

5-2023

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Hispanic Human Capital and Financial Aid Application in the West Census Region

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SBS 402 - Senior Capstone Seminar II

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May 19, 2023

Abstract

As of 2021, very few Hispanic residents in the United States held a college degree in comparison to non-Hispanic residents. Research has shown that, particularly for Hispanic students, financial aid increases college persistence. Hispanic Free Application for Federal Student Aid (FAFSA) submission rates rank among the lowest, preventing many Hispanic students from receiving financial assistance. This issue is most prevalent West Census Region (WCR), where there is the highest concentration of Hispanic residents. To understand what barriers may be preventing Hispanic submission in the WCR this Capstone used logistic regression models to analyze student-level data from the National Center for Education Statistic's High School Longitudinal Study of 2009. Barriers were assessed regarding human capital, as its subtypes have been shown to greatly effect university-related behaviors. Results indicated that, for Hispanic students in the WCR, economic capital had no significant effect on submission but cultural and social capital in the form of parental values, parental aid discussion, and aid counseling had a significant effect. The effects of capital on submission differed between races/ethnicities, affirming the results of prior research studying the relationship between race/ethnicity, capital, and university-related behavior. These results suggest that FAFSA assistance should be centered around parental outreach and aid counseling within high schools, ensuring Hispanic students have access to trusted sources of aid information.

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Introduction

Research from the National Center for Education Statistics (NCES) shows that Hispanic college enrollment rates in the United States increased dramatically between 2006 and 2016 (Snyder et al., 2019). Despite this increase, in 2021, only 17% of the US Hispanic population held a college degree compared to 36% of the non-Hispanic (Asian, Black, and white¹) population (US Census Bureau [USCB], 2021). Prior research shows that cost is a prominent factor in Hispanic students' ability and decision to apply for and persist in college (Becerra, 2010; Carales, 2020; Gross et al., 2014). The Free Application for Federal Student Aid (FAFSA) can reduce the financial burden of higher education by providing monetary support through grants, loans, and work-study. Espinosa et al.'s (2019) analysis of NCES's 2016 Postsecondary Student Aid Study found that only 75% of Hispanic students submitted a FAFSA compared to over 84% of Black students thereby resulting in lower financial aid for Hispanic students (see Figure 1; Espinosa et al., 2019). Racial wealth disparities have prompted research into submission barriers for Black students, while Hispanic submission remains understudied thus necessitating research into the presence of application barriers specific to this group (Gross et al., 2014).

Previous literature has assessed barriers to FAFSA submission relevant to the general population, triggering the enactment of the FAFSA Simplification Act in 2023 (Collins & Dortch, 2022). The FAFSA Simplification Act made several formatting and content changes to the application, aiming to reduce application-related barriers (Collins & Dortch, 2022). Existing research into Hispanic college application and attendance indicate that racial and ethnic differences in human capital lead to economic, cultural, and social barriers unique to Hispanic

¹ White is not capitalized as its capitalization has inherent ties to white supremacy and white supremacist ideology

students, which may also impact FAFSA submission (Becerra, 2010; González et al., 2003; Gross et al., 2014; Perna, 2006; Ryan, 2016; Yosso, 2005). As Hispanic financial aid application is understudied, the FAFSA Simplification Act may not address these barriers. Research focusing on Hispanic application could lead to further improvements, increasing FAFSA submission and, therefore, college attendance and graduation.

The West Census Region (WCR) is one of four Census regions and encompasses thirteen states from California to Colorado including Alaska and Hawaii (US Bureau of Labor Statistics, n.d.). The WCR has the largest concentration of Hispanic residents at 30%—11% higher than the US average of 19% (USCB, 2020). Therefore, issues around completion are especially relevant in this area of the country, prompting this Capstone's investigation into how barriers impacted FAFSA submission for WCR-based students who participated in the NCES's High School Longitudinal Study of 2009 (HSL:09).² HSL:09 surveyed thousands of students as they made the transition from high school into college. Data was cleaned in Excel, and logistic regression was completed using IBM's SPSS statistical analysis software. The following research questions were asked and hypotheses tested to help determine the significance of the selected human capital-related variables concerning a student's FAFSA submission status.

1. In what ways is human capital significantly associated with a Hispanic student's FAFSA submission status in the WCR?

H_a Human capital is significantly associated with a Hispanic Student's FAFSA submission status in the WCR.

2. To what extent does each subtype of human capital—economic, cultural, and social—significantly contribute to a Hispanic student's FAFSA submission status in the WCR?

² FAFSA *submission* does not guarantee completion or verification of eligibility (Federal Student Aid [FSA], n.d.)

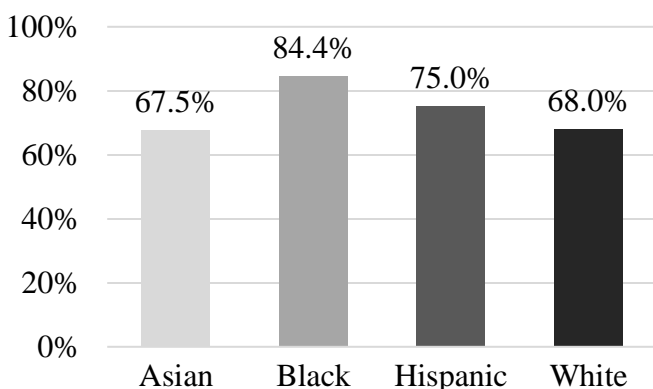
H_a One or more of the subtypes of human capital significantly contributes to a Hispanic student's FAFSA submission status in the WCR.

3. How does the impact of human capital on FAFSA submission differ between Hispanic, Asian, Black, and white students in the WCR?

H_a The impact of human capital on FAFSA submission significantly differs among Hispanic, Asian, Black, and white students in the WCR.

