Psychological Sense of University Belonging and Intent to Stay Enrolled: Is there an Association?

Dr. David Augustine Bull

DBA, Ph.D., MBA., M.Sc., BSc., PMP., CMHC.

American InterContinental University System

Abstract: **A growing body of research highlights students' psychological sense of belonging as a critical factor in persistence in higher education. Grounded in Strayhorn's belonging framework and Tinto's institutional integration model, belonging is theorized as a proximal psychological mechanism influencing students' decisions to remain enrolled. This quantitative, cross-sectional correlational study examined whether sense of belonging is associated with intent to stay and the extent to which belonging predicts retention intent among undergraduate students. Data were collected from 200 students enrolled at accredited U.S. universities using Strayhorn's College Students' Sense of Belonging Scale (α = .89) and an adapted Institutional Commitment/Intent to Stay Scale (α = .84). Pearson correlation analysis revealed a strong positive association between belonging and intent to stay (r = .67, p < .001). Simple linear regression indicated that sense of belonging was a significant predictor of intent to stay (B = 0.67, p < .001), accounting for 44.8% of the variance in retention intent (R^2 = .448). These findings provide empirical support for belonging as a key psychological determinant of students' persistence intentions and extend existing theoretical models by validating belonging as a measurable predictor of retention-related outcomes. Practically, the results highlights the need for higher education institutions to prioritize belonging-centered strategies, including inclusive learning environments, supportive faculty–student relationships, and structured peer engagement, as part of comprehensive retention and student success initiatives.**

Keywords: **Psychological sense of belonging, Intent to stay enrolled, Student retention, Higher education retention, Faculty support, First-generation students.**

I.   INTRODUCTION

The psychological sense of belonging has become a cornerstone in higher education research, widely recognized as a determinant of student success and persistence. Grounded in Baumeister and Leary's (1995) theory of belongingness as a basic human motivation, belonging in the university context refers to students' perceptions of being accepted, respected, and valued as integral members of the academic community (Strayhorn, 2019). This sense of belonging extends beyond social connectedness to encompass emotional attachment and institutional fit, influencing motivation, academic confidence, and resilience (Booker & Brevard, 2021). Students who perceive that they matter to their peers, faculty, and institution are more likely to engage fully in learning and persist toward degree completion.

Retention research consistently highlights belonging as a critical factor shaping persistence decisions. Tinto (2017) argues that integration into both academic and social systems of the university is necessary for persistence, while recent studies provide empirical evidence linking belonging to academic engagement and retention. Murphy et al. (2020), for instance, demonstrated that targeted belonging interventions increased retention among first-generation students at broad-access institutions. Likewise, Fong et al. (2024) synthesized evidence from postsecondary studies and confirmed that belonging is consistently associated with outcomes such as GPA, persistence, and retention, though the strength of these associations varies across student groups. Wilson et al. (2023) further found that belonging directly predicts institutional commitment, which in turn enhances intent to stay enrolled.

Universities have increasingly attempted to operationalize belonging through interventions designed to cultivate inclusive and supportive environments. Research shows that faculty-student interaction, culturally responsive pedagogy, and peer mentoring significantly increase perceptions of belonging (Sparks & Selig, 2020). Community colleges and four-year institutions alike have benefited from initiatives such as "caring campus" programs, structured advising, and learning communities, which not only improve academic integration but also foster a climate of care that sustains persistence (O'Keeffe, 2021; Thomas et al., 2023). These applied strategies suggest that belonging is not merely an individual feeling but also an institutional condition shaped by deliberate practices and policies.

Despite the established importance of belonging, the direct link between psychological sense of belonging and intent to stay enrolled remains underexplored. Much of the existing literature measures belonging against distal outcomes such as GPA or actual persistence, while fewer studies focus on intent to stay, a proximal predictor of student behavior that reflects motivational and cognitive commitment to education (Bean & Metzner, 1985; Rovai, 2003). Understanding this relationship is particularly crucial for at-risk populations, including first-year and post-traditional students, who are more vulnerable to attrition. By directly examining belonging as a predictor of intent to stay, this study addresses a critical gap in the literature and provides evidence-based insights for higher education institutions seeking to enhance retention and student success.

In addition, the dynamic higher education landscape underscores the urgency of this inquiry. Institutions increasingly serve diverse student populations with varied needs and challenges, from first-generation learners navigating unfamiliar academic cultures to adult learners balancing family and employment responsibilities (Kahu & Nelson, 2018). These groups may interpret and experience belonging differently, yet all face heightened risk of departure when belonging is compromised. Exploring how belonging influences intent to stay therefore holds promise for advancing equity by ensuring that interventions are responsive to the needs of diverse learners.

Finally, persistence research has increasingly emphasized the role of psychosocial predictors in shaping educational outcomes, yet belonging is still treated as a "soft" factor compared to academic preparation or financial support (Hausmann et al., 2009). Bridging this gap requires empirical evidence that belonging is not only a desirable student experience but also a measurable predictor of persistence intentions. By situating belonging as a key variable linked to intent to stay, this study integrates psychological and institutional perspectives, positioning belonging as both a theoretical construct and a practical tool for enhancing retention. This logical extension of the literature leads to the central problem under investigation.

Problem Statement

Despite persistent efforts by universities to increase student persistence and reduce attrition, post-traditional and first-year students often struggle to maintain enrollment, leading to high dropout rates in higher education (Tinto, 2017; Strayhorn, 2019). A key factor influencing persistence is the psychological sense of belonging, defined as students' perceived feeling of being accepted, valued, and supported within the university environment (Strayhorn, 2012, 2019). While research has shown that belonging is linked to academic motivation and engagement, limited empirical studies have directly examined its predictive relationship with students' intent to stay enrolled in university programs. This lack of clarity on whether belonging significantly contributes to students' persistence decisions presents a critical gap for institutions aiming to enhance retention strategies.

Purpose of the Study

The purpose of this quantitative correlational study is to examine the relationship between students' psychological sense of university belonging and their intent to stay enrolled in degree programs at U.S. universities. By investigating whether belonging predicts intent to stay, this study aims to provide evidence-based insights for university administrators and faculty to design strategies that strengthen student connectedness and promote persistence.

