Sense of Belonging Among Fort Lewis College Students in 2023

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Abstract

Background: A sense of belonging is a key contributor to college student retention and well-being. Social and economic factors, including financial and basic needs insecurity, may contribute to differences in belonging across student identities, particularly among Native American students. **Objective:** To assess how financial stress, food and housing insecurity, and demographic factors, like race, gender identity, and sexual orientation, are associated with sense of belonging, with a focus on comparing Native American students to other racial groups. **Methods:** This cross-sectional study used 2023 Healthy Minds Study data from students at Fort Lewis College, a Native American–serving college in Colorado. The outcome was self-reported sense of belonging, rated on a 6-point Likert scale. Independent variables included race, gender identity, sexual orientation, financial stress, food insecurity, and housing insecurity. Kruskal-Wallis tests and ordinal logistic regression were used to examine associations. **Results:** Kruskal-Wallis tests showed no significant differences in belonging by race, gender identity, or sexual orientation. However, the overall ordinal logistic regression model was significant ($\chi^2(25) = 185.33; P < .001$). Greater financial stress (B = −0.275; $P < .001$) and food insecurity (B = −0.369; $P = .011$) were associated with lower belonging. No significant effects were found for housing insecurity or demographic variables, though students identifying as bisexual, queer, questioning, asexual, or pansexual showed a trend toward lower belonging ($P = .088$). **Conclusion:** Financial stress and food insecurity were significant predictors of lower sense of belonging, while race, gender, and sexuality were not statistically significant. However, small sample sizes across identity groups may limit detection of meaningful differences. Increasing sample size is essential to more accurately assess disparities and guide targeted support.

Background

Native American students remain underrepresented in higher education, with lower first-year persistence rates compared to their peers.[1] This underrepresentation can impact students' academic experiences, particularly their sense of belonging on campus. Limited representation of Native American culture, history, and identity within institutional spaces may contribute to feelings of disconnection and lack of validation.[2] These challenges can be further intensified by intersecting identities, such as gender and sexual orientation, which may amplify experiences of marginalization.[1]

At the same time, a growing body of research highlights the prevalence of food and housing insecurity among college students.[3] Students facing food insecurity experience limited or uncertain access to nutritionally adequate and safe foods, while housing-insecure students may lack stable, safe, and affordable housing. These resource-related stressors have been linked to adverse academic and psychosocial outcomes.[3] Notably, students experiencing basic needs insecurity report lower engagement and reduced sense of belonging on campus.

This study explores how resource-related stressors—financial stress, food insecurity, and housing insecurity—along with identity characteristics such as race, gender identity, and sexual orientation, are associated with students' sense of belonging at Fort Lewis College, with particular attention to Native American students.

Methods

Study Design

This study utilized a cross-sectional design based on data from the 2023 Healthy Minds Study, collected at Fort Lewis College, a Native American-serving college in Colorado. A total of 636 student responses were included in the analysis after excluding missing data.

Variables

The study examined several key variables to assess their relationship with students' sense of belonging. Demographic variables included race, gender identity, and sexual orientation. Participants self-identified their race from categories such as White, Native American, Black, Hispanic, Asian/Pacific Islander, Middle Eastern, and other multiracial identities. Gender identity options included male, female, transgender, nonbinary, and multiple identities. Sexual orientation categories included heterosexual, bisexual, gay/lesbian, queer/questioning, asexual, pansexual, and other identities. Financial stress was measured on a 5-point scale ranging from "Always stressful" to "Never stressful." Food insecurity was assessed by asking participants how often they were worried about access to food in the past 12 months, with response options including "Often true," "Sometimes true," and "Never true." Housing insecurity was measured similarly, using self-reported concern about stable housing over the past year with the same three-point scale.

Statistical Analysis

Descriptive statistics were generated to summarize demographic and key variables. Nonparametric Kruskal-Wallis tests were conducted to assess differences in sense of belonging across race, gender, and sexuality groups. To evaluate the combined effects of identity and resource-related variables, an ordinal logistic regression was performed. The final model included race, gender, sexuality, financial stress, food insecurity, housing insecurity, age, and living situation. All analyses were conducted using IBM SPSS Statistics, with statistical significance defined at $p < .05$.

