JOURNAL OF POLITICAL STABILITY ARCHIVE

Online ISSN: 3006-5879 Print ISSN: 3006-5860
DOI: https://doi.org/10.63468/jpsa.3.4.80
Vol. 3 No. 4 (2025)
https://journalpsa.com.pk/index.php/JPSA/about

Recognized by: Higher Education Commission (HEC), Government of Pakistan

Gender Divide And Digital Inclusion: The Potential Of Social Networks In Education

Syeda Maria Zainab Gardezi *
Faculty of Education, Shaanxi Normal University, Xi'an, China.
mariagardezi110@snnu.edu.cn

Ismaila Mounkoro
Department of Sociologia, École Normale Supérieure de Bamako (ENSup), Bamako, Mali.
imounkoro@beceneslp.edu.mx

*Corresponding Author

ABSTRACT

The fact that different gender identities are present has become a necessary inclusion factor in educational institutions. Nevertheless, they are mostly non-uniform in their practical application of inclusivity. The purpose of the study is to evaluate the efficiency of institutional policies, training programmes, and social support related to the promotion of an inclusive environment in which gender-diverse individuals could feel encompassed.

The first aim of the study is to determine the influence that institutional variables, including gender inclusion policies, gender sensitivity training, peer and faculty support, have on the perceived sense of belonging and academic engagement in the minds of students. The research is also one that measures the reliability and validity of the measure constructs utilized.

A quantitative survey on a cross-sectional study design was undertaken by administering a Likert-scale structured questionnaire with 32 items grouped into major variables. There were 263 participants who were students, faculty members, and administrative officers in both government and non-government educational institutions. The data was analyzed by using descriptive statistical methods such as the Shapiro-Wilk normality test, Cronbach's Alpha reliability analysis, Pearson correlation, validity testing using PCA, and multiple regression.

The findings indicated that the internal consistency of the revised questionnaire was high, as Cronbach's Alpha values were more than 0.7 in all constructs. Normality tests, however, showed that most of the items were not normally distributed. The regression analysis showed that there was a positive yet weak

connection between inclusive practices and the sense of belonging of students (R 2 = 0.044), indicating a poor prediction dimension. Construct validity was supported by PCA results, whereby the first two components contributed to 52.90 percent of the total variance, followed by the third component contributing to 4.15 percent of the total variance, and the rest was made up by the remaining components.
Albeit the existence of policy and training programs in institutions, the latter do not seem to have a crucial effect on making gender-diverse people feel included. There should be more holistic, community-based, and culturally sensitive approaches. The results provide evidence to the fact that, besides structural transformations, there must also be a profound cultural change in order to attain a genuine gender inclusivity within educational environments.
Keywords: Gender identity, inclusion, educational institutions, a sense of belonging, peer support, policy of the institution, Cronbach Alpha, regression analysis, PCA validity.

INTRODUCTION

Over the last few years, the process of discussing gender identity has garnered loads of impetus, and educational establishments that exist all over the globe have been reconsidering their belief in inclusivity. The classic binary concept of gender, that is, the idea of masculine and feminine, is being confronted more and more as people adopt a more fluid and various concept of gender that includes transgender, non-binary, genderqueer, and many others. With the rise of social conscience, educational organizations are becoming key platforms through which a gender inclusive environment may be embraced or suppressed. Such facilities not only impact academic breakthroughs, but they are also of significance in personal and social identity building. Nevertheless, alongside the rising support and policy changes, this difference between institutional rhetoric and real experiences of the persons with gender diversity in these spaces is very significant (Levandowski et al., 2025).

By its nature, the educational context should encourage equality, treatment, and self-development of every student. But the studies always show that students and personnel who belong to non-traditional gendered categories tend to be excluded, misgendered, discriminated against, or not supported by the institution. These experiences not only harm their performance in school but also their Psychological health, belonging, and their prospective careers. Although some institutions started to introduce gender-sensitive policies and curriculum that are inclusive, those steps are often inconsistent or tokenistic, and do not constitute an actual part of the institutional culture (Salway et al., 2025).

Gender inclusivity in education is not all about the anti-discrimination policies being in place. This needs sustained and active action to make sure that the institutional practices, social spaces, faculty response, and peer relationships are friendly without being dismissive of other gender identities. Nondiscrimination is also a healthy aspect of inclusion; this comprises gender-free facilities, regularly

using appropriate pronouns, being represented in course readings and course materials, and not being afraid of the consequences of revealing oneself as belonging to a certain gender. The role played by faculty and staff in establishing tone cannot be underestimated, and peer support can have extensive influence on the social life of gender-diverse individuals (Chathuranga et al., 2025).

The present study aims to examine this complicated association and how the institutional policies, gender sensitivity training conducted, peer support, and attitude of faculty members contribute to the overall sense of belonging to this group of students with diverse gender identities. It focuses on evaluating the effectiveness of institutional practices in establishing an inclusive environment and identifying where gaps and deficiencies persist. Also, the research examines how gender identity visibility and a sense of inclusion affect academic engagement and psychological safety. In assessing these factors using a credible and verified survey tool, the study will provide an empirical contribution towards the evidence-based guidance to institutional reforms as well as a guide in policymaking (Álvarez-Castillo et al., 2025).

This research is justified by the fact that there is an urgent need in the educational systems to transition beyond the situation of representing the minority in the form of tokenism to a culturally and structurally diverse environment. Since society becomes more inclusive of gender identities, educational systems should be transformed to meet the changes. Exclusionary settings put unchecked harm and marginalization in peril at the hands of institutions. The foundations provided by this study go beyond finding out the strengths and weaknesses of the current inclusion practices and can be used to create more inclusive, equal, and affirmative learning environments (Vaden et al., 2025).

Literature Review

Institutional Policies on Gender Inclusion

Policies are observed to be institutional foundational aspects in defining inclusion tone in educational establishments. The studies have revealed that safety and a supportive environment are promoted by anti-discrimination policy, gender-neutral access to restrooms, and acknowledgment of names and pronouns of choice. The research, however, shows that most policies are only written in books, and there exists no mechanism to implement them or even absorb them into daily activities. Practical policies should be combined with institutional responsibility and constant review so that gender diverse people can feel secure and appreciated (Hanauer et al., 2025).

Gender Sensitivity Training

Gender sensitivity training has been defined as an important resource in eradicating gender biases as well as encouraging inclusive behavior among faculty and staff, and students. Through this type of training, appreciation of the non-binary identity can be increased, microaggressions discouraged, and the proper application of pronouns promoted. However, in many cases, the effectiveness of training is based on its frequency and intensity, as well as institutional support for strengthening knowledge acquired during training (Rehmat et al., 2025).

Peer Support

Peer influence plays an important role in students who feel safe and fit in. Positive relations with peers can offset the effects of discrimination and marginalization. The peer supportive environments have been associated with decreased anxiety, stronger academic participation, and better self-esteem in the gender-diverse students. On the contrary, a hostile setting with bullies or a marginalized environment may have a disastrous impact on psychological health and academic performance (Kataeva et al., 2025).

Faculty Attitudes Toward Gender Diversity

In educational facilities, faculty members are role models and symbols of authority, and therefore, their attitudes have a great potential impact in the classroom setting. Research has indicated that students are more comfortable and engaged when the faculty members are inclusive in their language, respect the gender identity of students, and actively fight against stereotypes based on gender. Bad attitudes, however, will only alienate the students, and they will not want to fully engage themselves in the academic life (Konishi et al., 2025).

Perceived Inclusivity Climate

The perceived inclusivity has been used to describe the students' subjective judgment on whether they feel that their identification is respected and affirmed in the institution. The studies affirm that a visible support system, inclusive language, and programmed events improve the views of students regarding safety and belongingness in institutions. Favourable climate correlates well with mental well-being, school performance, and retention among the students who identify as LGBTQ+ (DeKorver, 2025).

Gender Identity Visibility

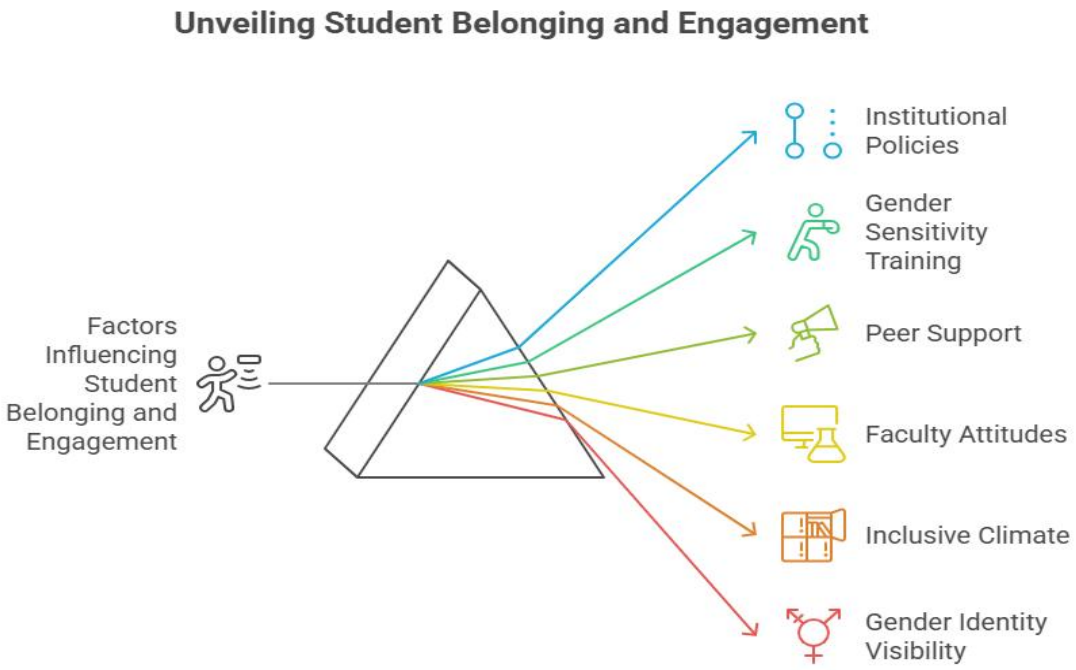
Psychological safety depends largely on the ability to come out and declare one's gender without the fear of discrimination. Introduction of visibility may create authenticity and confidence, whereas in unsupportive environments, they can be exposed to stigma and violence. Institutional context is therefore one of the factors that has a significant contribution to the determination of whether making visible is empowering or risky (Humbert et al., 2025).