Figure 1

FAFSA Completion Rates, by Race and Ethnicity: 2015–2016



Note: Low Asian and white application rates align with prior research (Gross et al., 2014; Kofoed, 2016)

^aHispanic is used as it is the official Census and NCES term, it includes both Spanish and Latino respondents

Literature Review

Current literature addresses the factors that deter and encourage Hispanic students to attend higher education, focusing on college application, enrollment, and the effect of financial aid on persistence. The findings of this research indicate that differences in human capital influence the efficacy of students' real and perceived resources (Bourdieu, 1986; Perna, 2006). Hispanic students' unique forms of capital are often not appreciated or deemed 'useful' within higher education, this diminishment denies many students the opportunity to consider, prepare for, and succeed in college (Dynarski & Scott-Clayton, 2006; Fahle et al., 2020; Perna, 2006;

Yosso, 2005). Missing in the existing research is a focus on Hispanic FAFSA submission, the first step required for students to receive federal or state aid.³ This is critical as Hispanic college enrollment and persistence significantly benefit from financial aid, i.e., economic capital (Becerra, 2010; Carales, 2020; Gross et al., 2014). The discussion will focus on how the subtypes of human capital relate to barriers around Hispanic FAFSA completion: 1) Economic capital, 2) Cultural Capital, and 3) Social Capital.

Theoretical Framework: Human Capital Theory

Pierre Bourdieu's human capital theory posits that the material and nonmaterial assets collected throughout life determine one's ability to succeed both economically and socially (Bourdieu, 1986). Economic capital is at the root of the system; it describes an individual's wealth, and its production requires cultural and social capital (Bourdieu, 1986; Goldrick-Rab et al., 2016; Perna, 2006). Cultural capital encompasses the knowledge, skills, and values accumulated from one's family, community, and social circles (Bourdieu, 1986; Perna, 2006). Social capital describes one's connections to other people and groups, connections that can provide access to skills and resources (Bourdieu, 1986; González et al., 2003; O'Connor et al., 2010; Perna, 2006). Cultural and social capital contribute to economic capital by providing the necessary relationships and abilities to find and maintain employment or sustain other means of wealth generation (Bourdieu, 1986; Goldrick-Rab et al., 2016; Perna, 2006).

Education is a product of all three forms of capital (Bourdieu, 1986; Goldrick-Rab et al., 2016; Perna, 2006; Ryan, 2016). Gaining a quality education requires economic capital to afford the best schools, tutors, and supplies, while cultural and social capital are required to navigate the academic, political, and social complexities of the university system (Goldrick-Rab et al., 2016;

³ Several states offer state-based financial aid to undocumented students (such as DACA recipients) who are ineligible for the FAFSA; this report only focuses on students deemed eligible for the FAFSA (FSA, 2022)

Greenfield, 2015; Ober et al., 2020; Perna, 2006). Perna's (2006) "model of student college choice" (p.117) posits that students' values and beliefs, or habitus, are primarily shaped by their demographic characteristics and access to economic, cultural, and social capital. These habitus inform how and why they make university-related decisions, Perna (2006) theorizes that students with capital deemed valuable in the university setting, such as high test scores or financial wealth, are more likely make college-oriented decisions. Early and expansive access to all three forms of capital is therefore critical in ensuring students' ability to make well-informed decisions when applying to and attending institutes of higher education (Bourdieu, 1986; Feeney & Heroff, 2013; Greenfield, 2015; Harper et al., 2021; Perna, 2006; Ryan, 2016).

The diverse and extensive forms of cultural capital often held by Hispanic students—such as linguistic, familial, and navigational—are frequently disregarded by university personnel and therefore undervalued (Carales, 2020; Lewis & Brown, 2021; Perna, 2006; Yosso, 2005). White, wealthy, and socially connected students are more likely to have university-related economic and social capital, granting them an unfair advantage within the university and financial aid systems (Carales, 2020; O'Connor et al., 2010; Perna, 2006; Warnock, 2016; Yosso, 2005). The undervaluation of certain capital by universities, and embedded within the bureaucracy of higher education, diminishes the efficacy of resources likely to be held by lower-income students and Students of Color (SOC) (Carales, 2020; González et al., 2003; Perna, 2006; Ryan, 2016; Yosso, 2005). This denigration may lead to lower enrollment and persistence rates for financial, racial, or ethnic minorities (Becerra, 2010; González et al., 2003; Warnock, 2016; Yosso, 2005).

Economic Capital

College is often seen as an investment to increase one's future economic capital. However, Scheld's (2019) investigation into college financial returns indicates that the economic

benefit of college has declined in recent years. Goldrick-Rab et al.'s (2016) research into the efficacy of need-based grants on college persistence found that existing federal and state financial aid packages have not risen sufficiently to meet the increasing cost of college. However, when financial aid comes in the form of grants rather than loans, lower award amounts still help bridge racial and class-based economic gaps (Goldrick-Rab et al., 2016; Gross et al., 2014; Ngo & Astudillo, 2019). Ultimately, financial aid in any form, other than loans, consistently increases college persistence rates by reducing the financial burden on students and their families (Carales, 2020; Goldrick-Rab et al., 2016; Gross et al., 2014; Ngo & Astudillo, 2019). However, financial aid is acquired primarily through completing the FAFSA, which may prove challenging for students struggling with financial literacy.

Dynarski and Scott-Clayton's (2006) study into the consequences of complexity within the financial aid system determined that low-income students tend to have lower rates of financial literacy than middle and upper-class students, making the financial aid process challenging. Kofoed (2016) and Dynarski and Scott-Clayton (2006) both note that financial literacy is required to obtain an accurate Expected Family Contribution (EFC) score, which is how one's eligibility for need-based aid is determined. Wage discrimination results in Hispanics of all educational levels receiving significantly lower economic gains (Fahle et al., 2020; Krivo & Kaufman, 2004; Warnock, 2016). As a result of this discrimination, Hispanics are more likely to be categorized as low-income, signifying that financial literacy may be a substantial barrier to financial aid application for Hispanic students (Fahle et al., 2020; Gross et al., 2014; Krivo & Kaufman, 2004; O'Connor et al., 2010; Warnock, 2016). Financial literacy-based education could increase application among Hispanic students, but access to this kind of education requires monetary, school, and personal resources (Gross et al., 2014; McKinney & Novak, 2015).