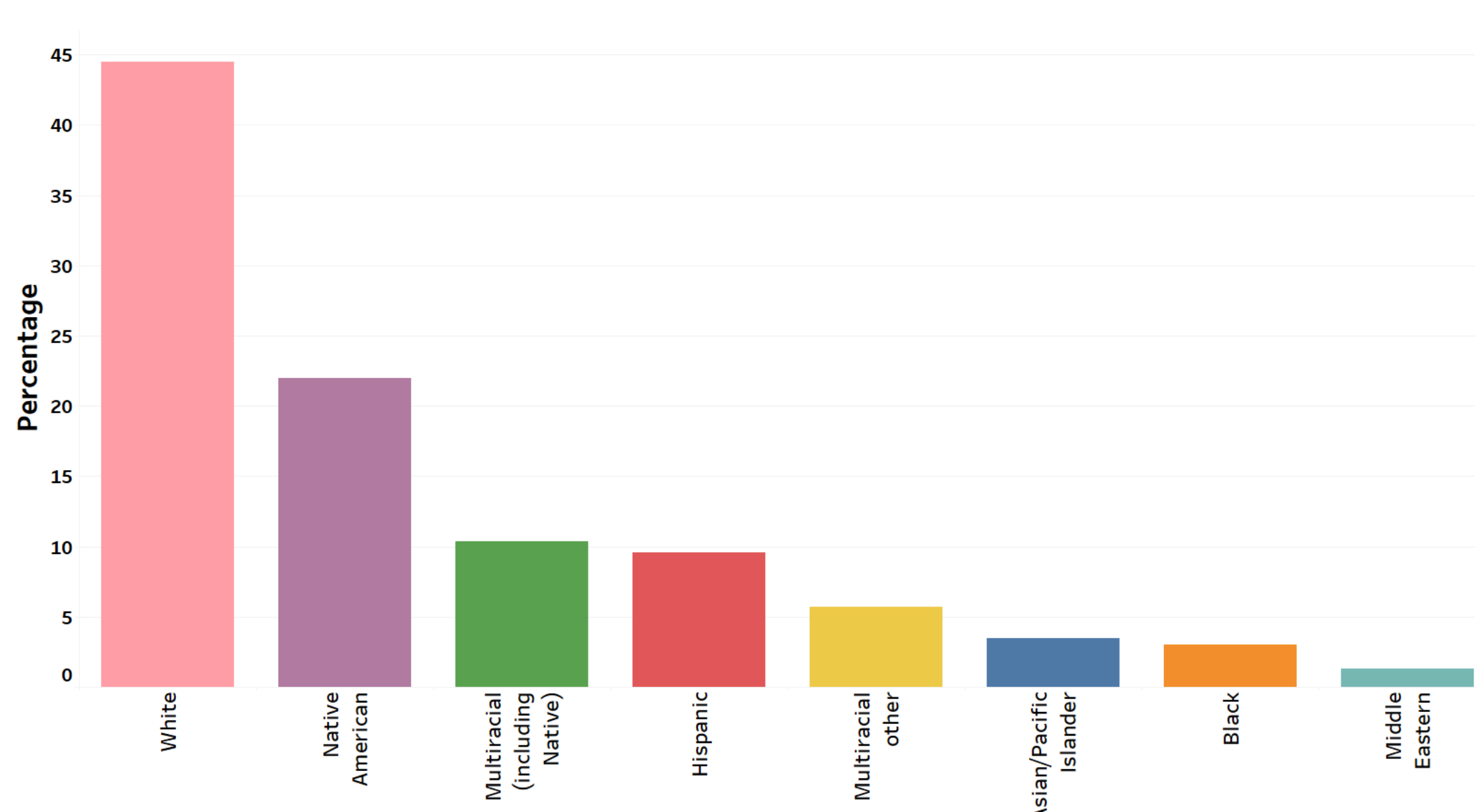**Figure 1: Age Distribution Among Fort Lewis College Survey Respondents in 2023**
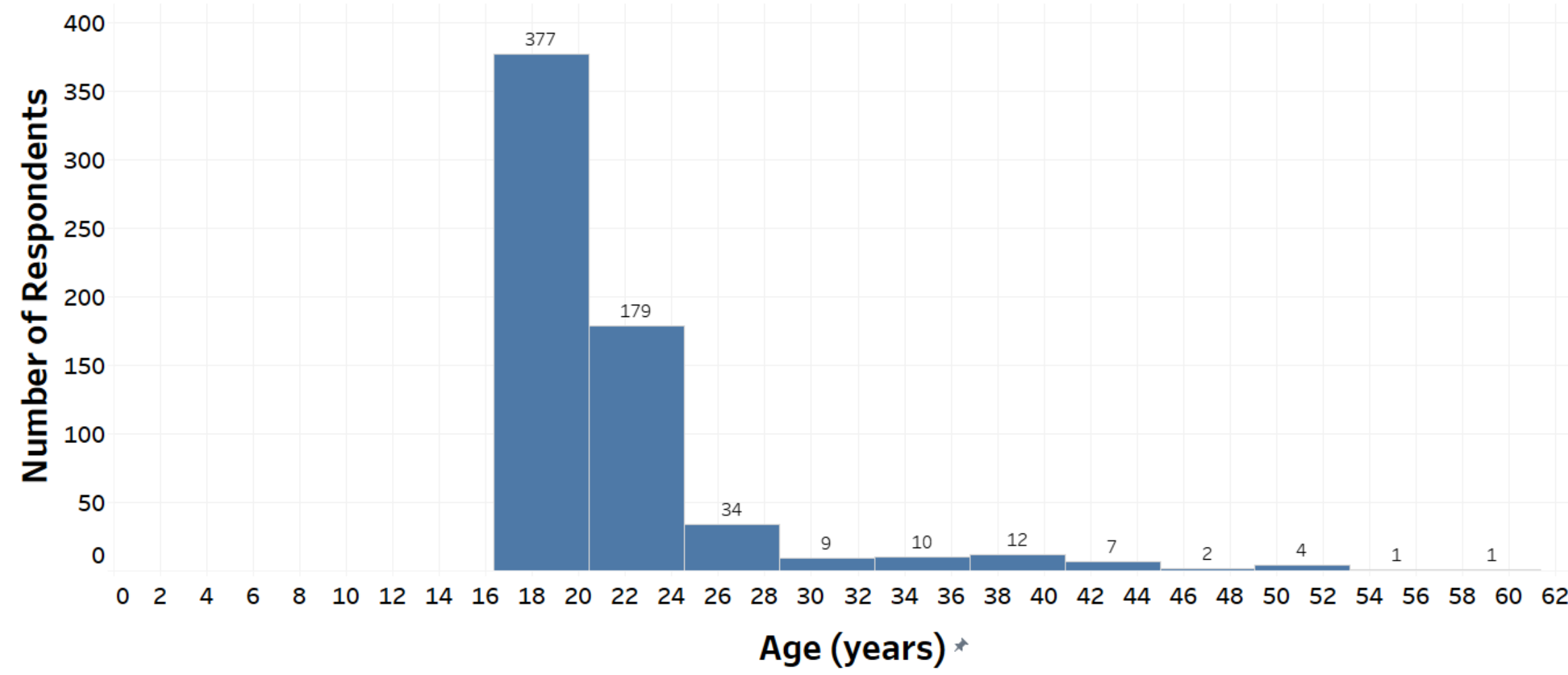
Note: this histogram displays the age distribution of the 2023 Healthy Minds survey respondents from Fort Lewis College. The mean age is 21.52 years with a range of 18 to 61 years. N = 636