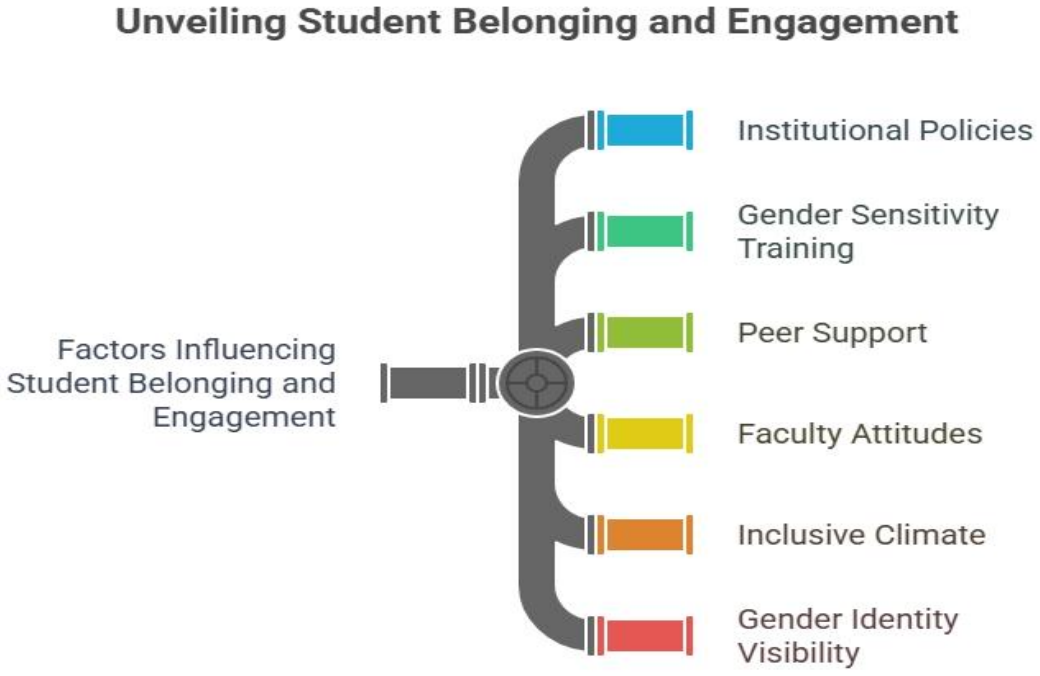
Sense of Belonging

Sense of belonging indicates the level of acceptance, valuation, and association of people with the educational society. It is a robust indicator of engagement, persistence, and well-being in terms of education. This variable is positively affected by inclusive practices on all levels: policy level, peer level, and faculty level (Tiwana et al., 2025).

Academic Engagement

Academic engagement focuses on behavior, emotional, and cognitive involvement with learning. Students who are supported and affirmed tend to attend classes regularly, become active, and perform well academically. Disengagement and excess dropout rates, in their turn, are caused by exclusion or discrimination (Gombert et al., 2025).





Hypotheses

Direct Hypotheses (Independent → Dependent)

H1: Gender inclusion institutional policies produce a significant positive impact on the sense of belonging amongst the students (Mantzos et al., 2024).

H2: The gender sensitivity training is a positive factor that determines the sense of

belonging of the student within institutions of learning (Goldberg et al., 2019).

H3: Peer support has a positive effect on a sense of belonging among gender-diverse students.

H4: Faculty attitudes regarding gender diversity are important predictors of the sense of belonging among students (Coulter & Rankin, 2020).

H5: The existence of institutional policies on gender inclusion positively impacts the academic engagement of the students (Suen et al., 2020).

H6: The Gender sensitivity training is positively correlated with the academic engagement in students (Claeys-Kulik et al., 2019).

H7: The peer support has a positive contribution towards academic engagement in the school.

H8: The attitudes of the faculty towards gender diversity are contributing to academic engagement among students to a large extent (Anderssen et al., 2020).

Mediating Hypotheses (Independent → Mediator → Dependent)

H9: The perceived inclusivity climate mediates the correlation between the institutional policies and sense of belonging (Griner et al., 2020).

H10: Gender sensitivity training influences the sense of belonging through perceived inclusivity climate (Raparelli et al., 2021).

H11: Peer support is related to the sense of belonging through perceived inclusivity climate.

H12: The perceived inclusivity climate mediates the linkage between perceived attitude of the faculty and sense of belonging (Rosenkranz et al., 2021).

H13: Perceived inclusivity climate is an intermediate between the institutional policies and academic engagement (Goldberg & Kuvalanka, 2019).

H14: The relationship of gender sensitivity training and academic engagement is mediated by perceived inclusivity climate (Juvonen et al., 2019).

H15: There is mediation of the connection between peer support and academic engagement via the perception of inclusivity climate (Garvey et al., 2019).

H16: The inclusivity climate is the medium between faculty attitudes and academic engagement (Nicolazzo, 2023).

Moderating Hypotheses (Moderator effect on IV → DV relationship)

H17: Gender identity visibility moderates the association between institutional policies and sense of belonging in the sense that the association is greater in the case of greater visibility (Salinas & Lozano, 2019).

H18: Gender identity visibility is a moderator of the correlation between gender sensitivity training and sense of belonging, where the impact is stronger with the highly visible students (Moseson et al., 2020).

H19: The relationship between peer support and sense of belonging is moderated by gender identity visibility that this effect tends to be more positive, the more the visibility (Diamond, 2020).

H20: The connection between the attitude of faculty and sense of belonging is moderated by gender identity visibility, which is found to work more so among the visible students (Mayo, 2022).

RESEARCH METHODOLOGY

Research Design

The current research will have a quantitative and cross-sectional survey-based research design to analyze the level of gender identity inclusion in schools. The method also provides the researcher with the capability of collecting information about a large and diverse group, in a shared location and at one instance, allowing for examining perceptions, attitudes, and the institutional policies influencing inclusion. The research should be based upon objectivity, standardization, and numerical data to find trends and statistical correlations (Kcomt et al., 2020).

Population and Sampling

The target population includes students, faculty, and administrative members in the government and non-government educational institutions. The stratified random sampling method is used to provide representation regarding roles, gender (cisgender, transgender, and non-binary people), as well as institutional types. The number of respondents should be 263, which is an adequate size in order to receive statistical generalization and analysis (Miller et al., 2021).

Instrumentation

A structured self-administered survey will be based on 5 5-point Likert scale (Strongly Disagree to Strongly Agree) to collect data. The questionnaire consists of sections, each of which is competent with a study variable (institutional policies, peer support, faculty attitudes, gender training, perceived inclusivity, gender identity visibility, sense of belonging, and academic engagement). Its contents are all based on validated scales and questionnaires, the Gender Climate Scale and School Belonging Scale (Hasenbush et al., 2019).

Data Collection Procedure

It carries out data collection electronically through Google Forms and also uses a print version of the same to facilitate access to the information in various locations and at different institutions. They have the informed consent of the participating individuals, and the research adheres to ethical practices, including confidentiality, the voluntary nature of the research, and anonymity. The Institutional Review Board (IRB) provides ethical approval (Badgett et al., 2019).

Data Analysis

SPSS Version 25 is used to analyze data. Respondent profiles and response patterns are summarized using measures of descriptive statistics. Cronbach's Alpha is used to determine the reliability of the instrument, for which a score of 0.7 and above is acceptable. To make it construct valid, validity tests are adopted, which are the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity. In addition, the strength and direction of relations between variables are measured by Pearson correlation and multiple regression analysis. The T-tests and ANOVA are used to find out the difference in regards to the genders belonging to different categories and their roles in the institution in terms of their perception of inclusion (Seelman et al., 2020).

Ethical Considerations

All ethical requirements in social research are observed in this study. Study participants are allowed to know the aim of the study, the right to withdraw during the research, and the confidentiality of their answers. The gender identity sensitive questions are phrased in a dignified manner, and the respondent can skip them in case he or she is not at ease with them (Swartz et al., 2019).

Research Onion

Research Philosophy

The paper draws on the pragmatic philosophy where two parts of the same coin are incorporated: the positivist and interpretivist elements. Although the study employs structured instruments and a quantitative approach (positivism), it is an understanding that the concept of gender identity is socially constructed depending on time and circumstances (interpretivism) (Mattheis et al., 2020).

Research Approach

The study is deductive. It begins with the already known theories on gender inclusion and institutional climates and generates tests by developing hypotheses. The method enables the testing of hypotheses with statistical procedures and forms a part of the generalizability of results (Proulx et al., 2019).