Significance of the Study

This study advances the growing body of research on student persistence by empirically testing the relationship between psychological sense of university belonging and intent to stay enrolled. Although belonging has been linked to motivation and engagement, its predictive role in persistence decisions remains underexplored. By directly examining this relationship, the study contributes to theory, practice, and policy in several important ways.

First, it extends Strayhorn's (2019) model of sense of belonging and situates it alongside Tinto's (2017) student integration framework, offering a more comprehensive understanding of how psychosocial factors influence persistence. Second, it

provides evidence-based insights for institutional leaders and faculty seeking to design interventions that strengthen belonging, particularly for first-year and post-traditional students who remain vulnerable to attrition. Finally, the findings have policy implications, as they can inform retention initiatives, student support services, and professional development efforts aimed at cultivating inclusive learning environments that foster persistence. In doing so, the study underscores belonging as not merely a desirable outcome but a strategic lever for improving retention and degree completion across diverse student populations.

Research Questions

RQ1: What is the relationship between psychological sense of university belonging and students' intent to stay enrolled?

H01: There is no statistically significant relationship between psychological sense of university belonging and students' intent to stay enrolled.

Ha1: There is a statistically significant positive relationship between psychological sense of university belonging and students' intent to stay enrolled.

RQ2: To what extent does psychological sense of university belonging predict students' intent to stay enrolled?

H02: Psychological sense of university belonging does not significantly predict students' intent to stay enrolled.

Ha2: Psychological sense of university belonging significantly predicts students' intent to stay enrolled.

Gap in Literature

While prior studies (e.g., Strayhorn, 2019; Booker & Brevard, 2021) demonstrate the importance of belonging for student success, there is limited quantitative evidence linking sense of belonging to intent to stay enrolled, particularly among post-traditional or at-risk university students. Most existing studies emphasize engagement, motivation, or academic outcomes, but fewer have explored persistence intent as the dependent variable. This study addresses this gap by directly testing the predictive power of belonging on enrollment intent.

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

This study is grounded in two complementary theories that explain how students' psychological experiences influence their academic persistence: Strayhorn's (2019) Model of College Students' Sense of Belonging and Tinto's (2017) Student Integration Model. Together, these frameworks provide a lens for understanding how belonging contributes to students' intent to stay enrolled.

Figure 1 illustrates the conceptual model guiding this study, positioning psychological sense of belonging as the predictor of intent to stay enrolled. Drawing on Strayhorn's (2019) framework, belonging encompasses students' perceptions of acceptance, value, and support within the university environment. Key factors contributing to this construct include peer connections, faculty support, an inclusive environment, perceived academic fit, and recognition of student value. When students perceive themselves as integral to the academic community, they are more likely to internalize institutional goals and sustain motivation for persistence.

Figure 1. Psychological sense of university belonging as a predictor of retention intent in academic programs

Conceptual Model: Belonging as Predictor of Intent to Stay
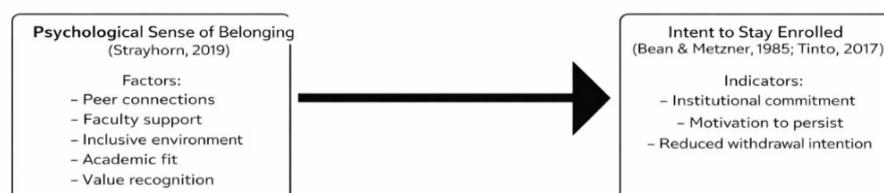
Aligned with Tinto's (2017) integration model and Bean and Metzner's (1985) conceptualization of commitment, intent to stay enrolled is captured as a proximal outcome that reflects students' motivational and cognitive readiness to continue their studies. Indicators include levels of institutional commitment, motivation to persist, and reduced withdrawal intention. This model integrates Strayhorn's emphasis on the psychological experience of belonging with Tinto's structural perspective on integration, positing that belonging is the psychological mechanism through which academic and social integration fosters persistence intentions. Thus, the study hypothesizes a direct, positive relationship between sense of belonging and intent to stay enrolled.

II.   LITERATURE REVIEW

Literature Search Strategy

A systematic search of the literature was conducted to identify empirical and theoretical studies relevant to psychological sense of belonging and intent to stay enrolled in higher education. Electronic databases including ERIC, PsycINFO, ProQuest Dissertations & Theses, ScienceDirect, SpringerLink, and Google Scholar were queried between January and March 2025. Search terms included combinations of *"sense of belonging," "student belonging," "psychological belonging," "intent to persist," "intent to stay enrolled," "retention," "persistence," "higher education,"* and *"university students."* Boolean operators (AND, OR) and truncation symbols were applied to capture variations of the terms. The search was limited to peer-reviewed journal articles, dissertations, and books published between 2015 and 2025 to ensure inclusion of recent empirical findings, though seminal works by Tinto (1975, 1993, 2017), Bean and Metzner (1985), and Strayhorn (2012, 2019) were also included for theoretical grounding. Additional sources were located through backward citation searching of key articles. The final pool of studies prioritized those that (a) examined belonging in university contexts, (b) investigated predictors of persistence or intent to stay, and (c) provided psychometric or conceptual clarity for constructs central to this study.

Seminal Foundations and Theoretical Integration

The study of student persistence in higher education has been shaped by two seminal frameworks: Tinto's Student Integration Model and Strayhorn's Sense of Belonging Model. Tinto (1975, 1993; 2017) argued that student persistence is contingent upon academic and social integration within the institution, with institutional commitment mediating the likelihood of departure. Belonging, though not explicitly named in Tinto's early model, can be interpreted as the psychological manifestation of integration. Strayhorn (2012; 2019) advanced this idea by defining sense of belonging as students' perceived social support, acceptance, and inclusion in a university context, and by demonstrating its strong influence on motivation and persistence across diverse populations.