Figure 3: Gender Distribution Among Fort Lewis College Survey Respondents in 2023
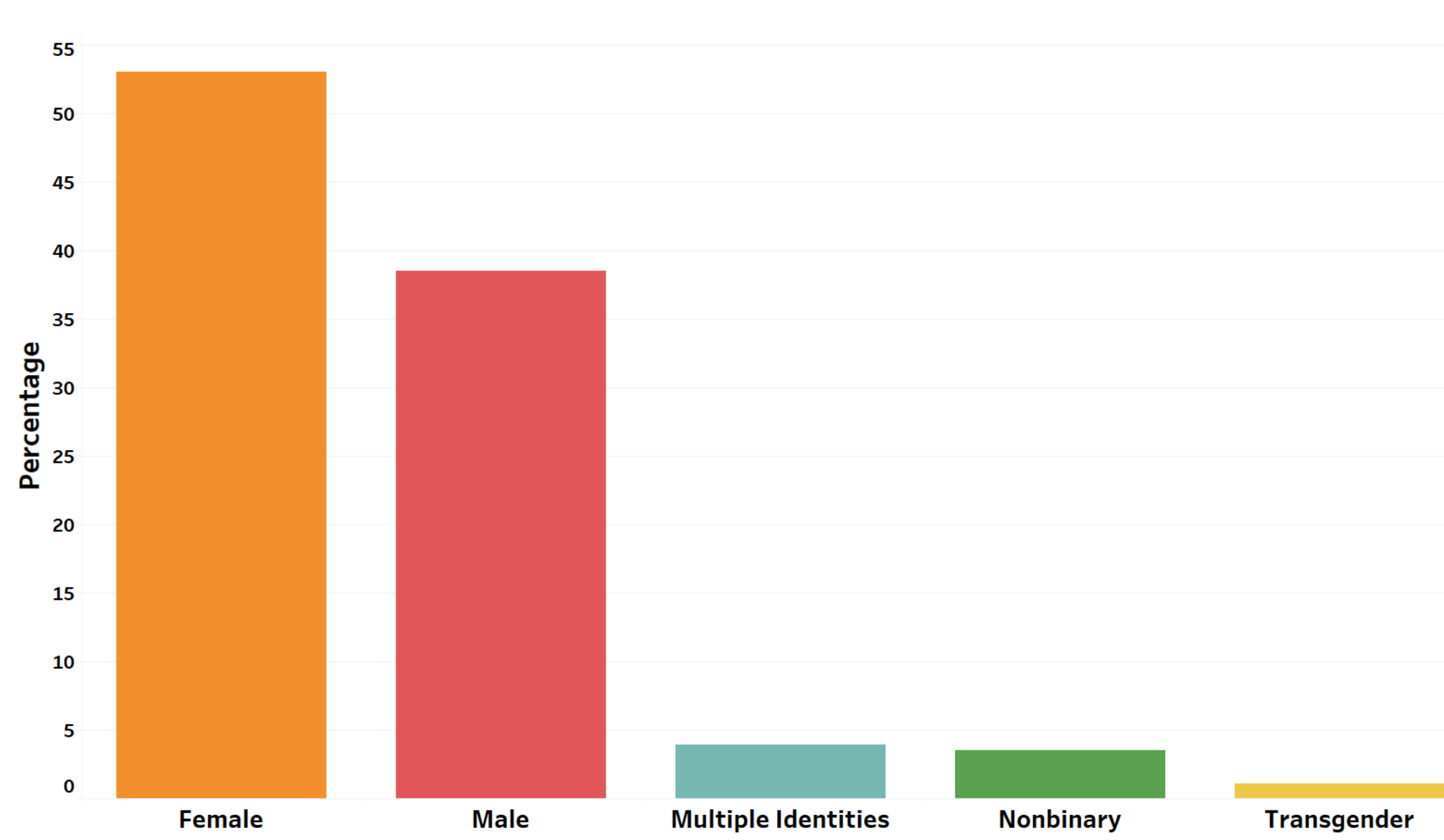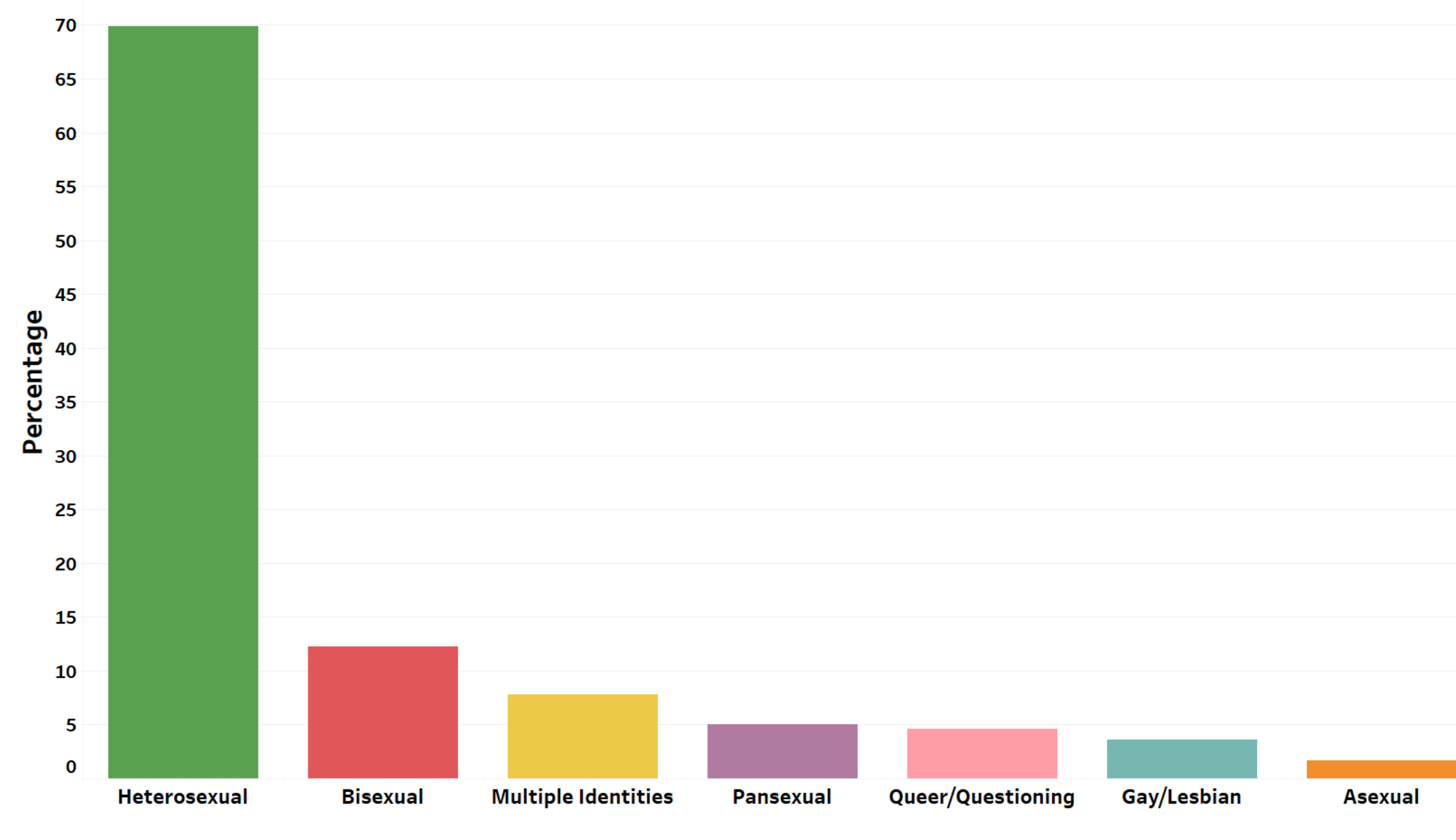