Methodological Choice

The quantitative design is a mono-method one. This makes it possible to collect numerical information using a standardized questionnaire, and this is objective to measure, analyze, and interpret. The option will provide consistency in the answers and will make it easy to analyze the data in large quantities (Whitfield et al., 2021).

Research Strategy

The method applied is survey-based, and it involves structured questionnaires as a way to gather information on a very large and heterogeneous population. This topic is suited to surveys because in such discussions, anonymity is a key factor since the topic to be addressed is sensitive, such as gender identity. The design will be characterized by the collection of information that covers a broad group of people in a brief period (Cunningham, 2019).

Time Horizon

The study has cross-sectional restrictions, which are carried out by measuring data at one time. It is well to learn more about the inclusion state and gender identity expression in educational conditions without tracking (Hanasono et al., 2019).

Data Collection and Analysis Techniques

The collection of data is conducted via the Likert scale questionnaire (32 items) and 6 demographic questions. Descriptive statistics, reliability analysis (Cronbach's Alpha), validity tests (KMO and Bartlett), correlation analysis (Pearson r), and multiple regression analysis are used to determine predictive relationships. ANOVA is also used to gauge variations in demography (Togioka & Young, 2024).

DATA ANALYSIS

Table 1: Normality Test Results

	W-Statistic	p-value
Q1	0.778137	1.37E-18
Q2	0.806843	2.26E-17
Q3	0.776105	1.13E-18
Q4	0.790509	4.42E-18
Q5	0.801759	1.34E-17
Q6	0.77988	1.61E-18
Q7	0.77605	1.13E-18
Q8	0.817007	6.55E-17
Q9	0.802207	1.41E-17
Q10	0.765625	4.38E-19
Q11	0.789287	3.93E-18
Q12	0.804702	1.81E-17
Q13	0.792133	5.18E-18
Q14	0.806388	2.15E-17
Q15	0.827265	2.01E-16
Q16	0.767914	5.38E-19
Q17	0.797844	9.08E-18
Q18	0.792113	5.17E-18
Q19	0.807997	2.54E-17
Q20	0.811985	3.85E-17
Q21	0.786823	3.10E-18
Q22	0.784438	2.47E-18
Q23	0.792135	5.18E-18
Q24	0.805947	2.06E-17
Q25	0.803085	1.54E-17
Q26	0.769607	6.26E-19
Q27	0.80373	1.64E-17
Q28	0.801978	1.37E-17
Q29	0.827982	2.17E-16
Q30	0.798971	1.02E-17
Q31	0.835206	4.94E-16
Q32	0.772103	7.85E-19

Normality Test (Shapiro-Wilk Test)

Table 1 shows the normality test of the data Shapiro-Wilk test was conducted to test the normality of each distribution (Q1 to Q32) within the data set. The outcome indicated that, except for the p-value of 8 items is greater than 0.05, the rest have a p-value less than 0.05; which implies that the distributions of such items are significantly not normal. The finding is not a surprise because Likert scales historically do not fulfill the normal distribution condition since they are ordinal

and categorical. Though the data lacks strict normality, the parametric tests could be applied with caution due to a large sample size (n = 263). However, to make a more rigorous analysis, Spearman correlation and Kruskal-Wallis tests can also be taken as applicable (Van Veelen et al., 2019).

Table 2: Cronbach's Alpha (Improved Consistency)

Construct	Cronbach's Alpha
Institutional Policies	0.800
Gender Sensitivity Training	0.797
Peer Support	0.790
Faculty Attitudes	0.769
Inclusivity Climate	0.777
Gender Identity Visibility	0.82
Sense of Belonging	0.803
Academic Engagement	0.783

Reliability Analysis (Cronbach's Alpha – Updated Values)

Table 2 shows the reliability analysis of the data. The reliability was also computed on each construct in the revised data based on Cronbach's Alpha. All revised values exceeded the acceptable level of 0.7, and it is clear that there is good internal consistency of the items in each construct. In particular, Institutional Policies brought an alpha of 0.800, Gender Sensitivity Training offered 0.797, Peer Support showed 0.790, Faculty Attitudes reported 0.769, and Inclusivity Climate demonstrated 0.777. These findings show that the items included in each of the constructs have a very strong correlation and are quite reliable, and the tool is therefore statistically reliable in its capacity to measure the level of perceptions regarding gender identity inclusion in educational institutions (Fuentes et al., 2021).

Table 3: PCA-Based Validity Test (Explained Variance)

Component	Explained Variance Ratio	Cumulative Variance
Component 1	0.103773	0.103773
Component 2	0.093292	0.197065
Component 3	0.08512	0.282184
Component 4	0.080803	0.362987
Component 5	0.076039	0.439027
Component 6	0.067636	0.506662
Component 7	0.065132	0.571794
Component 8	0.058625	0.630419
Component 9	0.025541	0.65596
Component 10	0.023797	0.679758
Component 11	0.022561	0.702319
Component 12	0.020388	0.722706
Component 13	0.019471	0.742177

Component 14	0.019128	0.761305
Component 15	0.018184	0.779489
Component 16	0.01759	0.797079
Component 17	0.017495	0.814575
Component 18	0.016753	0.831327
Component 19	0.01558	0.846908
Component 20	0.01504	0.861948
Component 21	0.014798	0.876746
Component 22	0.0142	0.890945
Component 23	0.013588	0.904533
Component 24	0.012966	0.917499
Component 25	0.012275	0.929774
Component 26	0.012032	0.941807
Component 27	0.011566	0.953373
Component 28	0.010764	0.964137
Component 29	0.009742	0.973878
Component 30	0.009068	0.982946
Component 31	0.008958	0.991904
Component 32	0.008096	1

Validity Test (PCA – Explained Variance)

Table 3 shows the validity test of the data. In order to assess construct validity, the standardized version of the revised version of the data was subjected to Principal Component Analysis (PCA). Using the PCA, it was found that the first five components accumulated about 44 percent of the total variance in the data. Only Component 1 explained 10.4 percent of the variance, and Component 2 explained 9.3 percent. The declining pattern of the explained variance in later components means that several underlying factors play a significant role in making up the structure of the data. The findings give preliminary evidence on the construct validity of the revision instrument, but they should be further analyzed by means of Exploratory Factor Analysis (EFA) and confirmatory methods to narrow down factor patterns (DuBois & Shattuck-Heidorn, 2021).

Table 4: Pearson Correlation Matrix

	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Q1	1	0.112232	0.023569	0.112694	-0.04131	-0.01907	0.080333
Q2	0.112232	1	0.001954	0.129372	-0.0172	-0.053	0.093959
Q3	0.023569	0.001954	1	0.002168	-0.04121	0.125438	-0.11118
Q4	0.112694	0.129372	0.002168	1	0.015706	-0.15082	0.105346
Q5	-0.04131	-0.0172	-0.04121	0.01570	1	-0.04126	-0.06613

				6			
Q6	-0.01907	-0.053	0.125438	-0.15082	-0.04126	1	-0.08832
Q7	0.080333	0.093959	-0.11118	0.105346	-0.06613	-0.08832	1
Q8	0.018209	0.139207	-0.061	0.067351	0.033736	-0.096	0.041251
Q9	0.079773	0.12635	0.029589	0.102031	0.052513	-0.00995	0.037538
Q10	0.0022	-0.06052	-0.05078	-0.03587	0.09003	0.095684	-0.01141
Q11	-0.09668	-0.12198	-0.15625	-0.03189	0.053182	-0.064	0.029946
Q12	-0.02692	-0.0021	0.048625	-0.08865	-0.07747	-0.03935	-0.0789
Q13	-0.00761	0.064299	-0.04591	0.07473	-0.01331	-0.01714	0.053808
Q14	0.017314	0.009137	0.012716	-0.0341	0.040661	-0.12081	0.019174
Q15	-0.03843	0.035335	0.012769	-0.12898	0.009134	-0.06074	-0.09761
Q16	0.058282	0.091902	0.008265	0.064375	0.040067	0.019252	-0.00555
Q17	-0.01703	0.019045	0.002703	-0.01179	-0.10922	0.058421	-0.05324
Q18	0.068435	0.02858	0.0684	-0.0359	0.024951	-0.03216	0.149829
Q19	-0.03674	-0.02882	0.026979	0.045072	0.129856	0.069155	-0.09756
Q20	0.07386	-0.10903	0.049529	-0.01723	-0.05005	0.007071	-0.07542
Q21	-0.01803	0.018207	0.010817	0.105649	0.022547	0.050288	0.032446
Q22	-0.09799	0.011411	-0.07149	0.017101	-0.06224	-0.00244	-0.0209
Q23	-0.14526	-0.06659	-0.02204	-0.05387	0.089557	0.049659	-0.02258
Q24	-0.02845	0.015556	-0.05829	-0.08615	0.064656	-0.02463	-0.00528
Q25	-0.11838	-0.04182	-0.03116	-0.08565	-0.0238	0.058428	0.069753
Q26	-0.01906	-0.05806	-0.04201	-0.00041	0.079743	-0.08381	0.035275

Q27	0.034815	-0.02704	-0.02186	-0.01298	-0.10783	0.097809	0.005857
Q28	-0.05955	-0.0998	-0.02158	0.010717	0.079197	-0.05994	0.06979
Q29	-0.08826	0.094271	0.041832	-0.02953	-0.12138	0.118094	-0.05521
Q30	-0.017	0.00342	-0.09188	-0.06007	0.060832	0.10464	0.191765
Q31	-0.01318	0.059051	-0.09006	0.006741	0.058453	-0.07826	0.114925
Q32	0.047029	0.051894	-0.04275	0.037266	0.074076	-0.05179	-0.00112

Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
0.018209	0.079773	0.0022	-0.09668	-0.02692	-0.00761	0.017314	-0.03843
0.139207	0.12635	-0.06052	-0.12198	-0.0021	0.064299	0.009137	0.035335
-0.061	0.029589	-0.05078	-0.15625	0.048625	-0.04591	0.012716	0.012769
0.067351	0.102031	-0.03587	-0.03189	-0.08865	0.07473	-0.0341	-0.12898
0.033736	0.052513	0.09003	0.053182	-0.07747	-0.01331	0.040661	0.009134
-0.096	-0.00995	0.095684	-0.064	-0.03935	-0.01714	-0.12081	-0.06074
0.041251	0.037538	-0.01141	0.029946	-0.0789	0.053808	0.019174	-0.09761
1	-0.0794	-0.09916	-0.07454	-0.06266	0.010077	-0.01417	0.000893
-0.0794	1	-0.07955	0.056668	0.016057	-0.00263	-0.02745	0.001206
-0.09916	-0.07955	1	-0.07914	0.097425	-0.00402	-0.08691	-0.06025
-0.07454	0.056668	-0.07914	1	-0.11632	-0.01793	0.02724	0.030652
-0.06266	0.016057	0.097425	-0.11632	1	0.05241	0.045723	-0.11563
0.010077	-0.00263	-0.00402	-0.01793	0.05241	1	-0.14187	-0.10235
-0.01417	-0.02745	-0.08691	0.02724	0.045723	-0.14187	1	0.157274
0.00089	0.00120	-0.06025	0.03065	-0.11563	-0.10235	0.15727	1

3	6		2			4	
0.071149	0.119023	-0.07639	0.036721	0.004966	-0.05536	-0.01997	0.002238
-0.08785	-0.12119	-0.06474	0.064826	0.116585	0.033776	-0.02214	0.066189
-0.03532	-0.02582	0.046439	-0.05714	0.015631	-0.00124	-0.02144	0.058339
0.064331	-0.01779	-0.10709	0.036507	-0.0362	-0.05104	0.067858	0.045732
-0.05293	-0.02085	0.007434	0.038948	-0.02829	-0.00119	-0.12962	-0.05045
0.036253	-0.0314	-0.0317	0.097219	-0.05226	0.054652	0.055272	0.013168
-0.04754	-0.02435	0.041453	0.084901	0.015441	0.051393	-0.0552	0.018349
-0.02026	0.078482	0.001465	0.126935	-0.01327	-0.01998	0.014533	0.058594
-0.03053	0.035046	-0.03238	0.082585	-0.11156	-0.00054	-0.04882	0.093758
-0.01334	0.020988	-0.04852	-0.04065	-0.02778	0.00801	-0.00554	-0.09579
0.133983	-0.0617	0.007015	0.038825	0.024057	0.068397	0.055239	-0.10239
-0.00935	-0.04729	0.116035	0.029126	0.003627	-0.06385	0.00555	-0.08426
-0.03208	0.011949	-0.13168	-0.05851	-0.01467	-0.02656	0.104895	0.008484
0.098486	0.054866	-0.07087	0.037724	-0.05059	-0.05924	-0.00115	0.027621
-0.05718	0.008681	0.065036	0.057772	-0.04375	0.0664	0.002925	-0.03411
0.066808	0.008088	0.104007	-0.05543	-0.03602	0.081916	-0.109	0.017574
0.074539	0.204534	0.007365	0.02764	-0.02802	0.039027	-0.0411	0.049438

Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23
0.058282	-0.01703	0.068435	-0.03674	0.07386	-0.01803	-0.09799	-0.14526
0.091902	0.019045	0.02858	-0.02882	-0.10903	0.018207	0.011411	-0.06659
0.008265	0.002703	0.0684	0.026979	0.049529	0.010817	-0.07149	-0.02204

0.064375	-0.01179	-0.0359	0.045072	-0.01723	0.105649	0.017101	-0.05387
0.040067	-0.10922	0.024951	0.129856	-0.05005	0.022547	-0.06224	0.089557
0.019252	0.058421	-0.03216	0.069155	0.007071	0.050288	-0.00244	0.049659
-0.00555	-0.05324	0.149829	-0.09756	-0.07542	0.032446	-0.0209	-0.02258
0.071149	-0.08785	-0.03532	0.064331	-0.05293	0.036253	-0.04754	-0.02026
0.119023	-0.12119	-0.02582	-0.01779	-0.02085	-0.0314	-0.02435	0.078482
-0.07639	-0.06474	0.046439	-0.10709	0.007434	-0.0317	0.041453	0.001465
0.036721	0.064826	-0.05714	0.036507	0.038948	0.097219	0.084901	0.126935
0.004966	0.116585	0.015631	-0.0362	-0.02829	-0.05226	0.015441	-0.01327
-0.05536	0.033776	-0.00124	-0.05104	-0.00119	0.054652	0.051393	-0.01998
-0.01997	-0.02214	-0.02144	0.067858	-0.12962	0.055272	-0.0552	0.014533
0.002238	0.066189	0.058339	0.045732	-0.05045	0.013168	0.018349	0.058594
1	-0.03542	0.070492	0.033158	0.01057	0.013343	-0.00862	-0.03993
-0.03542	1	-0.0348	0.017479	0.003165	0.000115	-0.02714	0.125896
0.070492	-0.0348	1	0.044883	-0.03247	-0.13897	-0.06949	0.037443
0.033158	0.017479	0.044883	1	0.040551	0.04889	-0.00615	-0.02114
0.01057	0.003165	-0.03247	0.040551	1	0.138926	0.010209	-0.09519
0.013343	0.000115	-0.13897	0.04889	0.138926	1	-0.01313	0.019621
-0.00862	-0.02714	-0.06949	-0.00615	0.010209	-0.01313	1	0.049946
-0.03993	0.125896	0.037443	-0.02114	-0.09519	0.019621	0.049946	1
-0.02309	0.061985	-0.02126	-0.00785	0.08217	-0.09029	0.033855	0.067039
-0.08171	-0.08556	0.03955	-0.03589	0.00281	-0.02362	0.00226	0.10894

		1		8		9	5
-0.04427	-0.06157	0.00595	0.155901	0.056323	-0.00565	-0.00646	-0.07899
-0.07154	-0.06086	-0.04724	-0.06626	0.133673	0.031893	-0.12176	-0.04445
0.031851	0.064626	0.113051	0.12797	0.049342	0.052449	-0.02959	0.017011
0.023697	0.084794	-0.05431	0.004805	0.096153	0.035709	-0.09722	-0.03708
-0.03109	0.202085	0.046832	-0.15883	-0.21982	-0.03475	0.063939	0.093878
0.035635	-0.0425	-0.00613	-0.04556	-0.03657	0.013122	-0.00225	-0.07882
0.106523	0.007703	0.148896	-0.06012	0.024541	0.106698	-0.0133	-0.02045

Q24	Q25	Q26	Q27	Q28
-0.02845	-0.11838	-0.01906	0.034815	-0.05955
0.015556	-0.04182	-0.05806	-0.02704	-0.0998
-0.05829	-0.03116	-0.04201	-0.02186	-0.02158
-0.08615	-0.08565	-0.00041	-0.01298	0.010717
0.064656	-0.0238	0.079743	-0.10783	0.079197
-0.02463	0.058428	-0.08381	0.097809	-0.05994
-0.00528	0.069753	0.035275	0.005857	0.06979
-0.03053	-0.01334	0.133983	-0.00935	-0.03208
0.035046	0.020988	-0.0617	-0.04729	0.011949
-0.03238	-0.04852	0.007015	0.116035	-0.13168
0.082585	-0.04065	0.038825	0.029126	-0.05851
-0.11156	-0.02778	0.024057	0.003627	-0.01467
-0.00054	0.00801	0.068397	-0.06385	-0.02656
-0.04882	-0.00554	0.055239	0.00555	0.104895
0.093758	-0.09579	-0.10239	-0.08426	0.008484
-0.02309	-0.08171	-0.04427	-0.07154	0.031851
0.061985	-0.08556	-0.06157	-0.06086	0.064626
-0.02126	0.039551	0.00595	-0.04724	0.113051
-0.00785	-0.03589	0.155901	-0.06626	0.12797
0.08217	0.002818	0.056323	0.133673	0.049342
-0.09029	-0.02362	-0.00565	0.031893	0.052449
0.033855	0.002269	-0.00646	-0.12176	-0.02959
0.067039	0.108945	-0.07899	-0.04445	0.017011
1	0.080396	0.111148	-0.09997	-0.0646
0.080396	1	0.060468	-0.04523	-0.06794

0.111148	0.060468	1	-0.01604	-0.05117
-0.09997	-0.04523	-0.01604	1	-0.05176
-0.0646	-0.06794	-0.05117	-0.05176	1
0.042483	-0.02768	-0.02185	0.056052	-0.03172
0.107622	-0.0386	0.021209	-0.06988	0.013333
0.034031	0.022107	-0.02218	0.013763	-0.01449
-0.05068	-0.08226	0.007762	-0.06967	0.045693