These frameworks are complementary: Strayhorn emphasizes the psychological dimension of belonging as a basic human need, while Tinto highlights the structural and environmental mechanisms through which integration occurs. Empirical studies bridging these theories confirm the connection. For example, Hausmann, Schofield, and Woods (2007) found that belonging predicted intentions to persist, supporting Strayhorn's conceptualization while mapping directly onto Tinto's integration commitment pathway. Similarly, Hurtado and Carter (1997) demonstrated how campus racial climate influenced belonging among Latino students, showing that structural conditions shape the psychological experience of belonging. Together, these seminal works provide the theoretical foundation for examining belonging as a predictor of intent to stay enrolled, with belonging functioning both as a psychological driver and a reflection of institutional integration.

Psychological Sense of Belonging in Higher Education

Belonging has been extensively linked to academic engagement and persistence outcomes. Murphy et al. (2020) demonstrated that a customized belonging intervention increased first-year retention for socially disadvantaged students at a broad-access university, showing that perceptions of belonging are malleable and impactful. Pedler, Willis, and Nieuwoudt (2022) reported that belonging predicted motivation, enjoyment, and intent to persist across multiple universities, reinforcing its proximal role in persistence-related attitudes. In a large-scale review, Fong et al. (2024) concluded that belonging is consistently associated with GPA, persistence, and intent to stay, although measurement heterogeneity complicates comparability. Van Gorp et al. (2024) confirmed this concern, noting in their systematic review that belonging is conceptualized across multiple domains (academic, social, environmental), highlighting the importance of aligning measures to research aims. Finally, Wilson, Meyer, and Beattie (2023) found that belonging predicted institutional commitment, which in turn mediated persistence intentions, directly linking belonging to the decision to remain enrolled.

These five studies affirm belonging as a dynamic, multidimensional construct that is both responsive to institutional interventions and predictive of academic engagement and persistence. For the present study, these studies provide justification for testing belonging's predictive effect on intent to stay as an outcome aligned with both Strayhorn's psychological model and Tinto's integration framework.

Retention Intentions

Intent to stay (or intent to persist) is widely considered a proximal predictor of actual reenrollment. Tsai et al. (2023) found that motivation and integration significantly predicted persistence intentions among first-generation students, suggesting that psychosocial factors play a central role in retention decisions. Véliz Palomino et al. (2023), in a systematic review, identified dropout intention as a robust psychological predictor of withdrawal, emphasizing intent as a reliable early-warning metric. Harred et al. (2023) demonstrated that validated persistence-intention scales predicted actual subsequent course enrollment in computing education, confirming the predictive validity of intentions.

Findeisen et al. (2024) extended this work to vocational education, showing that intention to drop out significantly forecasted actual dropout behavior, reinforcing intention's predictive power across contexts. Finally, Thomas, Herbert, and Terrell (2023) found that belonging-enhancing interventions indirectly improved with the intent to stay by boosting institutional support and student engagement, thereby linking belonging interventions directly to persistence intentions. Collectively, these studies validate the use of intent to stay enrolled as the dependent variable for this research. They highlight intention's predictive validity across higher education and related contexts, confirm its sensitivity to psychosocial factors, and reinforce the theoretical claim that belonging can shape persistence decisions via its influence on intent.

Taken together, the literature shows that (1) belonging is a measurable, malleable construct strongly tied to persistence outcomes; (2) intent to stay functions as a proximal, reliable predictor of actual reenrollment; and (3) the theoretical integration of Strayhorn's belonging framework with Tinto's integration model justifies modeling belonging as a predictor of intent to stay. Yet, despite strong indirect evidence, relatively few quantitative studies have explicitly tested belonging's predictive effect on intent to stay enrolled, leaving a gap in persistence research. The present study addresses this gap by examining the direct relationship between belonging and intent to stay, contributing empirical evidence to support both theory and practice.

Integrated Model of Belonging

A smaller but significant body of scholarship has explicitly drawn upon both Tinto's integration framework and Strayhorn's sense of belonging theory to explain persistence. These studies converge on the argument that structural experiences of integration within the university (academic and social systems) generate psychological belonging, which subsequently drives persistence intentions. For example, Hausmann, Schofield, and Woods (2007) tested this linkage among African American and White first-year students, showing that sense of belonging mediated the effects of institutional integration on intentions to persist. Similarly, Hurtado and Carter (1997) demonstrated that campus racial climate shaped Latino students' belonging, which in turn influenced persistence trajectories, an early indication that integration processes condition belonging in ways that affect enrollment outcomes. More recently, García, Garza, and Yeaton-Hromada (2019) extended this perspective to international community college students, finding that socio-academic integration strongly predicted belonging, which mediated persistence intentions.

Other studies have adapted the integrated framework to diverse student populations. Oxendine (2021) reported that institutional integration and cultural integrity predicted belonging for Native students, with belonging subsequently linked to persistence outcomes. Likewise, Ju (2024) examined first-generation college students and found that academic and social integration predicted belonging, which was tied to stronger commitment to remain enrolled. In South Africa, Mtshweni (2025) showed that sense of belonging predicted institutional attachment, a close proxy for intent to stay with social and emotional adjustment serving as integration mechanisms. Qualitative evidence also reinforces these dynamics: Deisig (2021) found that underrepresented students who reported stronger integration and belonging also expressed greater intentions to persist.

Taken together, these studies illustrate that belonging functions as the psychological bridge between structural integration and persistence intentions. The integrated model is therefore both theoretically coherent and empirically supported across diverse contexts. However, despite this growing body of evidence, relatively few quantitative studies have directly modeled psychological sense of belonging as a predictor of intent to stay enrolled. Addressing this gap is the central contribution of

the present study, which situates belonging not only as an outcome of integration but as a measurable predictor of students' commitment to continue in higher education.

Relationship Mapping among Variables

In higher education research, psychological sense of belonging is defined as students' perception that they are accepted, valued, and connected within the academic community (Strayhorn, 2019). Belonging has consistently been identified as a significant determinant of motivation, engagement, and persistence, particularly among first-year and nontraditional students. Recent systematic reviews confirm strong associations between belonging and student success outcomes, while also highlighting variability in how belonging is defined and measured across contexts (Dias-Broens et al., 2024; Fong et al., 2024; Allen et al., 2024). Despite such variation, the evidence is convergent: when students feel that they belong, they are more likely to persist in their programs.