Krivo and Kaufman's (2004) look into housing and wealth inequality in the United States found that racism in the housing and financial markets has segregated many Hispanics into low-income neighborhoods. Baker et al. (2020) and Fahle et al. (2020) determined that schools in low-income neighborhoods, which primarily serve SOC, lack economic capital and thus offer fewer resources. This lack of economic capital is tied directly to social capital; without school-based assistance, students are more likely to rely on their family and peers as a source of information (Becerra, 2010; Greenfield, 2015; Harper et al., 2021; O'Connor et al., 2010; Perna, 2006; Warnock, 2016). Family members of Hispanic students may provide inaccurate information or inaccurate estimates of the cost of college as Hispanics are less likely to have gone to college or filled out financial aid applications (Becerra, 2010; Carales, 2020; González et al., 2003; Gross et al., 2014; O'Connor et al., 2010; Warnock, 2016).

Cultural Capital

Authority and peer figures play a critical role in the early and sustained transmission of university-related cultural capital (González et al., 2003; Greenfield, 2015; Iceland, 2021; Ober et al., 2020; O'Connor et al., 2010; Perna, 2006). Harper et al. (2021) determined that the most accurate information is gained from *recent* experience—making siblings and peers better transmitters than parents or others who may have earned their degrees in past decades. Teachers and other educational leaders generally have up-to-date information, but Hispanic students tend to be more trustworthy of family and other Hispanic peers (Carales, 2020; González et al., 2003; Harper et al., 2021; Muñoz, 2016; Ngo & Astudillo, 2019; Perna, 2006). Due to lower Hispanic college attainment rates, there are less degree holding role models for Hispanic students, which may limit opportunities to gain university-related cultural and social capital (Carales, 2020; Gross et al., 2014; McKinney & Novak, 2015; Perna, 2006; Ryan, 2016). However, Yosso's

(2004) concept of “navigational capital” as a form of human capital prominent in Communities of Color indicates that having to navigate racism and other systemic barriers may help Hispanic students and families maneuver these complex processes.

Previous studies on Hispanic students’ familial cultural capital focus on parents’ educational attainment, negating the impacts of linguistic capital (González et al., 2003; Perna, 2006; Ryan, 2016; Yosso, 2005). Samson and Lesaux’s (2015) national study of English Language Learners (ELLs) shows that most ELLs in the United States are Hispanic Spanish speakers. Samson and Lesaux’s (2015) study also demonstrates that ELL students are likelier to be low-income and are placed in schools with under-experienced teachers who repeatedly fail to meet their educational needs. Additionally, Taylor (2019) demonstrates that many financial aid-related resources are only available in English, despite the US having no official language. Hispanic ELL students then have the added burden of locating appropriate and accurate financial-aid related materials (Contreras & Fujimoto, 2019; Lewis & Brown, 2021; Samson & Lesaux, 2015; Taylor, 2019).

When there are only resources in English, educators overlook non-English financial literacy skills and assume that ELL students lack financial literacy (Contreras & Fujimoto, 2019; Dynarski & Scott-Clayton, 2006; Fahle et al., 2020; Lewis & Brown, 2021). Due to this assumption, financial literacy programs do not cater to students looking to translate their current knowledge (Lewis & Brown, 2021; Taylor, 2019). College is where ELL students gain the most English proficiency, yet the complex language of financial aid may intimidate ELLs, restricting ELL access to higher education (Dynarski & Scott-Clayton, 2006; Rumbaut & Massey, 2013). Additionally, this lack of resources prevents the dissemination of accurate information on the

cost of college, possibly deterring students further (Becerra, 2010; Greenfield, 2015; Harper et al., 2021; O'Connor et al., 2010; Warnock, 2016).

Social Capital

As discussed, Hispanics are more likely to encounter language-related barriers while completing college applications (Becerra, 2010; Flores-Yeffal, 2019; Samson & Lesaux, 2015; Taylor, 2019). Language is not just a barrier to self-guided resources; it can also prevent communication with knowledgeable peers and teachers (Becerra, 2010; Bourdieu, 1986; Perna, 2006; Ryan, 2016; Samson & Lesaux, 2015; Taylor, 2019). Language skills include listening, speaking, reading, and writing, as well as financial literacy, which is needed to understand the availability and ramifications of grants and loans (Becerra, 2010; Greenfield, 2015; Harper et al., 2021; O'Connor et al., 2010; Perna, 2006; Warnock, 2016).

Transmitting cultural capital, including linguistic capital, requires connections to others via social capital (Becerra, 2010; Bourdieu, 1986; Carales, 2020; Flores-Yeffal, 2019; Perna, 2006). Schools in well-funded districts can afford bilingual advisors and teachers, necessary social capital for ELLs. In contrast, low-income districts are unable to afford this capital, even though they have higher percentages of ELL and financially illiterate students (Baker et al., 2020; Becerra, 2010; Carales, 2020; Fahle et al., 2020; O'Connor et al., 2010; Warnock, 2016; Samson & Lesaux, 2015). Families in low-income districts may then lack access to these linguistically appropriate knowledge sources, limiting the potential benefits of many educational sources of social capital (Baker et al., 2020; Becerra, 2010; Fahle et al., 2020; Krivo & Kaufman, 2004). Educationally and linguistically relevant social connections *could* be built via non-profit programs, filling gaps caused by underfunding without requiring major systemic changes (Baker et al., 2020; Fahle et al., 2020; Harper et al., 2021; McKinney & Novak, 2015).