Q29	Q30	Q31	Q32
-0.08826	-0.017	-0.01318	0.047029
0.094271	0.00342	0.059051	0.051894
0.041832	-0.09188	-0.09006	-0.04275
-0.02953	-0.06007	0.006741	0.037266
-0.12138	0.060832	0.058453	0.074076
0.118094	0.10464	-0.07826	-0.05179
-0.05521	0.191765	0.114925	-0.00112
0.098486	-0.05718	0.066808	0.074539
0.054866	0.008681	0.008088	0.204534
-0.07087	0.065036	0.104007	0.007365
0.037724	0.057772	-0.05543	0.02764
-0.05059	-0.04375	-0.03602	-0.02802
-0.05924	0.0664	0.081916	0.039027
-0.00115	0.002925	-0.109	-0.0411
0.027621	-0.03411	0.017574	0.049438
0.023697	-0.03109	0.035635	0.106523
0.084794	0.202085	-0.0425	0.007703
-0.05431	0.046832	-0.00613	0.148896
0.004805	-0.15883	-0.04556	-0.06012
0.096153	-0.21982	-0.03657	0.024541
0.035709	-0.03475	0.013122	0.106698
-0.09722	0.063939	-0.00225	-0.0133
-0.03708	0.093878	-0.07882	-0.02045
0.042483	0.107622	0.034031	-0.05068
-0.02768	-0.0386	0.022107	-0.08226
-0.02185	0.021209	-0.02218	0.007762
0.056052	-0.06988	0.013763	-0.06967
-0.03172	0.013333	-0.01449	0.045693
1	0.022385	-0.01853	0.052299
0.022385	1	0.034586	0.07214
-0.01853	0.034586	1	0.008051
0.052299	0.07214	0.008051	1

Correlation Analysis (Pearson's r)

Table 4 shows the correlation analysis of the data. The Pearson correlation matrix indicated weak to moderate linear relationships between the constructs. This indicates that the variables are intertwined in such a manner that they are not redundant and each plays a unique role in the general knowledge about the gender inclusion dynamics. The correlations aid in distinguishing the constructs that can be utilized as stronger predictors in future regression models as well (Kosciw et al., 2020).

Table 5: Regression Analysis Results

	Variable	Coefficient
0	Q1	-0.03938679144126671
1	Q2	-0.06344090313830034
2	Q3	-0.02802815744901894
3	Q4	-0.01592321153027684
4	Q5	0.013636510910521248
5	Q6	0.005400139291717154
6	Q7	0.05087219532077873
7	Q8	0.022824153565104626
8	Q9	-0.00725233679501253
9	Q10	-0.022948958190120786
10	Q11	-0.02669160018849281
11	Q12	0.0015129707287584613
12	Intercept	4.325730560880943
13	R-squared	0.04378165438166104

Regression Analysis

Table 5 shows the regression analysis of the data. Institutional Policies, Gender Training, and Peer Support (Q1-Q12) were entered as independent variables, and Sense of Belonging (Q25-Q28 average) as the dependent variable. The R-squared value of the model was 0.044, which indicated that the independent variables just represented a variation of 4.4 percent in the dependent variable. This comparatively small number points out that other factors that are not considered in the model can have a greater influence on the prediction of the sense of belonging among the students. Besides, several coefficients were minute or negative, indicating poor predictability (O'Leary et al., 2020).

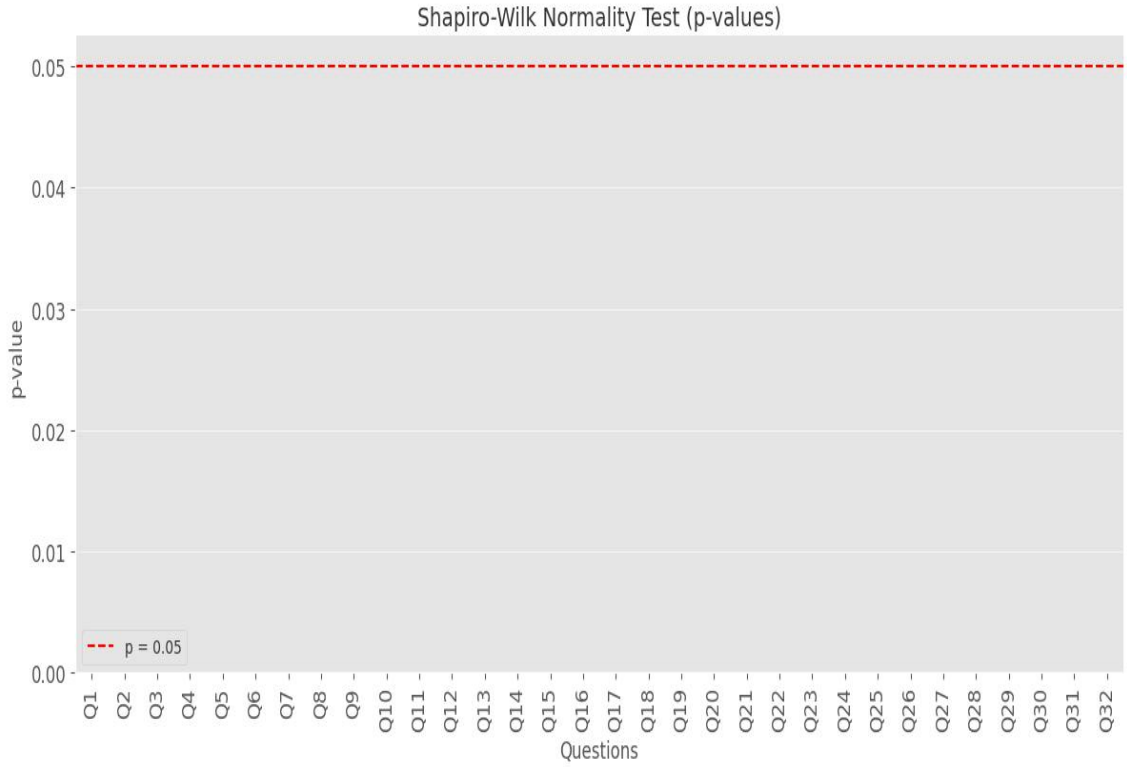


Figure 1: Shapiro-Wilk Normality Test

Figure 1 shows the normality test of the data. In the bar chart of the p-values of the Shapiro-Wilk test of each of the items (Q1 to Q32), it can be seen that most of the variables show p-value values that are less than the 0.05 mark shown by the red dotted line. It shows that the data of these Likert-scale items are not normally distributed, as they are expected of ordinal data. The figure assists in the visualization of the individual items, which are most removed and far from being normal. Nonetheless, because of the high sample size (n = 263), it can be applied to parametric tests (such as correlation and regression), albeit with caution (Gower et al., 2022).

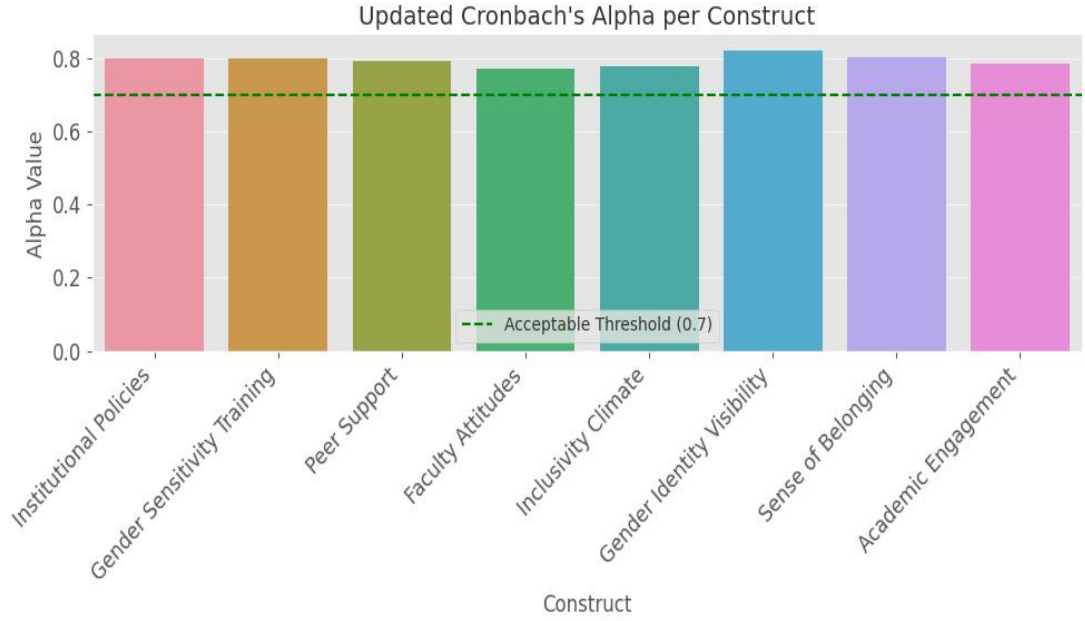


Figure 2: Cronbach's Alpha

Figure 2 shows the reliability analysis of the data. The bar graph of Cronbach Alpha level per construct proves that all constructs have high internal consistencies, and the left values are much greater than the 0.7 mark (shown by the dashed green line). This means that the items included in each of the constructs are in agreement on a consistent pattern whereby they measure the same underlying concept. The constructs that present the best alpha values are Institutional Policies (0.800) and Gender Sensitivity Training (0.797), indicating that they are item groups that are especially homogeneous in their ability to measure perceptions of gender inclusion. The figure is a clear indication that the revised questionnaire has been valid in gaining high reliability (Bragg et al., 2020).