Note: This bar chart presents the gender distribution of 636 survey respondents from Fort Lewis College in the 2023 Healthy Minds Study. Respondents identified as Female (53.0%), Male (38.5%), Multiple Identities (4.2%), Nonbinary (2.5%), and Transgender (0.2%).

Figure 2: Race Distribution Among Fort Lewis College Survey Respondents in 2023

Note: This bar chart shows the racial distribution of 636 survey respondents from Fort Lewis College based on the 2023 Healthy Minds Study. The sample included 44.5% White, 22.0% Native American, 10.4% Multiracial (including Native), 9.6% Hispanic, 5.7% Multiracial other, 3.5% Asian/Pacific Islander, 3.0% Black, and 1.3% Middle Eastern respondents.

Figure 4: Sexuality Distribution Among Fort Lewis College Survey Respondents in 2023

Note: This bar chart displays the sexual orientation distribution of 636 Fort Lewis College students who participated in the 2023 Healthy Minds Study. Respondents identified as Heterosexual (70.0%), Bisexual (12.3%), Multiple Identities (8.1%), Pansexual (5.2%), Queer/Questioning (4.7%), Gay/Lesbian (3.5%), and Asexual (1.7%).

Table 1: Comparison of Sense of Belonging Scores by Race, Gender Identity, and Sexual Orientation Using Kruskal-Wallis Tests

Variable	N	Test Statistic (H)	Degrees of Freedom	p-value
Race	636	5.283	7	0.625
Gender	636	6.569	5	0.255
Sexuality	636	7.140	5	0.210

Note: Kruskal-Wallis H tests were conducted to assess differences in students' sense of belonging across racial, gender identity, and sexual orientation groups. No statistically significant differences were found at the $p < .05$ level for any demographic category.

Table 2: Ordinal Logistic Regression Predicting Sense of Belonging from Resource-Related and Demographic Variables

Variable	Estimate (B)	Wald Statistic	p-value
Financial Stress	-0.275	10.947	<0.001
Food Insecurity	-0.369	6.468	0.011
Housing Insecurity	0.157	0.92	0.337
Age	0.022	2.637	0.104
Bisexual	-0.872	2.915	0.088
Queer/Questioning	-0.645	2.909	0.088
Transgender	0.944	0.253	0.615
Nonbinary	0.41	0.473	0.492

Note: This table summarizes results from an ordinal logistic regression model examining the relationship between students' sense of belonging and predictors including financial stress, food insecurity, housing insecurity, age, gender identity, and sexual orientation. Significant associations were found for financial stress and food insecurity ($p < .05$).

Financial Stress Impact on Sense of Belonging
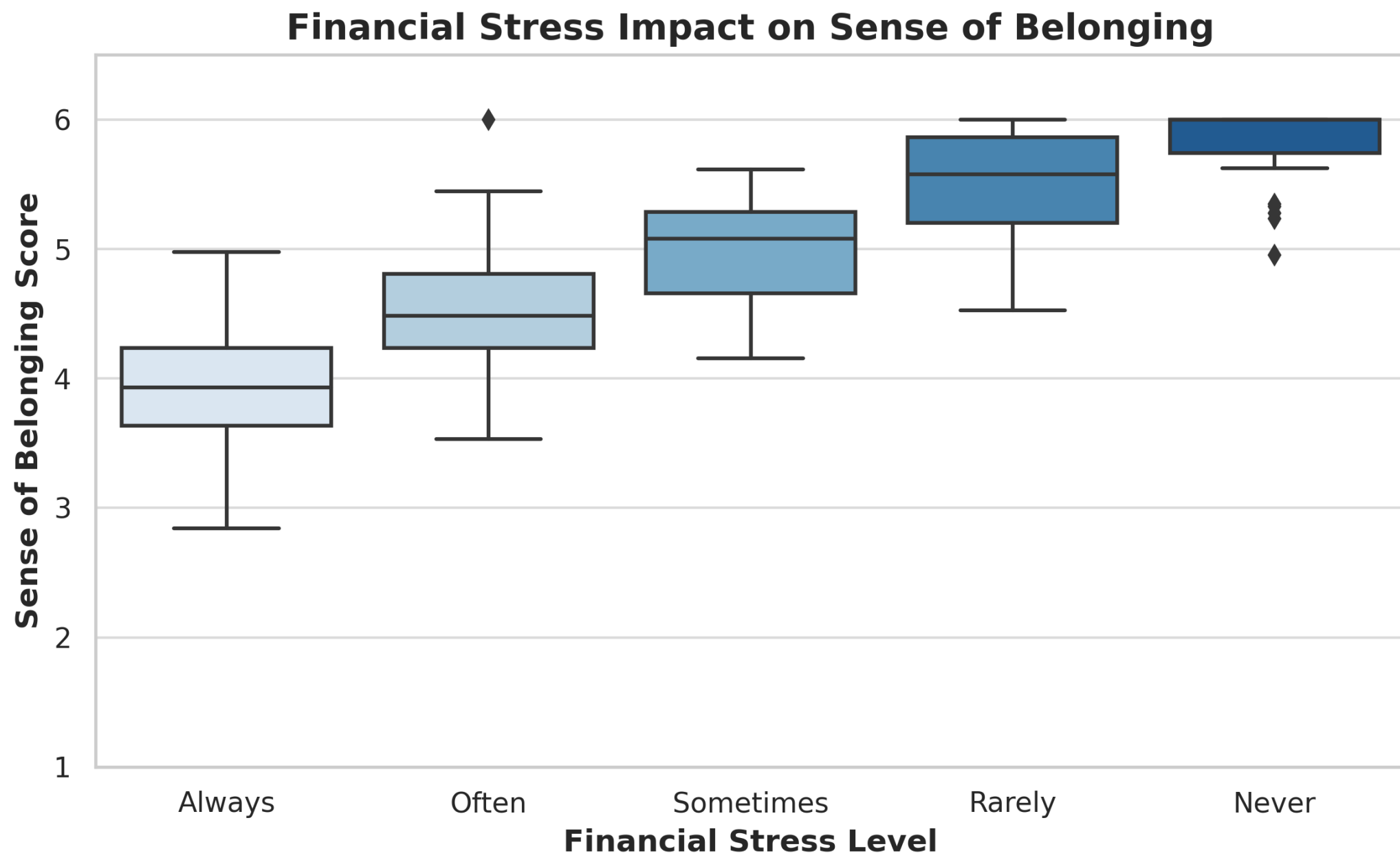
Note: This box plot illustrates the relationship between financial stress and students' sense of belonging at Fort Lewis College. Data from the 2023 Healthy Minds Study show that higher financial stress is associated with lower belonging scores. Sense of belonging was measured on a 6-point scale, where 1 = Strongly Disagree and 6 = Strongly Agree.