Hispanics also comprise the highest proportion of immigrants in the United States (Hernandez et al., 2010; Rumbaut & Massey, 2013; Samson & Lesaux, 2015). Immigrants are likely to struggle to find social capital helpful for completing the FAFSA, such as a friend or family member who has previously filed (Dynarski & Scott-Clayton, 2006; Flores-Yeffal, 2019; Iceland, 2021; Ober et al., 2020; Perna, 2006; Rumbaut & Massey, 2013). Undocumented students often cannot seek assistance from non-family members; due to the risk of deportation and judgment these students may fear disclosing their immigration status (Flores-Yeffal, 2019; Greenfield, 2015; Iceland, 2021; Muñoz, 2016). Connecting undocumented students with trusted peers may reduce fear and provide a way for them to gain the social and cultural capital required to apply for and persist in higher education (Carales, 2020; Flores-Yeffal, 2019; Iceland, 2021; Muñoz, 2016; Ngo & Astudillo, 2019). Building this trust network can also help to dispel inaccurate college and financial aid-related information, increasing financial aid application rates (Carales, 2020; Greenfield, 2015; Muñoz, 2016).⁴

Conclusion

Previous research viewed through the lens of human capital theory demonstrates possible barriers to receiving financial aid for Hispanics, showing that identity is intersectional and encompasses race, language, and immigration status (Becerra, 2010; González et al., 2003; Hernandez et al., 2010; O'Connor et al., 2010; Perna, 2006). These aspects of identity, alone or together, affect one's economic, cultural, and social capital by limiting the availability and efficacy of resources (Becerra, 2010; Bourdieu, 1986; McKinney & Novak, 2015; Ober et al., 2020; Perna, 2006). However, human capital's impact on Hispanic *FAFSA application* is still unclear, as existing research is limited to Hispanic students' experiences with *college application*

⁴ While undocumented students (including DACA recipients) are not eligible for federal aid, state and private financial aid application requires the same access to capital (FSA, 2022; Ngo & Astudillo, 2019)

and financial aid *receival*. Existing research neglects to inspect racial and ethnic barriers within the financial aid application process. Taylor (2019) and Dynarski and Scott-Clayton's (2006) research provides insight into linguistic and financial barriers to the FAFSA but does not shed light on the specific experiences of Hispanic students. Considering the role of cost in Hispanic college attendance, identifying barriers specific to the FAFSA may provide a path toward increased enrollment and persistence previously unrecognized (Becerra, 2010; Carales, 2020; Gross et al., 2014; Ngo & Astudillo, 2019).

Methodology

This Capstone conducted a quantitative data analysis using secondary data sourced from NCES's HSLs:09, which surveyed thousands of teenagers from public, charter, and private schools five times over seven years (Ingels et al., 2014). HSLs:09 was chosen due to its adherence to specific inclusion criteria: it 1.) is from a government source, 2.) indicates students' FAFSA submission status, and 3.) includes student-level demographic information such as sex, race, location, and income. HSLs:09 was also chosen as its longitudinal format and stratified sampling technique provide reliable and robust data, granting accurate insight into students' capital. For this Capstone, data was taken from the HSLs:09's 2012 and 2013 surveys of students exiting high school and entering college.

Excel was used to refine the data by race/ethnicity (Asian, Black, Hispanic, white), region (West), FAFSA eligibility status (eligible), and to remove cases who did not respond to any questions.⁵ The longitudinal design of HSLs:09 makes it vulnerable to non-response resulting in missing (at random) data, making it a good candidate for multiple imputation (Casleton et al., 2017; Pederson et al., 2017). Prior to imputation, the data was brought into

⁵ Eligible respondents were those who had begun college courses in any capacity, including those taking concurrent courses while in high school. Respondents who believed themselves to be ineligible were also excluded.

SPSS, and the variables recoded. "Don't know" responses were recoded as user missing. The dependent variable, whether the student submitted a FAFSA, was not imputed following Eekhout et al. (2017), and missing cases were instead listwise deleted. Post filtering, the sample size was reduced from $N=23,503$ to $n=1,939$, and 10% of the data remained missing. The distribution of race/ethnicity was Asian $n=182$; Black $n=171$; Hispanic $n=453$; and white $n=1,133$. The distribution of responses to FAFSA submission status was yes $n=1,532$ and no $n=407$.

The recoded independent variables each regard a subtype of human capital. Based on averages for the WCR (USCB, 2013), family incomes were recoded into mid-low ($\leq \$15,000 - < \$55,000$), mid-high ($\geq \$55,000 - < \$115,000$), high ($\geq \$115,000 - < \$175,000$), and very high ($\geq \$175,000$) to demonstrate economic capital. Primary language (recoded from how often the student speaks their first language with their mom and friends), what their parents view as most important to do the following fall, and their financial aid influences demonstrate cultural capital. If students have spoken with a parent about financial aid, have seen a counselor about financial aid, and if their friends plan for college, demonstrate social capital. Variables were grouped and sparse categories combined based on Perna's (2006) and Yosso's (2005) conceptual models.

After recoding, multiple imputation was completed in SPSS. Using HSLs:09's provided survey weights for the 2013 update data, the independent variables acted as predictors to replace missing data multiple times, creating five imputed data sets. The creation of multiple data sets allows for the analysis of pooled estimates, garnering more accurate results than those produced by other methods of data replacement (Eekhout et al., 2017; Li et al., 2015; Pederson et al., 2017). Post-imputation linear regression was used to test for multicollinearity by Variance Inflation Factor (≥ 10). Logistic regressions were run on the datasets, filtered for race/ethnicity, to help answer the proposed research questions and their associated hypotheses. Goodness-of-fit

was assessed using the omnibus test of model coefficients (OTC; $p \leq 0.05$) and Nagelkerke's Pseudo R^2 (R^2_N). As SPSS does not pool these measures, OTC results were pooled using the Median P Rule (MPR) recommended by Eekhout et al. (2017) and R^2_N values were pooled by mean. Confidence intervals (CIs) were used to compare model effects. Chi-squared p -values, odds ratios, and significance levels (pooled by SPSS) were obtained for variable-level analysis.