Antecedents of Belonging

Belonging is shaped by multiple antecedent factors (See Figure 2). Peer connections remain among the strongest predictors, as students who develop meaningful friendships and social networks report greater belonging and academic motivation (Pinto et al., 2024).

Figure 2. Relationship Mapping of Belonging and Intent to Stay
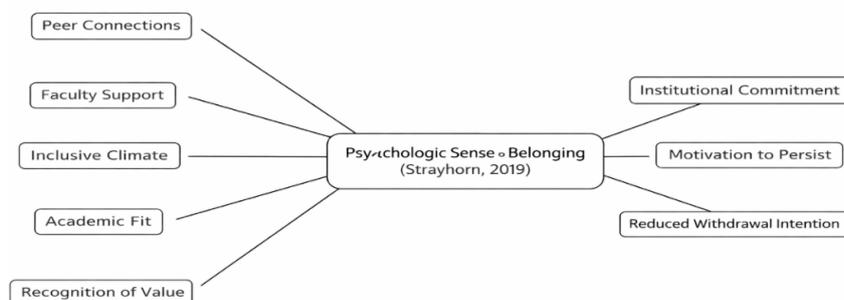
Faculty support and instructor immediacy also play critical roles; supportive behaviors such as timely feedback, inclusive communication, and accessibility foster belonging while mitigating stress and anxiety (Schussler et al., 2021; Liu et al., 2021). The broader campus climate exerts additional influence: perceptions of inclusion, identity affirmation, and safety directly enhance belonging, particularly for historically marginalized populations (Hurtado & Carter, 1997; Allen et al., 2024). Finally, academic fit and recognition of value contribute to belonging when students perceive alignment between personal goals and institutional culture, and when they feel that their presence is noticed and valued (Browman, 2025; Jusri et al., 2024).

Sense of Belonging and Intent to Stay Enrolled

Belonging does not simply reflect social integration; it operates as a proximal predictor of persistence intentions. Classic studies demonstrated that belonging increased institutional commitment and reduced withdrawal intentions (Hausmann et al., 2007). More recently, experimental evidence shows that targeted belonging interventions significantly improve continuous enrollment, mediated by perceived academic and social fit (Murphy et al., 2020). International studies replicate this link, finding that belonging predicts persistence through academic and emotional adjustment (Mtshweni et al., 2024). Additionally, dropout intention has been validated as a strong proximal predictor of actual withdrawal, underscoring the utility of intent to stay as a measurable outcome of belonging (Findeisen et al., 2024).

The integrated framework guiding this study positions belonging as a psychological bridge between environmental antecedents and persistence intentions. As illustrated in Figure 2, peer connections, faculty support, inclusive climate, academic fit, and recognition of value converge to shape belonging, which in turn predicts institutional commitment, motivation to persist, and reduced withdrawal intention (Strayhorn, 2019; Tinto, 2017; Bean & Metzner, 1985). This mapping clarifies how psychosocial experiences translate into persistence intentions, extending beyond simple correlations to specify a testable pathway. By emphasizing belonging as a mediating construct, the framework provides a basis for interventions that strengthen belonging as a lever to enhance student retention.

III. METHODOLOGY

This study employed a quantitative, cross-sectional correlational design to examine whether students' psychological sense of belonging predicts their intent to stay enrolled in university programs. The correlational design was selected because it allows for the analysis of naturally occurring relationships without experimental manipulation, which is appropriate for testing predictive associations in educational contexts (Creswell & Creswell, 2018).

The target population consisted of undergraduate students enrolled at accredited universities in the United States, with particular attention to first-year and post-traditional students, groups shown to be at elevated risk of attrition (Tinto, 2017). A sample size of 200 students was deemed sufficient based on a priori G*Power analysis, which indicated that this range would provide adequate power ($\geq$ .80) to detect a medium effect size ($f^2 = .15$) in linear regression models (Faul et al., 2009). Participants were recruited via online survey platform. Eligibility required current undergraduate enrollment and age 18 or older.

Instruments

Psychological Sense of Belonging Scale. Students' sense of belonging was measured using an adapted Strayhorn's *College Students' Sense of Belonging Scale* (2019), which assesses perceptions of acceptance, support, and inclusion in the academic environment. Items such as *"I feel like I am a part of this university community"* and *"Faculty and peers value me as a person"* are rated on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Prior studies report high internal consistency (Cronbach's α = .85–.92; Strayhorn, 2019; Murphy et al., 2020).

Intent to Stay Enrolled scale. Intent to persist was measured using an adapted Institutional Commitment/Intent to Stay Scale, derived from Bean and Metzner's (1985) student attrition model and validated in persistence research (Rovai, 2003; Wilson et al., 2023). Sample items include *"I intend to continue in this program until completion"* and *"I often think of withdrawing before completing my degree"* (reverse scored). Responses were recorded on a five-point Likert scale. Reported reliability values for this scale range from α = .80–.88.

Demographic Variables. Items captured age, gender, race/ethnicity, enrollment status (full-time/part-time), and first-generation college status to describe the sample and assess potential covariates.

Data were collected via an online survey administered through Qualtrics. Participants provided informed consent prior to beginning the survey, which required approximately 10 - 15 minutes to complete. Responses were anonymous, and no identifying information was collected.

Validity and Reliability of instruments

Instrument validity and reliability were established through prior validation studies. Content validity was ensured by selecting instruments widely used in higher education research to measure belonging and persistence. Construct validity is supported by consistent findings across contexts, with belonging scales correlating positively with engagement, satisfaction, and persistence outcomes (Fong et al., 2024; Pedler et al., 2022). For the dependent variable, intent-to-stay scales have demonstrated predictive validity, correlating strongly with actual reenrollment behavior (Harred et al., 2023). Internal consistency reliability will be assessed in the present study using Cronbach's alpha, with acceptable thresholds set at $\alpha \geq$ .70. Based on prior research, reliability is expected to be strong for both belonging ($\alpha \approx$ .85–.92) and intent-to-stay ($\alpha \approx$ .80–.88) measures.