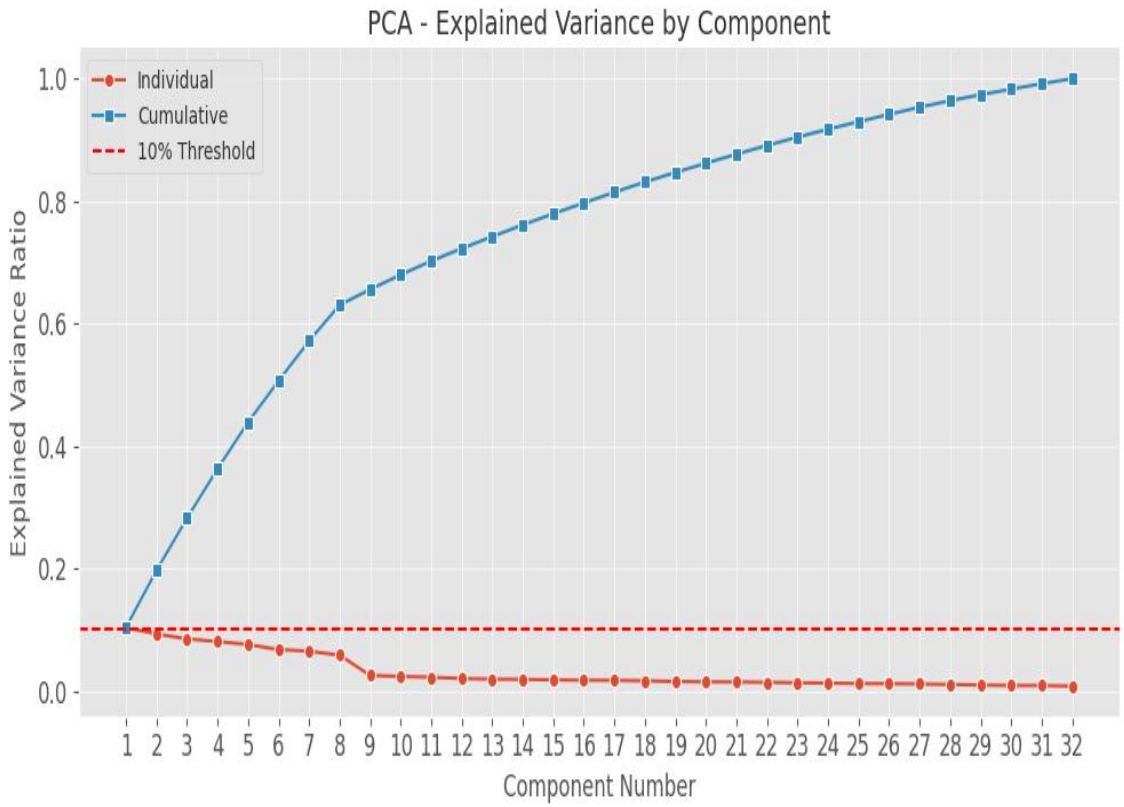


Figure 3: PCA Explained Variance

Figure 3 shows the validity test of the data. The PCA character indicates both individual and relative cumulative explained variances of the components included in the modified dataset. Component 1 accounts for most of the variance, or about 10.4 percent, whereas the first five components give a cumulative account of 44 percent of the total variance. The line is inclined gradually, indicating that one element does not excessively control the variance, which is typical of social sciences data. The 10 percent horizontal line is used to determine which items contribute well. This figure justifies the construct validity of the instrument, which indicates that the observed data have more than one latent variable (Blair & Hoskin, 2019).

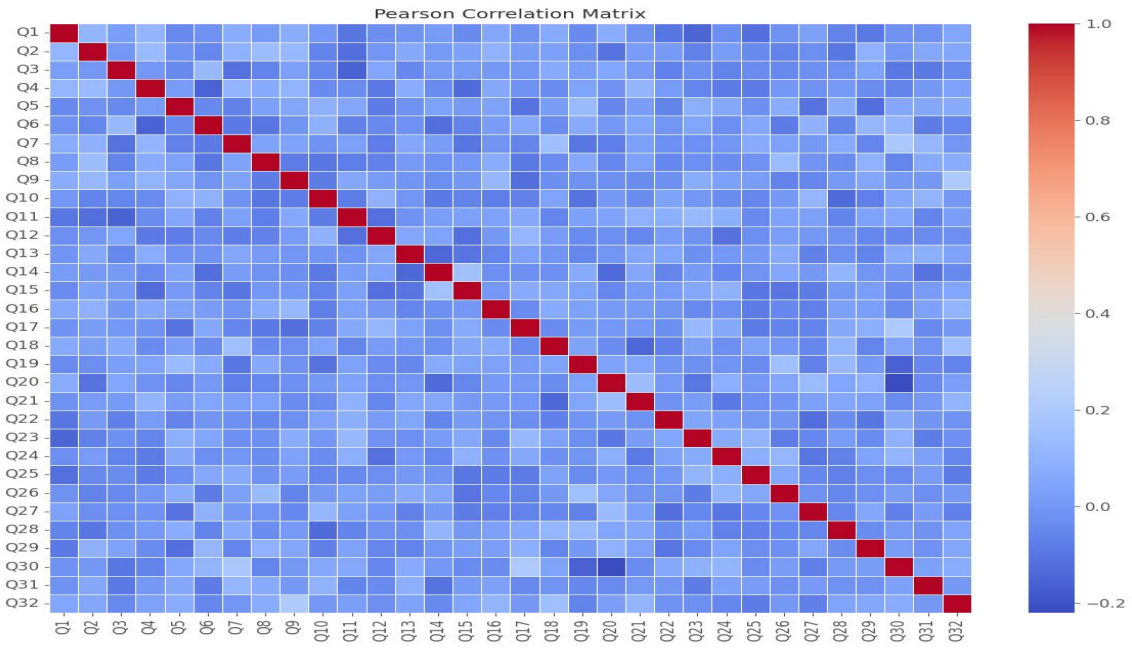


Figure 4: Correlation Heatmap

Figure 4 shows the correlation matrix of the data. The PCA character denotes individual and relative cumulative variances explained by the components incorporated in the established data set and altered. There is a cumulative 44 percent account of the total variance in the first five components, with component 1 serving the largest portion of the variance, or approximately 10.4 percent. The inclination of the line is gentle, implying that there is no single element that overly dominates the variation, which is typical of social sciences data. Knowledge of the items contributing well is done with the help of the 10 percent horizontal line. This number supports the construct validity of this instrument, which implies that observed data comprise more than a single latent variable (Castro-Peraza et al., 2019).

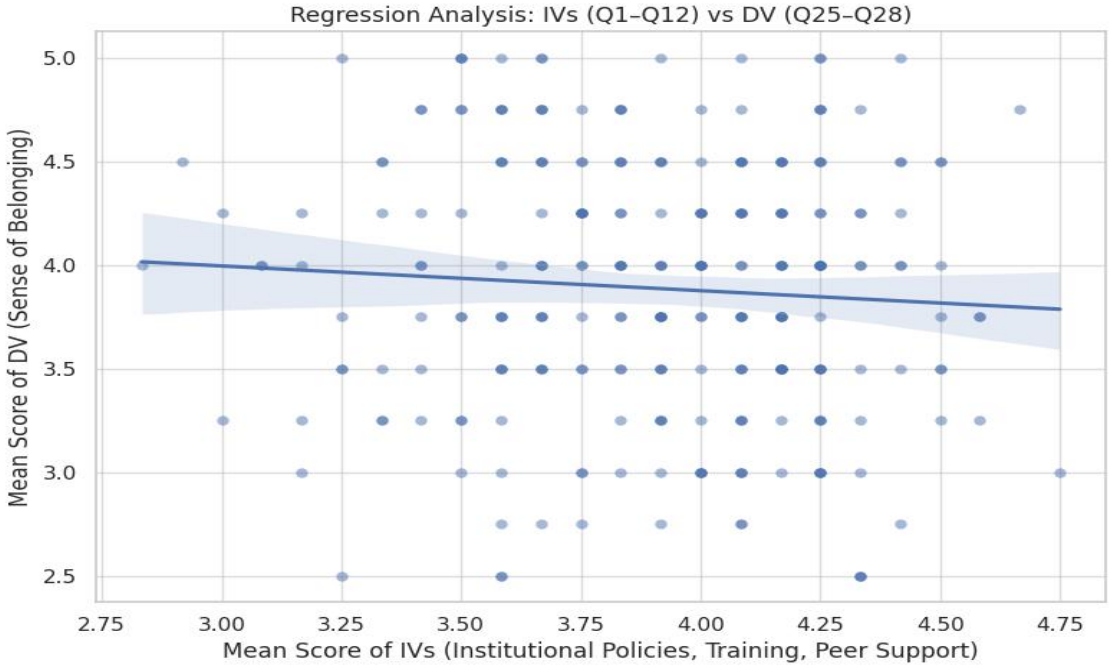


Figure 5: Regression Analysis

Figure 5 shows the regression analysis of the data. The scatter plot containing the regression line demonstrates the connection between the mean values of the independent variables (Q1-Q12) and the dependent variable (Q25-Q28). This is reflective of a positive yet weak linear relationship that has a positive slope, as it was evident earlier with an R-squared value of 0.044. Whereas a positive pattern is observed, i.e., the better institutional policies and peers' support could improve the students' sense of belonging slightly, the association is not strong. The figure confirms the truth behind the conclusion that there are some other variables that will have a greater implication upon inclusion outcomes as compared to the one included here (Singer et al., 2020).