Results

Linear regressions in SPSS confirmed that the weighted imputed and original data sets contained no significant multicollinearity; all variance inflation factors were well below the threshold. The first logistic regressions were run to test the hypothesis that human capital is significantly associated with a Hispanic Student's FAFSA submission status in the WCR. Capital was measured by seven independent variables chosen based on Perna's (2006) and Yosso's (2005) conceptual models. These measures of capital were tested against the dependent variable, FAFSA submission status. Table 1 shows the pooled results of these regressions.

Table 1

Logistic Regression Model: FAFSA Submission and Hispanic Students' Human Capital

OTC (MPR) = 0.000	Mean R^2_N = 0.214	Exp(B)	95% CI	
			Lower	Upper
Family income bracket				
	Mid-low – Mid-high	1.226	0.639	2.354
	High – Mid-high	1.472	0.478	4.531
	Very high –Mid-high	3.834	0.398	36.962
Primary language spoken with mom and friends				
	English – 1st language English	0.768	0.295	2.001
	Not English – 1st language English	0.665	0.359	1.230
Most important to parents for next fall (according to student)				
	Higher education – Something else	2.620*	1.229	5.586

	Exp(B)	95% CI	
		Lower	Upper
Who influenced student's thinking about aid			
Parents – Counselor/teacher	1.550	0.707	3.399
Family/friends – Counselor/teacher	3.267	0.730	14.622
Unspecified/self – Counselor/teacher	1.283	0.563	2.928
How many friends plan for college			
Few or none – About half	2.610	0.475	14.339
More than half – About half	1.695	0.809	3.551
If student talked about aid with a parent			
Yes – No	1.998*	1.062	3.761
If student talked about aid with a counselor			
Yes – No	4.553***	2.376	8.722

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$

The OTC determined that the full models fit the data well ($p = 0.000$) but had a rather low R^2_N (0.214). Variable level chi-squared p -values indicate that three of the seven tested measures of capital have a significant relationship with Hispanic students' FAFSA submission status. Hispanic students whose parents felt higher education was most important next fall ($p = 0.013$) had 175.7% higher odds of submitting a FAFSA than Hispanic students whose parents felt something other than higher education was most important. Those who talked about aid with a parent ($p = 0.032$) were found to have 111.2% higher odds of submitting compared to those who did not talk about aid with a parent. Most significantly ($p = 0.000$), compared to Hispanic students who did not talk to a counselor about aid, Hispanic students who did talk to a counselor had 355.3% higher odds of submitting a FAFSA. As multiple measures of human capital are shown to be significant, these results support the hypothesis that human capital is significantly associated with a Hispanic Student's FAFSA submission status in the WCR.

Three further logistic regression models were created to test the second hypothesis that one or more of the subtypes of human capital significantly contributes to a Hispanic student's FAFSA submission status in the WCR. Each model represents a subtype of human capital—economic, cultural, or social. The pooled results of these regressions are displayed in Table 2, sorted by subtype of capital. Economic capital, as measured by family income level, does not fit the model well as per the OTC ($p = 0.167$) and R^2_N (0.018) thereby showing no significant effect on FAFSA submission. Economic's CIs are slightly narrower than in the full model but remain wide for the odds ratio of very high compared to mid-high incomes.

Cultural capital fits the model well ($p = 0.003$), but the model has a very low R^2_N (0.074). One cultural variable shows significance: if parents feel something other than education is most important for next fall ($p = 0.001$; $\text{Exp}(B) = 3.201$). The CI for family or friends as an aid influence compared to a counselor or teacher is narrower in the cultural model than in the full model. Although there were no additional significant variables observed in the reduced model, students' whose aid influence was unspecified or themselves compared to students whose aid influence was a counselor or teacher became noticeably less significant ($p = 0.553 - p = 0.885$).

Social capital has the best model fit ($p = 0.000$) and the highest R^2_N (0.172). The social model contains three significant variables, if more than half of the student's friends planned for college compared to if about half did ($p = 0.047$; $\text{Exp}(B) = 2.392$), if the student talked about aid with a parent ($p = 0.003$; $\text{Exp}(B) = 2.392$), and if the student talked about aid with a counselor ($p = 0.000$; $\text{Exp}(B) = 4.143$). The CI for talking to a counselor about aid is narrower in the social model than in the full model. While economic capital did not significantly contribute to a Hispanic student's FAFSA submission status in the WCR, cultural and social capital showed significant contributions, supporting the hypothesis.

Table 2*Logistic Regression Models: Hispanic FAFSA Submission and the Subtypes of Human Capital*

<i>Economic</i>		Exp(B)	95% CI	
OTC (MPR) = 0.167	Mean $R^2_N = 0.018$		Lower	Upper
Family income bracket				
	Mid-low – Mid-high	0.871	0.503	1.509
	High – Mid-high	1.215	0.421	3.510
	Very high – Mid-high	4.405	0.526	36.904
<i>Cultural</i>		Exp(B)	95% CI	
OTC (MPR) = 0.003	Mean $R^2_N = 0.074$		Lower	Upper
Primary language spoken with mom and friends				
	English – 1st language English	0.758	0.310	1.852
	Not English – 1st language English	0.736	0.433	1.249
Most important to parents for next fall (according to student)				
	Higher education – Something else	3.201***	1.632	6.278
Who influenced student's thinking about aid				
	Parents – Counselor/teacher	1.592	0.792	3.199
	Family/friends – Counselor/teacher	2.242	0.622	8.073
	Unspecified/self – Counselor/teacher	1.055	0.509	2.189
<i>Social</i>		Exp(B)	95% CI	
OTC (MPR) = 0.000	Mean $R^2_N = 0.172$		Lower	Upper
How many friends plan for college				
	Few or none – About half	2.674	0.520	13.759
	More than half – About half	2.044*	1.010	4.137
If student talked about aid with a parent				
	Yes – No	2.392**	1.358	4.213
If student talked about aid with a counselor				
	Yes – No	4.143***	2.367	7.250

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$

All seven independent variables were used to create three final logistic regression models, one consisting of only Asian students, one of Black students, and another of white students, to test the final hypothesis that the impact of human capital on FAFSA submission significantly differs among Hispanic, Asian, Black, and white students in the WCR. Table 3 displays the pooled odds ratios of these regressions and includes the results for Hispanic students to allow for direct comparison. CIs are not listed in this table, but wide intervals are discussed in relation to significant variables.

