

Evaluating Hispanic Students' Sense of Belonging in a College of Agriculture

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Introduction

Texas Tech University achieved Hispanic Serving Institution (HSI) status in 2019 and has focused the institution's recruitment and programming efforts on retaining and serving the 29.7% undergraduate Hispanic student population (TTU, 2022). Texas Tech acknowledges the importance of the support and promotion of DEI (diversity, equity, and inclusion) in higher education. Few studies have focused on Hispanic students in agricultural colleges. Hispanic students have lower retention rates than peers, urging universities to focus on a more welcoming environment for their retention and well-being (Schwartz et al., 2022).

Need for Research

Research has begun to look past pre-entry demographics and characteristics to understand better the impact of structural and cultural institutional factors on the retention of Hispanic students (Hernandez & Lopez, 2004; Crisp et al., 2015). A 2022 HSI study found that opportunities, such as undergraduate research, are the "best predictor of graduation rates" rather than pre-college characteristics such as academic backgrounds or socioeconomic differences (Caraballo-Cueto et al., 2022, p. 2). The inability to achieve workforce diversity in STEM fields is due to institutional barriers that need to be removed (Estrada et al., 2017). The focus should be on students' ability and commitment to persist in STEM fields and majors. An institutional push to grow the Hispanic undergraduate population within agricultural colleges brings an opportunity to assess Hispanic students' sense of belonging on campus.

Theoretical Framework

Utilizing Lane's (2016) Model for Programmatic Impact on Retention and Degree Attainment among Underrepresented students in STEM, researchers found that a sense of belonging - "students' feelings of connectedness or sense of mattering on campus" - was hard to achieve for minorities in STEM, but was important in fostering retention (Abrica et al., 2020, p. 230; Strayhorn, 2012). In terms of retention, AAAE states, "Individual student factors that lead to successful completion of [degrees] need to be investigated" (AAAE, 2020, p. 45). To study the perceived sense of belonging among Hispanic agricultural students, a Qualtrics survey utilized an 18-statement SOB framework (Giorgi, 2020).

Methodology

This study is a secondary analysis of a 2021 agricultural college-wide DEI Qualtrics survey assessing Davis College students' perceived sense of belonging. A total of 323 respondents (N = 323) responded, as well as indicated by their Hispanic or non-Hispanic origin. A previous study found significant differences in first-generation students' perception of equal opportunities to their peers (Ford & Headrick, 2022). This study took the existing data and, using SPSS, stratified for data on Hispanic students compared to their non-Hispanic peers. A four-point Likert scale was used for the survey (1 = *Strongly Disagree*, 4 = *Strongly Agree*). Levene's (1960) Test of equality of variances was utilized, with t statistics not assuming homogeneity of variance computed for any violated assumptions.

Results

18.9% of students (n = 61) identified as having a Hispanic origin, and 81.1% did not. Table 1 shows the comparative means of students' belonging statements by Hispanic origin that were found to have significant differences.

Table 1*Comparative Means of Students' Belonging Statements by Hispanic Origin (N = 323)*

Belonging Statement (I feel...)	Hispanic		Non		<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
I belong in CASNR	3.0	0.8	3.4	0.7	>.001*
Most of my peers in CASNR are like me.	2.2	0.8	2.8	0.8	>.001*
Most faculty members are like me.	2.2	0.8	2.7	0.8	>.001*
Most staff members are like me.	2.2	0.8	2.8	0.7	>.001*
CASNR allows me to be my authentic self.	3.0	0.8	3.3	0.7	.004*
Diversity is valued and celebrated within CASNR.	2.7	0.9	3.0	0.8	.005*
CASNR leadership understands that diversity is critical to success.	3.0	0.7	3.2	0.6	.006*
I have connections with other Texas Tech students.	3.2	0.8	3.4	0.7	.02*
I feel a sense of belonging at Texas Tech.	3.0	0.8	3.3	0.7	.02*
I can engage with students, staff, and faculty from other cultures.	3.1	0.8	3.3	0.7	.02*
My unique background and identity are valued in CASNR.	2.9	0.8	3.2	0.8	.03*
I have connections with Texas Tech faculty.	3.0	0.8	3.2	0.7	.04*
I belong in my major.	3.2	0.8	3.4	0.6	.04*

p* < .05, *p* < .001

The alpha level was set at .05 *a priori*. The statements in Table 1 all showed statistical significance. The mean score for each statement of belonging was higher among non-Hispanic students than Hispanic students. The statements “I have connections in my major” and “I belong in my major” had the highest mean score among Hispanic students ($M = 3.2$), while non-Hispanic students showed a higher mean score ($M = 3.4$). The statements with the lowest mean score for Hispanic students were: “Most of my peers in CASNR are like me,” “Most faculty members are like me,” and “Most staff members are like me” ($M = 2.2$). For non-Hispanic students, the statements “Most of my peers in CASNR are like me” and “Most staff members are like me” shared the same mean ($M = 2.8$), and the statement “Most faculty members are like me” had a slightly lower mean ($M = 2.7$).

Conclusions

18.1% of respondents identified as Hispanic or of Hispanic origin. It is important to recognize the individual colleges' role and the individual majors and departments in addressing the needs and support offered to Hispanic students.

Implications & Impact

More work must be done to support agricultural Hispanic and other underrepresented students. To properly address students' challenges, universities must first be aware of their experiences. We suggest replicating surveys, such as this one, to help investigate the current state of student belonging and involvement and assist in decision-making for the best resources and support. Students who feel they belong are more likely to continue in their major and be empowered to impact the agricultural industry and profession.

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