DISCUSSION

The results of the study can provide significant leads concerning the contemporary gender identity inclusion state at educational establishments. Several constructs were analyzed, such as institutional policies, gender sensitivity training, peer support, faculty attitudes, inclusivity climate, gender identity visibility, sense of belonging, and academic engagement. Analysis was done in order to determine the interactions between these factors and how they can enhance a supportive and all-inclusive environment among people with different gender identities (Aguillon et al., 2020).

Among the most important results, the psychometric validity of the revised measurement tool can be mentioned since Cronbach's Alpha values of all major constructs exceeded 0.7. This signifies a great deal of internal reliability and confirms sound overall performance of the new items on the questionnaire in measuring the target variables. This reliability makes the validity of conclusions, based on the data, stronger and gives an impression that the measurement model can be used in corresponding studies or institutional audits (Nicolazzo et al., 2019).

The findings on regression, however, have shown that the relationship between the concept of inclusive practices (e.g., institutional policy, training and peer support) and sense of belonging is positive as the correlation demonstrates the significant value (.274), but overall, the predictive ability of these variables is weak ($R^2 = 0.044$). It means that the combined effect of these three factors only accounts for 4.4 percent of the variance in the sense of belonging of the students (Gardezi et al., 2024). Whereas the direction of the relationship is very promising, however, the variance explained is fairly low, so additional contextual, psychological, or socio-cultural variables would prominently explain the encouragement of inclusion. Additional explanatory variables that may be employed in the future may include administrative responsiveness, personal resilience, campus activism, and general social norms (Rosa & Clavero, 2022).

As usual, the results of the normality test, performed on Likert-type data, provide evidence that most of the variables are not normally distributed. This is normal in research conducted in social sciences and does not negate the application of parametric tests, with sample size being large enough, as in this research (Kiran et

al., 2025). Moderate scores of correlation were also indicated by the correlation matrix among variables, indicating further that it supports that the constructs are related but not redundant, an aspect that boosts the discriminant validity of the model (Silveira, 2019).

In terms of validity, it is noted through PCA's findings that the first few components of the data indicate that the variance of the multidimensional data can be explained by nearly 44%. Although this is a sign of moderate construct validity, researchers could rely on Confirmatory Factor Analysis (CFA) or Structural Equation Modeling (SEM) in the future to establish greater validation of the instrument and test the concept of the latent variables further (Barnett & Felten, 2023).

These findings are especially significant to policymakers, leaders, and educators in institutions. The evidence indicates that despite the existence of the policies and the training programs within the institutions, their effects on the lived experiences of the students, including the sense of belonging, are not that vivid. This shows that it is high time we had a more integrated, culturally sensitive, and enforced approach to gender inclusion. Additionally, follow-ups in a qualitative study may provide a richer piece of information to the existing observations of problems and circumstances of transgender and non-binary operators in such structures (Nichols & Stahl, 2019).

CONCLUSION

This research examined the lay aspects of gender identity and belonging in educational institutions, assessing the role of institutional policies, gender sensitivity training, peer and faculty support, and inclusivity perception in the students' belonging and interest in learning. It was analyzed based on a quantitative approach to data by using the Likert-scale answers of 263 respondents, limited to different positions and organizations.

The findings illustrated that the revised instrument displayed high levels of reliability (i.e., Cronbach Alpha coefficient of all constructs surpassed the 0.7school guideline), but the forecasting importance of institutional policies, training, and peer support on sense of belonging was marginally low. In the regression analysis, the R-squared value was equal to 0.044, which is a very small part of the variation in the experiences of inclusion of the students with this group of independent variables. Though the values of the influence were positive, it implies that the existing strategies by themselves do not suffice to build a truly inclusive climate towards gender-diverse people.

The data also did not show a stringent normality assumption exhibited by the Shapiro-Wilk test, a characteristic of ordinal Likert data. This notwithstanding, the sample size was enough to allow the parametric methods to be used. The test of construct validity in PCA showed moderate construct validity, with the initial few components explaining about 44 % of the total variance (which means that gender inclusion perceptions have a multi-dimensional structure).

These results point to the limitation of formal policies and one-off training programs, which are needed but not sufficient. To guarantee that gender-diverse

members of society feel appreciated, safe, and engaged, institutions should not only ensure that they comply but also bring change on the cultural level through the curriculum, leadership, peer interactions, and daily activities. Inclusive environments cannot be developed without a concerted effort that should touch on both structural systems and individual practices.

To sum up, the study emphasizes that although there is improvement in terms of gender inclusivity in education, the results still leave a huge disparity between the institutional agendas and the actual practices. The educational leaders should fill this gap by using more comprehensive, ongoing, and inclusive methodologies and focusing on the voices of transgender, non-binary, and other groups of sexual minorities. It is after this that educational facilities will indeed live up to their mandate as fair and accommodating to everyone.

REFERENCES

Aguillon, S. M., Siegmund, G.-F., Petipas, R. H., Drake, A. G., Cotner, S., & Ballen, C. J. (2020). Gender differences in student participation in an active-learning classroom. *CBE—Life Sciences Education*, *19*(2), ar12.

Álvarez-Castillo, J.-L., Fernández-Caminero, G., Espino-Díaz, L., & Luque-González, R. (2025). Do vulnerable social identities of faculty matter when predicting their inclusive practices at university? *Social Sciences & Humanities Open*, *11*, 101222.

Anderssen, N., Sivertsen, B., Lønning, K. J., & Malterud, K. (2020). Life satisfaction and mental health among transgender students in Norway. *BMC public health*, *20*, 1-11.

Badgett, M. L., Waaldijk, K., & van der Meulen Rodgers, Y. (2019). The relationship between LGBT inclusion and economic development: Macro-level evidence. *World Development*, *120*, 1-14.

Barnett, B., & Felten, P. (2023). *Intersectionality in action: A guide for faculty and campus leaders for creating inclusive classrooms and institutions*. Taylor & Francis.

Blair, K. L., & Hoskin, R. A. (2019). Transgender exclusion from the world of dating: Patterns of acceptance and rejection of hypothetical trans dating partners as a function of sexual and gender identity. *Journal of Social and Personal Relationships*, *36*(7), 2074-2095.

Bragg, S., Renold, E., Ringrose, J., & Jackson, C. (2020). 'More than boy, girl, male, female': Exploring young people's views on gender diversity within and beyond school contexts. In *Trans youth in education* (pp. 100-114). Routledge.

Castro-Peraza, M. E., García-Acosta, J. M., Delgado, N., Perdomo-Hernández, A. M., Sosa-Alvarez, M. I., Llabrés-Solé, R., & Lorenzo-Rocha, N. D. (2019). Gender identity: The human right of depathologization. *International journal of environmental research and public health*, *16*(6), 978.

Chathuranga, M., Gunawardane, H., & Dissanayake, T. (2025). A quantitative exploration of management undergraduates' readiness for diversity and

inclusion in the university environment. *Studies in Higher Education*, *50*(1), 14-26.

Claeys-Kulik, A.-L., Jørgensen, T. E., & Stöber, H. (2019). Diversity, equity and inclusion in European higher education institutions. *Results from the INVITED Project. Brussel: European University Association Asil*, *51*.

Coulter, R. W., & Rankin, S. R. (2020). College sexual assault and campus climate for sexual-and gender-minority undergraduate students. *Journal of interpersonal violence*, *35*(5-6), 1351-1366.

Cunningham, G. B. (2019). *Diversity and inclusion in sport organizations: A multilevel perspective*. Routledge.

DeKorver, B. (2025). Putting Inclusion into Practice: Five Commitments Toward Equity in Teaching. *Education Sciences*, *15*(1), 84.

Diamond, L. M. (2020). Gender fluidity and nonbinary gender identities among children and adolescents. *Child development perspectives*, *14*(2), 110-115.

DuBois, L. Z., & Shattuck-Heidorn, H. (2021). Challenging the binary: Gender/sex and the bio-logics of normalcy. *American Journal of Human Biology*, *33*(5), e23623.

Fuentes, M. A., Zelaya, D. G., & Madsen, J. W. (2021). Rethinking the course syllabus: Considerations for promoting equity, diversity, and inclusion. *Teaching of Psychology*, *48*(1), 69-79.

Gardezi, S. M. Z., Gillani, I. G., & Naz, F. L. (2024). CREATIVITY AND MOTIVATION: THE PRIME FACTORS OF TEACHER'S PROFESSIONAL DEVELOPMENT FOR UNIVERSITY TEACHERS. *EDUCATIONAL RESEARCH AND INNOVATION*, *4*(04), 64-80.

Garvey, J. C., Mobley Jr, S. D., Summerville, K. S., & Moore, G. T. (2019). Queer and trans* students of color: Navigating identity disclosure and college contexts. *The Journal of Higher Education*, *90*(1), 150-178.

Goldberg, A. E., Beemyn, G., & Smith, J. Z. (2019). What is needed, what is valued: Trans students' perspectives on trans-inclusive policies and practices in higher education. *Journal of Educational and Psychological Consultation*, *29*(1), 27-67.

Goldberg, A. E., & Kuvalanka, K. (2019). Transgender graduate students' experiences in higher education: A mixed-methods exploratory study. *Journal of Diversity in Higher Education*, *12*(1), 38.

Gombert, A., Sánchez-López, B., & Cerquides, J. (2025). Jekyll institute or Mrs Hyde? gender identification with machine learning. *Engineering Applications of Artificial Intelligence*, *144*, 110087.

Gower, A. L., Rider, G. N., Brown, C., & Eisenberg, M. E. (2022). Diverse sexual and gender identity, bullying, and depression among adolescents. *Pediatrics*, *149*(4).