Table 3

Logistic Regression Models: FAFSA Submission and Student's Capital by Race/Ethnicity

	Asian	Black	Hispanic	White
OTC (MPR) =	0.001	0.000	0.000	0.000
Mean R^2_N =	0.365	0.280	0.214	0.215
	Exp(B)	Exp(B)	Exp(B)	Exp(B)
Family income bracket				
Mid-low – Mid-high	1.148	1.090	1.226	1.224
High – Mid-high	4.289	3.360	1.472	1.718*
Very high –Mid-high	0.911	NA [†]	3.834	1.478
Primary language spoken with mom and friends				
English – 1st language English	0.210	1.642	0.768	2.296
Not English – 1st language English	0.678	0.543	0.665	1.952
Most important to parents for next fall (according to student)				
Higher education – Something else	5.138	3.033	2.620*	2.562***
Who influenced student's thinking about aid				
Parents – Counselor/teacher	1.301	1.687	1.550	2.052**
Family/friends – Counselor/teacher	0.102	0.428	3.267	0.908
Unspecified/self – Counselor/teacher	0.115	0.561	1.283	0.752
How many friends plan for college				
Few or none – About half	0.452	1.437	2.610	1.065
More than half – About half	0.645	1.326	1.695	0.974

	Asian	Black	Hispanic	White
	Exp(B)	Exp(B)	Exp(B)	Exp(B)
If student talked about aid with a parent				
Yes – No	0.445	0.812	1.998*	1.748***
If student talked about aid with a counselor				
Yes – No	6.347*	5.573**	4.553***	3.194***

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$

[†] No Black students in the sample ($n = 171$) reported having a “very high” family income

The regression including only Asian students fit the model well ($p = 0.001$) with the highest R^2_N of the four models (0.365). For Asian students, the only variable deemed significant was if they had talked to a counselor about aid ($p = 0.014$), but the CI was quite wide (1.468 – 27.442). Those who talked to a counselor had 534.7% higher odds of submitting a FAFSA than those who did not. The regression including only Black students also had good model fit ($p = 0.000$) and the second highest R^2_N (0.280). If the student had talked to a counselor about aid was, again, the only variable deemed significant for Black students ($p = 0.001$) and again had a wide CI (1.876 – 16.555). Those who talked to a counselor had 457.3% higher odds of submitting than those who did not.

Five variables showed significance for white students and the regression displayed good model fit ($p = 0.000$), but the R^2_N (0.215) is lower than the Asian and Black student models. White students whose family income was high ($p = 0.029$) had 71.8% higher odds of submitting a FAFSA than those whose family income was mid-high. If higher education was most important to their parents for next fall ($p = 0.000$), they had 156.2% higher odds of submitting than if something other than higher education was most important to their parents. Those whose aid influence was their parents rather than a counselor or teacher ($p = 0.019$) had 105.2% higher

odds of submitting. White students who talked to their parents about aid ($p = 0.001$) had 74.8% higher odds of submitting than those who did not, while white students who talked to a counselor about aid ($p = 0.000$) had 219.4% higher odds of submitting than those who did not. The racial/ethnic differences in significance levels and odds ratios among the measures of human capital support the hypothesis that the impact of capital on FAFSA submission significantly differs among Hispanic, Asian, Black, and white students in the WCR.

Discussion

As human capital encompasses all the values, tools, and skills collected throughout life, any individual's connections or resources can be positioned within the framework of human capital. However, the usefulness of these resources depends on the person who holds them and the context in which they are used (Bourdieu, 1986; Perna, 2006; Yosso, 2005). The logistic regressions tested variables measuring different aspects of human capital that can discourage or encourage Hispanic FAFSA submission. These measures indicated that parents' views of college, parental aid guidance, and access to aid counseling significantly affected Hispanic submission. As these factors relate to a student's human capital, the results of their regressions inform the following research questions and their associated hypotheses.

Human Capital

The first research question asks, in what ways is human capital significantly associated with a Hispanic student's FAFSA submission status in the WCR? Human capital had a significant influence on Hispanic FAFSA submission as determined by the OTC, however the R^2_N showed that only 21.4% of the variation in submission could be accounted for by the given variables. The low R^2_N indicates that other demographic factors or forms of human capital may

have a greater impact on submission, however the significance of the model and of the included variables demonstrate that capital *does* play a role in submission.

When Hispanic students' parents viewed higher education as most important and discussed aid with their child, there was a positive and significant influence on FAFSA submission. This significance, along with the fact that most Hispanic students responded that their parents viewed higher education as most important (88.3%) and had talked with them about aid (69.8%), aligns with prior research showing that Hispanic students often have strong connections with parental and family figures who provide skills, advice, and assistance (Becerra, 2010; O'Connor et al., 2010; Ryan, 2016; Yosso, 2004). It also affirms studies showing that parental encouragement and guidance leads to higher educational success rates (Feeney & Heroff, 2003; Goldrick-Rab et al., 2016; Warnock, 2016). The positive significance of Hispanic parental involvement challenges ideas about Hispanic students' access to degree-holding or knowledgeable role models and suggests that navigational capital does play a role in Hispanic students' ability to succeed over systemic barriers (Carales, 2020; Ryan, 2016; Yosso, 2004).