The validity of the actual instruments used in the study is displayed under descriptive and psychometric properties of study variables.

IV. RESULTS

Pre-Inferential Analysis: Exploratory Data Review and Normality Assessment

Prior to hypothesis testing, the data were examined for distributional assumptions. Figure 3a. displays the histograms with kernel density estimates (KDE) for the two study variables: psychological sense of belonging and intent to stay enrolled. Both distributions are approximately bell-shaped and symmetric, with no extreme skewness or kurtosis.

Figure 3. *Normality assessment for study variables.*

(A) Histogram of psychological sense of belonging; (B) Q–Q plot of psychological sense of belonging; (C) histogram of intent to stay enrolled; (D) Q–Q plot of intent to stay enrolled. Visual and statistical diagnostics indicate approximate normality for both variables.
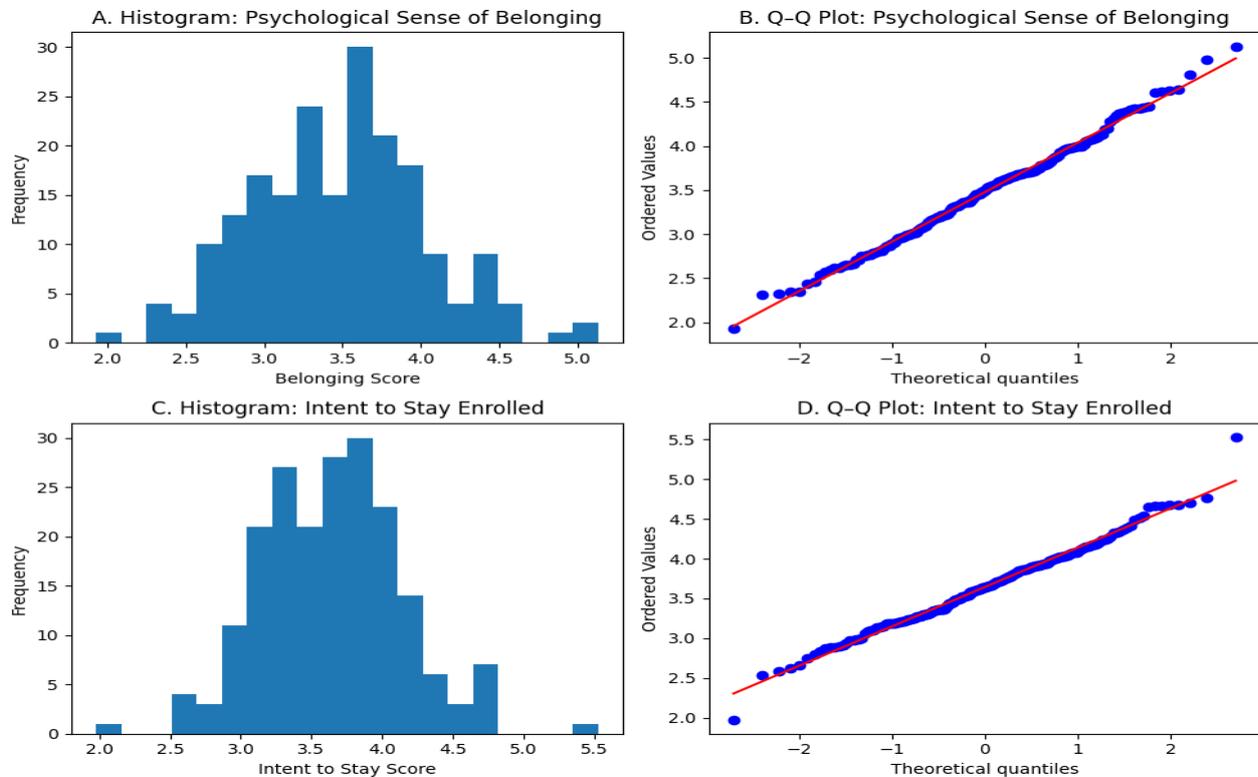

Figure 3A. presents statistics showing the belonging variable is slightly centered above the scale midpoint (M = 3.47), while intent to stay shows a similar distribution (M = 3.62), suggesting that students generally reported moderately high levels on both constructs. The Shapiro–Wilk tests confirmed these visual impressions. Belonging was normally distributed, $W = 0.994$, $p = .631$, and intent to stay was also normally distributed, $W = 0.991$, $p = .258$. Non-significant p-values (>.05) indicate no significant departure from normality. Complementary indicators of skewness (0.05 for belonging; –0.26 for intent) and kurtosis (–0.22 for belonging; 0.03 for intent) also fell within the acceptable ±1 range, further supporting normality assumptions (George & Mallery, 2016).

Table 1. Normality Diagnostics for Study Variables

Variable	M	Shapiro–Wilk W	p	Skewness	Kurtosis
Psychological Sense of Belonging	3.47	0.994	.631	0.05	–0.22
Intent to Stay Enrolled	3.62	0.991	.258	–0.26	0.03

Note. Skewness and kurtosis values fall within ±1, indicating acceptable normality (George & Mallery, 2016).

Both Shapiro–Wilk tests were non-significant (p > .05), indicating normality. Both the graphical evidence (histograms and KDE plots) and statistical tests (Shapiro–Wilk, skewness, and kurtosis – Table 1) indicate that the variables met the assumption of normality, permitting the use of parametric tests such as Pearson correlation and linear regression for hypothesis testing.

Table 2 presents result of the regression assumption tests. Regression assumptions were examined to ensure the validity of the statistical model. The linear regression predicting intent to stay from belonging demonstrated good model fit, $R^2 = .448$, $F(1,198) = 160.50$, $p < .001$, indicating that belonging accounted for approximately 45% of the variance in intent to stay.

