionals (Mock & Love, 2012). Further training for these service providers could prove valuable.

Furthermore, a discrepancy remains in the cultural backgrounds of the staff of disability programs and the individuals they serve (Hasnain & Balcazar, 2009). It would be advantageous for IPSE programs to consider how their staffing decisions may impact the students on campus. Inclusive hiring practices and a purposeful commitment to diversity is important to ensure that students and families feel represented at the campuses where they choose to attend.

Limitations

There are some limitations to the analysis in this research. First, the findings of the present study are based on correlational data. Further research with quasi-experimental or experimental designs would be beneficial to understand the causal mechanisms behind these relationships. In addition, the data set can only identify a small number of individuals with ID in PSE programs because the data is specific to VR programs, rather than specifically students with ID or specifically IPSE programs. The inclusion of institutional level variables would be a strong addition to this study; however, a data set is not yet available that is large enough to conduct this form of research. While this analysis would be beneficial, the research conducted in this study remains novel and exploratory, and future research could potentially assess individual programs' equitable practices. Additionally, there are limitations to the utilization of race, ethnicity, gender, and other variables when they are collapsed into dichotomous variables such as the ones utilized in the present study (Johnson et al., 2021). However, the utilization of the variables highlights that further study is warranted to analyze these constructs in more depth.

Conclusion

This study sought to enhance the understanding of the under- and overrepresentation of students with ID in PSE. Findings indicated that women, American Indian or Alaska Native, and Asian students were overrepresented in higher education, while Black or African American, low socioeconomic status, foster care, and homeless students were all underrepresented. This research contributes to a growing body of literature which suggests that certain communities face barriers to higher education access. Future research must continue to investigate these findings and examine their causal mechanisms; however, the present study has provided justification for increased examination of inclusive postsecondary education and how discrimination may impact students' enrollment.

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Table 1

Variable Descriptions

Variable	Description
Postsecondary Education	Whether or not the individual received postsecondary education support through VR. Individual may or may not have received a certificate, license, or degree.
Sex	Male or Female
Race	Dichotomous indicators of the following races: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, or White.
Ethnicity	Hispanic or not Hispanic.
Foster Care	Whether an individual is currently in or was once in the foster care system.
Long Term Unemployment	Reported as unemployed for 27 or more consecutive weeks.
Low-Income	Either (1) Reported as receiving assistance through SNAP, supplemental security income, temporary assistance for needy families (TANF) program, or state or local income-based public assistance including free or reduced school lunches in the past 6 months, (2) from a family who does not exceed the poverty line or 70% of the lower living standard income level, or (3) homeless or live in a high poverty area as considered low-income.
Homeless and/or Runaway	Either (1) reported lacking a fixed residence, including individuals who share housing because of economic hardships or other reasons, is living in a motel or similar accommodations, is living in emergency or transitional shelters, is abandoned in a hospital, or is awaiting foster care placement, or (2) live in a fixed residence, but it is not originally intended as a sleeping accommodation, such as a car, a park, or a bus shelter, or (3) were required to move because of seasonal employment or have abandoned their familial residence to be homeless.
Supplemental Security Income	Supplemental Security Income (SSI) is a nationwide, federally governed program which provides supplemental income to assist with basic needs for individuals who are either “aged, blind, or disabled” (Social Security Adminstration, 2020).
English Language Learner	Limited ability to speak, read, write or understand English as a language, and must meet at least one of these two conditions; (1) their native language is not English, (2) they live in a family or environment where English is not the dominant language spoken.

Table 2

Demographics of the Sample

Variable	*N*	*%*
PSE		
Postsecondary Education	1081	3.7%
No Postsecondary Education	28165	96.3%
Gender		
Male	16595	56.7%
Female	12635	43.2%
Race/Ethnicity		
American Indian or Alaska Native	559	1.9%
Asian	667	2.3%
Black or African American	9032	30.9%
Native Hawaiian or Other Pacific Islander	227	0.8%
White	19265	65.9%
Hispanic	3424	11.7%
Other Demographics		
SSI	12979	44.4%
Long Term Unemployed	10669	36.5%
Foster Care	833	2.8%
Homeless or Runaway	666	2.3%
Low-Income Status	15666	53.6%
English Language Learner	3088	10.6%

Table 3

Demographic Characteristic across PSE and Chi-Square Values

	No PSE		PSE		Total		Chi-Square		
Variable	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*Value*	*Sig.*
Sex									
Female***	12088	42.9	547	50.6	12635	43.2	29,230	24.879	0.000
Race/Ethnicity									
American Indian or AN**	526	1.9	33	3.1	559	1.9	29,238	7.821	0.005
Asian*	630	2.2	37	3.4	667	2.3	29,238	6.591	0.010
Black or African American**	8742	31.0	290	26.9	9032	30.9	29,238	8.571	0.003
Native Hawaiian or OPI*	213	0.8	14	1.3	227	0.8	29,234	3.933	0.047
White	18542	65.8	723	66.9	19265	65.9	29,239	0.557	0.456
Hispanic	3284	11.7	140	13.0	3424	11.7	29,223	1.746	0.186
Other Demographics									
SSI***	12623	44.8	356	32.9	12979	44.4	29,246	59.579	0.000
Long Term Unemployed**	10305	37.5	364	33.7	10669	37.3	28,585	6.403	0.011
Foster Care**	818	3.0	15	1.4	833	2.9	28,575	9.263	0.002
Homeless or Runaway**	654	2.4	12	1.1	666	2.3	28,585	7.346	0.007
Low-Income Status***	15152	55.1	514	47.5	15666	54.8	28,585	23.884	0.000
English Language Learner	2964	10.8	124	11.5	3088	10.8	28,585	0.52	0.471

Note: N = 29,246. Percentages within rows are calculated based on total *N* within that category, excluding all missing values. Total Percent of Race categories ≠ 100% because some individuals identify within multiple racial categories. PSE = Postsecondary Education, AN = Alaska Native, OPI = Other Pacific Islander, SSI = Supplemental Security Income