The possible effects of multilinguistic capital, such as that of ELLs, are not well represented in this study, as non-fluent English speakers were omitted. Despite offering this survey in Spanish to parents, NCES did not offer a Spanish version to students (Ingels et al., 2014). However, multilinguistic capital includes the linguistic capital of bilinguals proficient in English and another language, students such as these were included allowing some insight into how bilingual capital did or did not affect FAFSA submission. As Hispanic students' primary language was insignificant concerning their FAFSA submission status, there is no evidence to suggest that bilingual capital positively or negatively influenced FAFSA submission for Hispanic students in the WCR. As navigational capital serves to overcome systemic barriers, linguistic

capital may aid Hispanic students in navigating the complex language of the FAFSA, averaging submission among native and non-native English speakers (Becerra, 2010; Yosso, 2004).

The variable that proved to be the most significant, if the student talked about aid with a high school counselor, is tied to the student's available resources. Although who influenced the students thinking about aid was not significant, the high percentage of students who visited a counselor to discuss aid and viewed a counselor or teacher as their aid influence (77.3%) indicates a positive correlation between resource availability and financial aid knowledge. A student whose school has several counselors, especially those with college readiness counselors, is far more likely to be able to visit a counselor than a student whose school does not have those same resources. Low-income districts, which have more SOC on average, often lack this kind of access (Baker et al., 2020; Fahle et al., 2020). Students who can see a counselor may be more equipped to complete the FAFSA, as they are likely to have access to other resources, such as monetary and social connections (Feeney & Heroff, 2013; Perna, 2006; Ryan, 2016). The significance of aid counseling, parental views, and parental aid discussion prompts the hypothesis to be accepted and the null rejected. There was a significant association between human capital and a Hispanic student's FAFSA submission status in the WCR.

Economic, Cultural, and Social Capital

While human capital measures all the resources available to an individual, the three main subtypes of human capital divide these resources by the areas of life they grow from and impress upon (Bourdieu, 1986; Perna, 2004). The results of the logistic regression models run for each subtype help answer the second research question: To what extent does each subtype of human capital significantly contribute to a Hispanic student's FAFSA submission status in the WCR?

Economic capital is inherently tied to both cultural and social capital; having economic capital allows families to live in neighborhoods with well-supplied schools and afford to connect their children with the outside resources necessary to build university-related practical and interpersonal skills (Bourdieu, 1986; Baker et al., 2020; Fahle et al., 2020; Goldrick-Rab et al., 2016; Ober et al., 2020; Perna, 2006). For this reason, it is surprising that economic capital—as measured by family income—failed to fit the model, suggesting no significant effect on Hispanic FAFSA submission. This insignificance contradicts Kofoed (2016), McKinney and Novak (2015), and Feeney and Heroff's (2013) findings that FAFSA submission varies by income level. However, O'Connor et al. (2010) found that Hispanic college enrollment and benefit varies based on whether students' parents saved money for college rather than their parent's income. Given that Hispanic people—on average—have lower rates of wealth accumulation due to unequal opportunities and systemic racism, it is possible that a wealth-based measure of economic capital would show significance in relation to a student's FAFSA submission status (Bhutta et al., 2020; Krivo & Kaufman, 2004). The wide CI for very high income compared to mid-high income may be because only one Hispanic student who reported a very high family income also reported not submitting a FAFSA, resulting in a lack of comparable data.

Cultural capital is often discussed regarding an individual's upbringing but also includes the transmission of linguistic capital, values, and belief systems through friends and educators (Bourdieu, 1986; Perna, 2006; Yosso, 2004). The logistic regression limited to the variables representing cultural capital fit the model well according to the OTC but had a very low R^2_N suggesting that the variation in submission cannot be solely attributed to the included measures of cultural capital. The cultural model also showed slightly different variable-level effects than in the full model. Having family or friends as an aid influence rather than a teacher or counselor

had a narrower CI in the cultural model than in the full model; this may indicate an increased predictive ability of human capital when grouped by subtype and points to cultural capital as an excellent predictor of Hispanic FAFSA submission. This theory is supported by prior research demonstrating that Hispanic college admission and persistence correlate highly with cultural capital (Carales, 2020; González et al., 2003; O'Connor et al., 2010). Primary language spoken with mom and friends, albeit biased due to the omission of non-proficient English speakers, did not significantly affect Hispanic FAFSA submission. If the student's parents consider higher education most important for next fall becomes even more significant in the cultural model than in the full model. This increase further supports the theory that cultural capital is a strong predictor of FAFSA submission and suggests that parental value systems provide a critical role in how cultural capital influences Hispanic FAFSA submission.

The logistic regression limited to variables representing social capital had the best model fit of the three subtype models according to the OTC and its R^2_N , indicating that social capital plays a prominent role in a Hispanic student's decision to submit a FAFSA. Although the social model's R^2_N was the highest of the models, it is still low, again suggesting that the variation in submission cannot be solely attributed to the included measures of social capital. Having most or all college-oriented friends was significant in the scope of social capital but not in the full model, further demonstrating the increased predictive ability of subtype-limited models. As discussed, parental involvement through talking about aid increased the odds that a Hispanic student would submit a FAFSA. This factor becomes more significant and influential in the social capital model, agreeing with the cultural model and with prior research showing that parental values and beliefs impact a student's college-oriented behaviors (Feeney & Heroff, 2003; Goldrick-Rab et al., 2016; Warnock, 2016). Although issues have been noted around the impact of aid

counseling, its significance concerning other measures of social capital cannot be negated. As two of the three subtypes of human capital, cultural and social, were shown to significantly contribute to a Hispanic student's FAFSA submission status in the WCR, the alternative hypothesis is accepted, and the null is rejected.