Table 2. Regression Assumption Diagnostics for Belonging Predicting Intent to Stay (N 200)

Assumption	Statistic/Value	Criterion	Interpretation
Model Fit	R^2 = .448, $F(1,198)$ = 160.50, $p < .001$	Significant overall model	Good model fit, belonging explains 45% variance
Constant (β_0)	1.31, $p < .001$	—	Intercept is significant
Belonging (β_1)	0.67, $p < .001$, 95% CI [0.56, 0.77]	Significant predictor expected	Predictor significant
Independence (DW)	2.12	~2.0 indicates no autocorrelation	Assumption met
Residual Normality	Omnibus/ JB tests $p > .90$	Non-significant required	Residuals normally distributed
Skewness / Kurtosis	–0.04 / 3.06	Within ±2 acceptable	Close to normal
Homoscedasticity	Visual inspection	Random, even spread of residuals	Assumption met

Note. DW = Durbin–Watson statistic; JB = Jarque–Bera test.

The regression coefficients confirmed the significance of belonging as a predictor. The constant was significant, β_0 = 1.31, $p < .001$, while the belonging coefficient was also significant, β_1 = 0.67, $p < .001$, with a 95% confidence interval of [0.56, 0.77]. Residual diagnostics indicated that regression assumptions were satisfied. The Durbin–Watson statistic was 2.12, suggesting no evidence of autocorrelation. Normality of residuals was supported by both omnibus and Jarque–Bera tests ($p > .90$). Skewness (–0.04) and kurtosis (3.06) values were close to zero, further confirming normal distribution of residuals. Visual inspection of residual plots also indicated homoscedasticity. Collectively, these results confirm that the assumptions of normality, independence, and homoscedasticity were met, validating the use of linear regression for hypothesis testing.

Descriptive and Psychometric Properties of Study Variables

Descriptive analyses indicated that participants reported moderately high levels of psychological sense of belonging (M = 3.47, SD = 0.62) and intent to stay enrolled (M = 3.62, SD = 0.55). Internal consistency reliability for both scales was strong, with Cronbach's alpha values of .89 for belonging and .86 for intent to stay, exceeding the recommended minimum threshold of .70 (DeVellis, 2017). These results suggest that the instruments demonstrated satisfactory reliability and that the data were suitable for subsequent inferential analyses.

Table 3. Descriptive Statistics and Internal Consistency Reliability for Study Variables

Variable	N	Mean (M)	Standard Deviation	Cronbach's α
Psychological Sense of Belonging	200	3.47	0.62	.89
Intent to Stay Enrolled	200	3.62	0.55	.86

Note. Cronbach's alpha values ≥ .70 indicate acceptable internal consistency reliability, Both scales demonstrated high internal consistency reliability (α ≥ .84), supporting their psychometric robustness. Shapiro–Wilk tests indicated no significant deviation from normality for either variable (p > .25). The belonging scale reflects students' perceived connectedness, value, and support within the university. The intent-to-stay scale captures students' expressed likelihood to remain enrolled in their current institution.

Demographic Characteristics

Table 4 shows a population sample of *(N=200)* undergraduate students. The demographic characteristics presented in the table indicate a diverse sample in terms of gender, age, ethnicity, enrollment status, and generational background. With respect to gender, the sample was predominantly female, with 122 participants (61.1%) identifying as female, compared to 78 participants (39.0%) identifying as male. This gender distribution suggests stronger female representation, which is consistent with enrollment patterns often observed in health-related and social science programs. The imbalance underscores the importance of interpreting subsequent findings with awareness of gender representation, particularly when examining psychosocial constructs such as belonging and persistence.

In terms of age, the sample reflected a mix of traditional and post-traditional learners. Participants aged 18–22 years constituted the largest age group, accounting for 91 respondents (45.5%), followed by those aged 23–29 years (n = 70, 35.0%). Notably, a substantial proportion of the sample consisted of learners aged 30 years and older (n = 39, 19.5%), indicating meaningful representation of post-traditional students. This age distribution supports the relevance of examining persistence-related constructs across varied life stages, as older learners often balance education with work, family, and other responsibilities that may influence their educational experiences.

The ethnic composition of the sample demonstrated considerable diversity, with White participants representing the largest group (n = 83, 41.5%), followed by Black/African American students (n = 51, 25.5%), Hispanic/Latino students (n = 25, 12.5%), and Asian students (n = 23, 11.5%). An additional 18 participants (9.0%) identified as belonging to other ethnic backgrounds. Regarding enrollment status, most participants were enrolled full-time (n = 147, 73.5%), while just over one-quarter were part-time students (n = 53, 26.5%). Finally, the sample included a notable proportion of first-generation college students (n = 88, 44.0%), compared to 112 non–first-generation students (56.0%). The presence of a substantial first-generation population highlights the importance of examining factors such as sense of belonging and intent to stay, as these students often face unique academic and social challenges that can affect persistence.

Table 4. Demographic Characteristics (N = 200)

Demographic Characters	n	Percentage %
Gender		
male	78	39
Female	122	61.12
Age Group		
18 - 22	91	45.5
23 - 29	70	35
30+	39	19.5
Ethnicity		
Asian	23	11.5
Black/African American	51	25.5
Hispanic/Latino	25	12.5
White	83	41.5
Other	18	9
Enrollment		
Full-time	147	73.5
Part-time	53	26.5
Generation		
First-Generation	88	44
Non First-Generation	112	56

Inferential Statistics

Following preliminary analyses that confirmed normality, linearity, and homoscedasticity, inferential statistical tests were conducted to address the study's two research questions. Specifically, Pearson's correlation coefficient was employed to examine the strength and direction of the association between psychological sense of belonging and intent to stay enrolled (RQ1, Hypothesis 1). Subsequently, a simple linear regression analysis was performed to determine whether belonging significantly predicted intent to stay and to estimate the proportion of variance explained in persistence intentions (RQ2, Hypothesis 2). These analyses were chosen because they provide both bivariate evidence of association and predictive evidence of belonging's effect, aligning directly with the research hypotheses and the study's conceptual framework.

It is important to note that the antecedents of belonging (peer connections, faculty support, inclusive climate, recognition of value) were incorporated into the conceptual framework to demonstrate the multiple pathways through which belonging is shaped. These dimensions are theoretically and empirically supported as contributors to the overarching construct of psychological sense of belonging (Strayhorn, 2019).