Results and Discussion

Results

Summary Statistics
A total of 636 students from Fort Lewis College participated in the 2023 Healthy Minds Study. The average age was 21.5 years with a range: of 18–61 years (Figure 1). Racially, 22% identified as Native American only, and 10.4% reported Native American identity in combination with another race (Figure 2). Most students identified as female (53%) or male (39%), with approximately 7% identifying outside the binary (Figure 3). The most common sexual orientation was heterosexual (65%), followed by bisexual (12%) and queer, questioning, asexual, or pansexual (8%) (Figure 4).

Kruskal Wallis
These univariate comparisons suggest that race, gender, and sexuality — when considered alone — are not significantly associated with students' sense of belonging at Fort Lewis College, based on this sample (Table 1).

Ordinal Regression
The ordinal logistic regression model was statistically significant overall ($\chi^2(25) = 185.33, p < .001$), indicating that identity and insecurity factors together predict differences in students' sense of belonging. Greater financial stress (B = −0.275, $p < .001$) and greater food insecurity (B = −0.369, $p = .011$) were significantly associated with lower levels of belonging (Table 2). There were no statistically significant differences in belonging by race, gender, or sexuality; however, students identifying as bisexual or queer/questioning/asexual/pansexual showed trends toward lower belonging ($p = .088$) (Table 2). No significant effects were found for housing insecurity, age, or living situation.

Conclusions

This study explored how financial stress, food and housing insecurity, and identity characteristics relate to students' sense of belonging at Fort Lewis College. Results showed that financial stress and food insecurity were significantly associated with lower belonging, suggesting that material well-being plays a critical role in shaping students' connection to the campus community. In contrast, race, gender identity, and sexual orientation were not statistically significant predictors, though trends indicated potentially lower belonging among LGBTQ+ students. These findings highlight the importance of addressing economic and resource-related challenges when aiming to improve student engagement and retention.

Limitations and Future Work

Limitations

This study was based on cross-sectional, self-reported survey data, limiting the ability to draw causal conclusions. Additionally, small sample sizes within some identity groups may have reduced the power to detect statistically significant differences. The study also did not include all possible influencing factors, such as perceived discrimination or access to campus support systems, which could further explain variations in belonging.

Recommendations

Fort Lewis College should consider prioritizing expanding access to financial and food assistance services, including emergency aid, campus food pantries, and meal support programs. These services should be framed within a culture of inclusion and belonging to reduce stigma and promote engagement. Continued monitoring of underrepresented students' experiences, especially through qualitative methods or longitudinal tracking, can help uncover needs that are not captured in quantitative data. Institutional strategies that address both material hardship and social connection are likely to have the greatest impact on improving campus belonging.

References

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