Racial/Ethnic Differences in Human Capital

Following the logistic regression model built for Hispanic students, three more models were built for Asian, Black, and white students. Interpretation of the data garnered from these regressions allows the third research question to be answered: How does the impact of human capital on FAFSA submission differ between Hispanic, Asian, Black, and white students in the WCR? The OTCs of the regressions run for Asian and Black students show good model fit and the R^2_N are the highest of the four models, but talking to a counselor about aid was the only significant predictor. Additionally, small sample sizes and the resulting wide CIs in both regression models make the true influence of aid counseling questionable.

The MPR OTC of the regressions run for white students shows good model fit, but like the Hispanic model, its low R^2_N demonstrates that there are influential demographic factors and forms of capital that have not been accounted for. Of the measures of capital examined, for white students, having parents as an aid influence rather than a teacher or counselor significantly increased the odds that they would submit a FAFSA. In contrast, who influenced Hispanic students' thinking about aid did not significantly impact submission. This difference speaks to the navigational and resistant capitals of People of Color, as Yosso (2004) described, in that whites rely on pre-contrived systems while Hispanic students have learned to create and utilize communal networks and techniques to "maneuver through structures of inequality permeated by racism" (p. 80) and may thereby not be as reliant on outside influences.

White students also had higher odds of submitting if their family income was high than if it was mid-high. The increase in submissions from higher-income white students contradicts previous studies showing that lower-income students are more likely to apply than higher-income students (Kofoed, 2016; McKinney & Novak, 2015). As this Capstone did not investigate racial/ethnic differences in income, further research would need to be completed to understand why income alone is insignificant for Hispanic students while it appears to be significant for whites. Parents thinking that higher education was most important for the fall, talking to their parents about aid, and talking to a counselor about aid all had comparably significant effects on Hispanic and white students. However, whites had narrower CIs, most likely due to the larger sample size (which is reflective of the WCR's population).

Racial/ethnic differences in the effect of capital on FAFSA submission are apparent in the comparison between Asian, Black, Hispanic, and white students' measures of capital. Asian and Black students' capital had limited and imprecise effects on submission. However, the lack of effect, when compared to the effects observed in the Hispanic and white models, shows that the significance of these measures of human capital does differ between Asian, Black, Hispanic, and white students. White students were also affected by economic capital as represented by family income level and additional cultural capital represented by who influenced their thinking about aid. In contrast, these aspects of capital were found to have no significant interaction with submission for Hispanic students. These differences led to the acceptance of the alternative hypothesis and rejection of the null: the impact of human capital on FAFSA submission significantly differs between Asian, Black, Hispanic, and white students in the WCR.

Conclusion

Comparatively low Hispanic graduation rates point to a need for solutions tailored to the needs of Hispanic students, and research has shown that financial aid has a strong positive effect on Hispanic college persistence (Carales, 2020; Gross et al., 2014). Discerning barriers to financial aid application can inform school-level resource management, inciting changes that will increase financial aid application and therefore college graduation rates. To discern these barriers, eight variables were chosen to serve as measures of human capital, these variables were to be run in a logistic regression model against the dependent variable, FAFSA submission status. The eighth variable, if the student had ever attended a college prep program, had to be removed due to a lack of valid responses.

Perna's (2006) conceptual model hypothesizes that social and cultural capital play a critical role in students' university-related beliefs and decisions; applying her theory to FAFSA submission showed that the impacts of capital extend beyond the scope of college application and attendance. Without access to general wealth information, economic capital did not significantly affect a Hispanic student's FAFSA submission status. However, cultural and social capital significantly affected submission and demonstrated distinct effects when stratified, supporting the practice of investigating capital by subtype. These models also suggest that values imparted by parents significantly impact FAFSA submission and align with previous research showing correlations between parental values and university-related behavior (Perna, 2006). Racial/ethnic differences in the effect of capital on submission confirm that the forms and uses of capital held by students changes based on their racial/ethnic backgrounds and affirms the belief that changes to the financial aid process must be made with SOC, particularly Hispanic students, in mind (Becerra, 2010; González et al., 2003; Perna, 2006; Ryan, 2016; Yosso, 2005).

Limitations

Data provided from HSL:09 was redacted, limiting many potential variables (including financial information and parent-level data) which could grant further insight into how capital affected submission. Had more precise variables been available and included in the regressions, the R^2_N and significance levels may have shown capital, especially economic capital, to have a more substantial effect on submission. Additionally, students not fluent in English were disqualified from the survey, biasing questions regarding language preference or competency, and possibly reducing the significance of cultural capital as represented by linguistic capital. It should be noted that the profound effect of aid counseling on submission may be overstated as students who see a counselor to discuss aid likely already plan to submit a FAFSA. Additionally, this variable may have had a confounding effect due to a high percentage of students who visited a counselor selecting that a counselor or teacher was their aid influence.

Recommendations

Aid counseling was effective for students of all races and income levels and SOC in low-income school districts are most often denied these types of resources (Baker et al., 2020; Fahle et al., 2020). Additional funding to train and hire financial aid-knowledgeable counselors would expand the benefit of direct assistance and improve the awareness of financial aid offerings. The importance of parental views and parental aid discussion also signifies that programs aimed at educating parents would be equally effective, if not more so, as the information would come from a trusted source (Flores-Yeffal, 2019; González et al., 2003). Both solutions require funding, especially if done at the public school level, but could be realistically implemented through non-profit or volunteer programs. However, for these programs to be effective, training must be current and consistent, and services must be available in languages other than English.

Further research should test the efficacy of such programs, focus specifically on Hispanic students/SOC, and ensure the inclusion of parent-level data to gain a well-rounded view of students' various capitals. Research should also be conducted utilizing data from the updated (2023–2024) FAFSA, as the changes made may have had an impact on Hispanic completion, race/ethnicity data is now collected during application, and the FSA provides completion data more reliable than the self-reported data available through NCES (Collins & Dortch, 2022).

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