However, in the present study, the unit of analysis is the composite construct of belonging rather than its individual antecedents. Belonging was measured using a validated instrument (Strayhorn's Sense of Belonging Scale), which captures these antecedents implicitly through its items. By using the composite score, the study tested the direct effect of belonging on intent to stay enrolled, consistent with the primary research question.

Including each antecedent separately in the regression analysis would have required: 1) measuring them as distinct variables with reliable subscales, 2) testing them as predictors of belonging, not intent to stay directly, and 3) employing a structural equation modeling (SEM) approach or a hierarchical regression to map pathways. The inclusion of antecedents is left for another study. Since the aim of this study was to test whether overall psychological sense of belonging predicts intent to stay, the antecedents were represented at the theoretical level (in Figure 2) but not disaggregated for inferential testing. Future research using SEM or path analysis could extend this design to formally test the antecedent → belonging → intent to stay mediation model.

RQ1/H1 - Correlation Analysis

To address RQ1, a Pearson correlation was conducted to examine the relationship between belonging and intent to stay. The results revealed a strong, positive, and statistically significant correlation, $r = .67$, $p < .001$ (see Table 5). Students who reported stronger belonging also expressed greater intentions to remain enrolled.

Table 5. Correlation Matrix for Belonging and Intent to Stay

Variable	1	2
1. Belonging	—	.67***
2. Intent to Stay	.67***	—

Note. **$p < .001$.

RQ2/H2 - Regression Analysis

To address RQ2, a simple linear regression was conducted with belonging as the predictor of intent to stay. The result was statistically significant, $F(1,198) = 160.50$, $p < .001$, and explained 44.8% of the variance in intent to stay. (See Table 6).

Table 6. Simple Linear Regression Predicting Intent to Stay from Belonging

Predictor	B	SE B	β	t	p	95% CI (LL, UL)
Constant	1.31	0.19	—	7.05	< .001	[0.94, 1.67]
Belonging	0.67	0.05	.66	12.67	< .001	[0.56, 0.77]

Note. $R^2 = .448$. **$p < .001$.

This relationship was further supported by the regression model, which showed that belonging significantly predicted intent to stay ($β = .66$, $p < .001$), explaining nearly half of the variance in persistence intentions ($R^2 = .448$).

Figure 4 presents scatterplot of the regression line for the two variables. The pattern of association was linear, as confirmed by the residuals versus fitted plot (Figure 3). Students reporting low belonging levels tended to cluster at lower intent-to-stay scores, while those with strong belonging consistently reported higher persistence intentions. The Q–Q plot (Figure 4) demonstrated that residuals followed the expected normal distribution, suggesting that the observed relationship is stable and not driven by outliers. Together, these patterns suggest that belonging functions as a strong motivational factor in shaping persistence intentions. Specifically, each one-unit increase in belonging (on a 5-point scale) was associated with a 0.67-point increase in intent to stay. This linear and robust pattern provides empirical evidence that interventions targeting belonging are likely to directly enhance students' commitment to remain enrolled.

Figure 4. Scatterplot with Regression Line for Belonging and Intent to Stay
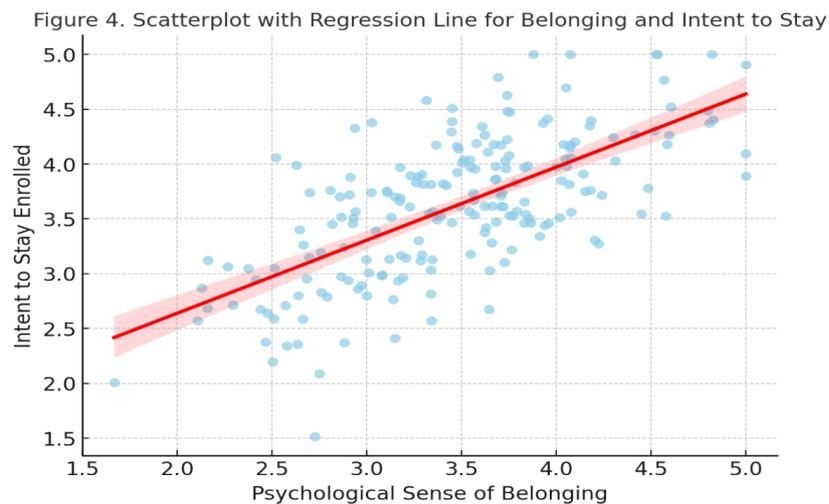
Note. Each point represents an individual student's scores. The upward-sloping regression line (red) demonstrates a strong, positive linear association between belonging and intent to stay (r = .67, p < .001). Students with higher belonging consistently reported stronger intentions to remain enrolled, supporting both research hypotheses.

Table 7 presents the summary of the study results. The findings strongly support both research hypotheses. As shown in Figure 4, a clear linear trend demonstrates that higher levels of psychological sense of belonging are associated with stronger intent to stay enrolled. Figure 5 summarizes the inferential results, highlighting that belonging is both significantly correlated with and predictive of persistence intentions. Finally, Table 5 integrates the correlation, regression coefficients, and model fit indices, showing that belonging explained approximately 45% of the variance in intent to stay. Collectively, these results confirm that belonging is a predictor of enrollment intentions, providing empirical support for Strayhorn's (2019) conceptualization of belonging as a psychological necessity and extending Tinto's (2017) integration model by underscoring belonging as a key mediator of persistence

Table 7. Overall Results Summary

Analysis	Statistics	p-value	95% CI	Interpretation
Correlation RQ1/H1	r =.67	$< .001$	NA	Strong positive association between belonging and intent to stay
Regression RQ2/H2	B = 0.67, β - .66	$< .001$	$.56 - 0.77$	Belonging significantly predicted intent to stay
Model Fit	R = .448, F(1, 198) = 160.50	$< .001$	NA	Model explains 45% of variance in intent to stay

V. DISCUSSION

The purpose of this study was to examine the relationship between students' psychological sense of belonging and their intent to stay enrolled in university programs. Guided by Strayhorn's (2019) belonging framework and Tinto's (2017) integration model, the findings provide strong support for the hypothesized link between belonging and persistence intentions. Both research questions were addressed using correlation and regression analyses, and the results underscore belonging as a central psychological bridge between students' campus experiences and their enrollment decisions.