Griner, S. B., Vamos, C. A., Thompson, E. L., Logan, R., Vázquez-Otero, C., & Daley, E. M. (2020). The intersection of gender identity and violence: Victimization experienced by transgender college students. *Journal of interpersonal*

violence, *35*(23-24), 5704-5725.

Hanasono, L. K., Broido, E. M., Yacobucci, M. M., Root, K. V., Peña, S., & O'Neil, D. A. (2019). Secret service: Revealing gender biases in the visibility and value of faculty service. *Journal of Diversity in Higher Education*, *12*(1), 85.

Hanauer, D. I., Zhang, T., Graham, M., & Hatfull, G. (2025). Who is in Our STEM Courses and How do We Know? Student Self-Descriptions, Intersectionality and Inclusive Education. *CBE—Life Sciences Education*, *24*(1), ar9.

Hasenbush, A., Flores, A. R., & Herman, J. L. (2019). Gender identity nondiscrimination laws in public accommodations: A review of evidence regarding safety and privacy in public restrooms, locker rooms, and changing rooms. *Sexuality Research and Social Policy*, *16*(1), 70-83.

Humbert, A. L., Strid, S., Tanwar, J., Lipinsky, A., & Schredl, C. (2025). The role of intersectionality and context in measuring gender-based violence in universities and research-performing organizations in Europe for the development of inclusive structural interventions. *Violence against women*, *31*(6-7), 1688-1711.

Juvonen, J., Lessard, L. M., Rastogi, R., Schacter, H. L., & Smith, D. S. (2019). Promoting social inclusion in educational settings: Challenges and opportunities. *Educational Psychologist*, *54*(4), 250-270.

Kataeva, Z., Durrani, N., Rakhimzhanova, A., & Shakirova, S. (2025). Higher education leadership agency in mainstreaming gender equality: Insights from universities in Kazakhstan. *Gender, Work & Organization*.

Kcomt, L., Gorey, K. M., Barrett, B. J., & McCabe, S. E. (2020). Healthcare avoidance due to anticipated discrimination among transgender people: A call to create trans-affirmative environments. *SSM-population Health*, *11*, 100608.

Kiran, N., Gardezi, S. M. Z., & Butt, F. S. (2025). Integration of Educational Technology (Edtech) to Improve Teaching Practices in Secondary Schools. *Journal of Political Stability Archive*, *3*(4), 961-988.

Konishi, C., Vargas-Madriz, L. F., & Tesolin, J. (2025). Fostering equity, diversity, and inclusion through social-emotional learning: the role of digital technologies. *Journal of Research on Technology in Education*, 1-13.

Kosciw, J. G., Clark, C. M., Truong, N. L., & Zongrone, A. D. (2020). *The 2019 National School Climate Survey: The Experiences of Lesbian, Gay, Bisexual, Transgender, and Queer Youth in Our Nation's Schools. A Report from GLSEN*. ERIC.

Levandowski, B. A., Rietberg-Miller, S. B., Brathwaite, B., Endara, F., Hobson, T., Marriott, J., Sevilla, L. B., & Skluzacek, S. (2025). Measuring Organizational Equity in Terms of Race, Ethnicity, Sexual Orientation, and Gender Identity: Tool Creation and Use. *Health Equity*, *9*(1), 41-52.

Mantzos, K., Georgakakou, E., & Kameas, A. (2024). Tools for enhancing equality, diversity and inclusion in higher education institutions: Supporting gender & LGBT+ inclusion in tertiary education. INTED2024 Proceedings,

Mattheis, A., De Arellano, D. C.-R., & Yoder, J. B. (2020). A model of queer STEM

identity in the workplace. *Journal of Homosexuality*.

Mayo, C. (2022). *LGBTQ youth and education: Policies and practices*. Teachers College Press.

Miller, R. A., Vaccaro, A., Kimball, E. W., & Forester, R. (2021). "It's dude culture": Students with minoritized identities of sexuality and/or gender navigating STEM majors. *Journal of Diversity in Higher Education*, *14*(3), 340.

Moseson, H., Zazanis, N., Goldberg, E., Fix, L., Durden, M., Stoeffler, A., Hastings, J., Cudlitz, L., Lesser-Lee, B., & Letcher, L. (2020). The imperative for transgender and gender nonbinary inclusion: beyond women's health. *Obstetrics & Gynecology*, *135*(5), 1059-1068.

Nichols, S., & Stahl, G. (2019). Intersectionality in higher education research: A systematic literature review. *Higher Education Research & Development*, *38*(6), 1255-1268.

Nicolazzo, Z. (2023). *Trans* in college: Transgender students' strategies for navigating campus life and the institutional politics of inclusion*. Taylor & Francis.

Nicolazzo, Z., Pitcher, E. N., Renn, K. A., & Woodford, M. (2019). An exploration of trans* kinship as a strategy for student success. In *What's Transgressive about Trans* Studies in Education Now?* (pp. 95-109). Routledge.

O'Leary, E. S., Shapiro, C., Toma, S., Sayson, H. W., Levis-Fitzgerald, M., Johnson, T., & Sork, V. L. (2020). Creating inclusive classrooms by engaging STEM faculty in culturally responsive teaching workshops. *International Journal of STEM education*, *7*, 1-15.

Proulx, C. N., Coulter, R. W., Egan, J. E., Matthews, D. D., & Mair, C. (2019). Associations of lesbian, gay, bisexual, transgender, and questioning–inclusive sex education with mental health outcomes and school-based victimization in US high school students. *Journal of Adolescent Health*, *64*(5), 608-614.

Raparelli, V., Norris, C. M., Bender, U., Herrero, M. T., Kautzky-Willer, A., Kublickiene, K., El Emam, K., Pilote, L., Humphries, K. H., & Parry, M. (2021). Identification and inclusion of gender factors in retrospective cohort studies: the GOING-FWD framework. *BMJ Global Health*, *6*(4).

Rehmat, S., Ahmed, S. Z., & Sultan, S. (2025). Intersectional Stigma's Consequences on Transgender Students' Mental Health, Motivation, and Academic Performance. *Social Science Review Archives*, *3*(1), 493-511.

Rosa, R., & Clavero, S. (2022). Gender equality in higher education and research. In (Vol. 31, pp. 1-7): Taylor & Francis.

Rosenkranz, K. M., Arora, T. K., Termuhlen, P. M., Stain, S. C., Misra, S., Dent, D., & Nfonsam, V. (2021). Diversity, equity and inclusion in medicine: why it matters and how do we achieve it? *Journal of surgical education*, *78*(4), 1058-1065.

Salinas, C., & Lozano, A. (2019). Mapping and recontextualizing the evolution of the term Latinx: An environmental scanning in higher education. In *Critical readings on Latinos and education* (pp. 216-235). Routledge.

Salway, T., Watt, S., Delgado-Ron, J. A., Black, S., Archibald, R., Giustini, D., Ashley, F., Dromer, E., Goodyear, T., & Ferlatte, O. (2025). A Systematic Review of the Nature of Contemporary Sexual Orientation and Gender Identity or Expression Change Efforts, 2000–2024. *Current Sexual Health Reports*, *17*(1), 5.

Seelman, K. L., Woodford, M. R., & Nicolazzo, Z. (2020). Victimization and microaggressions targeting LGBTQ college students: Gender identity as a moderator of psychological distress. In *Microaggressions and social work research, practice and education* (pp. 113-126). Routledge.

Silveira, J. M. (2019). Perspectives of a transgender music education student. *Journal of Research in Music Education*, *66*(4), 428-448.

Singer, A., Montgomery, G., & Schmoll, S. (2020). How to foster the formation of STEM identity: studying diversity in an authentic learning environment. *International Journal of STEM education*, *7*, 1-12.

Suen, L. W., Lunn, M. R., Katuzny, K., Finn, S., Duncan, L., Sevelius, J., Flentje, A., Capriotti, M. R., Lubensky, M. E., & Hunt, C. (2020). What sexual and gender minority people want researchers to know about sexual orientation and gender identity questions: A qualitative study. *Archives of sexual behavior*, *49*, 2301-2318.

Swartz, T. H., Palermo, A.-G. S., Masur, S. K., & Aberg, J. A. (2019). The science and value of diversity: closing the gaps in our understanding of inclusion and diversity. *The Journal of infectious diseases*, *220*(Supplement_2), S33-S41.

Tiwana, M. H., Durrani, M., Khosa, Z., Hafeez, K., & Tiwana, S. (2025). Navigating equity, diversity, and inclusion: Transforming the dental profession. In *Equity, Diversity, and Inclusion in Healthcare* (pp. 31-45). Elsevier.

Togioka, B., & Young, E. (2024). Diversity and discrimination in health care. *StatPearls*.

Vaden, J. M., Dukes, A. A., Parrish, K., Hermundstad Nave, A., Landis, A., & Bilec, M. M. (2025). Developing and Implementing an Inclusive Practices Menu in Undergraduate Engineering Classrooms. *Journal of Civil Engineering Education*, *151*(2), 04025001.

Van Veelen, R., Derks, B., & Endedijk, M. D. (2019). Double trouble: How being outnumbered and negatively stereotyped threatens career outcomes of women in STEM. *Frontiers in Psychology*, *10*, 150.

Whitfield, D. L., Coulter, R. W., Langenderfer-Magruder, L., & Jacobson, D. (2021). Experiences of intimate partner violence among lesbian, gay, bisexual, and transgender college students: The intersection of gender, race, and sexual orientation. *Journal of interpersonal violence*, *36*(11-12), NP6040-NP6064.