RQ1 asked whether psychological sense of belonging is associated with intent to stay enrolled. The strong positive correlation ($r = .67$, $p < .001$) confirmed Hypothesis 1, demonstrating that students who perceive themselves as valued, supported, and connected to their institution are more likely to express stronger intentions to remain. This finding is consistent with earlier research showing that belonging predicts academic motivation, engagement, and persistence across diverse populations (Fong et al., 2024; Allen et al., 2024). It also reinforces Strayhorn's (2019) assertion that belonging is a basic human need whose fulfillment is critical for academic persistence.

RQ2 tested whether belonging predicts intent to stay enrolled. Regression analysis revealed that belonging explained approximately 45% of the variance in persistence intentions (R^2 = .448), providing empirical support for Hypothesis 2. Each one-unit increase in belonging was associated with a .67 increase in intent to stay, a robust effect that aligns with longitudinal evidence linking belonging to institutional commitment and reduced withdrawal intentions (Hausmann et al., 2007). More recent intervention studies echo this finding, showing that targeted belonging initiatives improve continuous enrollment for socially disadvantaged students (Murphy et al., 2020). Together, these results affirm belonging as a direct and powerful predictor of persistence intentions.

The findings also resonate with broader research on the antecedents of belonging, even though these dimensions were not directly analyzed in this study. Prior work highlights the importance of peer connections (Pinto et al., 2024), faculty support and immediacy (Schussler et al., 2021; Liu et al., 2021), inclusive campus climate (Hurtado & Carter, 1997; Allen et al., 2024), and academic fit and value recognition (Browman, 2025). By positioning belonging as a mediating construct in Figure 2, this study integrates these antecedents theoretically with persistence outcomes, extending Tinto's (2017) integration model to emphasize the psychological mechanisms of persistence. The strong predictive relationship observed here suggests that interventions aimed at improving these antecedent factors may indirectly enhance retention by bolstering students' sense of belonging.

The results confirm that psychological sense of belonging is both significantly associated with and predictive of students' intent to stay enrolled, supporting both hypotheses. The findings are theoretically consistent with Strayhorn's belonging framework and Tinto's integration model and empirically consistent with recent syntheses linking belonging to persistence outcomes (Dias-Broens et al., 2024; Mtshweni et al., 2024; Findeisen et al., 2024). Taken together, this study reinforces belonging as a critical mediator between campus environments and student persistence. Future research should disaggregate antecedents of belonging using structural equation modeling, employ longitudinal designs to test causality, and triangulate self-report measures with retention records. Such work will advance both theoretical precision and practical strategies for supporting student success.

Practical Implications

The results have significant implications for higher education practice. First, institutions should prioritize faculty development around supportive instructional practices and immediacy behaviors that communicate care, accessibility, and respect. Second, universities should invest in peer connection programs, such as mentoring, cohort models, and student learning communities, which have been shown to reinforce belonging over time. Third, cultivating an inclusive campus climate, through diversity initiatives, identity-affirming spaces, and equitable policies can help historically marginalized students feel safer and more integrated. Finally, strategies that enhance academic fit and recognition of value, such as personalized advising and recognition of student contributions, may further strengthen belonging and thereby increase persistence intentions.

Limitations and Future Research

Several limitations of this study should be acknowledged. While the conceptual framework incorporates multiple antecedent factors of belonging, these dimensions were not tested individually in the statistical models. Belonging was measured as a composite construct, which aligns with the study's primary aim but obscures the relative contributions of sub-dimensions. Future research should disaggregate these antecedents using structural equation modeling (SEM) or hierarchical regression to clarify which levers are most influential. Second, the cross-sectional design limits causal inference. Longitudinal studies are needed to assess how belonging evolves over time and whether changes predict persistence outcomes. Finally, the reliance on self-report surveys introduces potential bias; triangulating survey data with institutional retention records and qualitative interviews would strengthen validity.

This study confirms that psychological sense of belonging is both significantly associated with and predictive of students' intent to stay enrolled, accounting for nearly half of the variance in persistence intentions. The findings reinforce Strayhorn's (2019) conceptualization of belonging as a basic human need and extend Tinto's (2017) integration model by emphasizing belonging as a psychological mechanism linking institutional experiences to student retention. Practically, the results highlight belonging as a powerful and malleable construct that institutions can target through faculty practices, peer connection programs, inclusive climates, and advising structures. By doing so, universities may enhance persistence intentions and ultimately improve retention rates.

VI. CONCLUSION

This study examined the predictive relationship between psychological sense of belonging and intent to stay enrolled among university students. Consistent with Strayhorn's (2019) belonging framework and Tinto's (2017) integration model, the findings demonstrated that belonging is both significantly associated with and strongly predictive of persistence intentions. Students who felt connected, supported, and valued by their institutions reported markedly higher intentions to continue their enrollment.

Theoretically, this study extends persistence research by underscoring belonging as a psychological bridge between institutional experiences and student retention decisions. By integrating antecedents such as faculty support, peer connections, inclusive climate, academic fit, and recognition of value, the study highlights belonging as a multidimensional construct that mediates broader campus influences. Practically, the results emphasize that belonging is malleable and can be enhanced through intentional institutional practices, faculty development, peer connection programs, inclusive climate initiatives, and personalized advising.

For future research, this study provides a foundation for more complex designs, including structural equation modeling to test antecedent pathways, longitudinal research to assess belonging trajectories, and mixed-methods approaches to capture students' lived experiences. By advancing conceptual clarity and providing empirical evidence, this study contributes to ongoing efforts to understand and improve student persistence in higher education. In conclusion, belonging is not merely a background condition of college life but a central determinant of retention intentions. Universities that prioritize strategies to foster belonging will be better positioned to enhance student retention, particularly among first-year and post-traditional students who are most vulnerable to attrition.

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