



Group Projects and Sense of Belonging Among First Year Students

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ABSTRACT

Collaborative learning and group projects help to build highly valued, life-long skills. There is the possibility, however, that small groups may also present an environment that could foster negative experiences such as stereotype threat and microaggressions that may lead to some students feeling excluded from the group and the campus in general. To test this possibility, a survey was given to students enrolled in a first-year seminar course during the fall semester at the University of Wisconsin – River Falls (UWRF). This survey used a Likert scale to assess the students' perception of their small group experience and their feelings of belonging. Demographic data was also collected. The data will be used to explore possible correlations between a poor group experience and a lack of feeling of belonging, and to ascertain if these correlations are stronger in underrepresented demographic groups.

IS IT A PROBLEM?

As the result of several observations I made over the course of a couple of semesters teaching a First Year Experience course at UWRF that required some out of class group work, I became concerned that some students who had no previous experience with diversity were bringing preconceived notions into their groups, creating an environment in which the majority group was making it difficult for individuals from underserved and underrepresented groups to contribute to the best of their abilities. It has been previously reported that diverse groups often times show lower performance levels compared to homogeneous groups due to problems with group dynamics (1). This led me to wonder if some students were having negative group experiences related to their demographic group and if these negative experiences were leading to a poor sense of belonging on campus that could lead to a lack of success.

In order to see if this was in fact a problem, I developed a study that asked students to report on their group experiences, their sense of belonging, and their demographic group.

SURVEY

The following survey was completed by 156 students in seven different sections of a First Year Experience course at UWRF after the completion of a required group project. The group projects varied from section to section.

The Group Project Experience was evaluated by asking students to use a Likert scale from 1 (strongly disagree) to 5 (strongly agree) to show the extent to which they agreed with the following statements.

- + The members of my group care about each other.
- + The contributions of all group members were valued by the group.
- + My contributions were valued by my group.
- + My group members listened to my project ideas .
- Some members in my group were listened to more than others.
- + Group members were interested in my opinions.
- + I feel like the members of my group will support me.
- I felt like I was stereotyped by my group.
- I wish there had been more people like me in my group.

A Sense of Belonging was evaluated by asking students to use a Likert scale (1-5) to show the extent to which they agreed with the following statements (2).

- + The students in this course care about each other.
- + I am connected to others in this course.
- + I can rely on others in this course.
- + I am confident that others in this course will support me.
- + I feel like I belong at UWRF.

Demographic data. As part of the survey, students were asked to self identify in the following categories.

- Gender identity
- Race/Ethnicity
- Sexual orientation
- Mother's and Father's level of education

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RESULTS

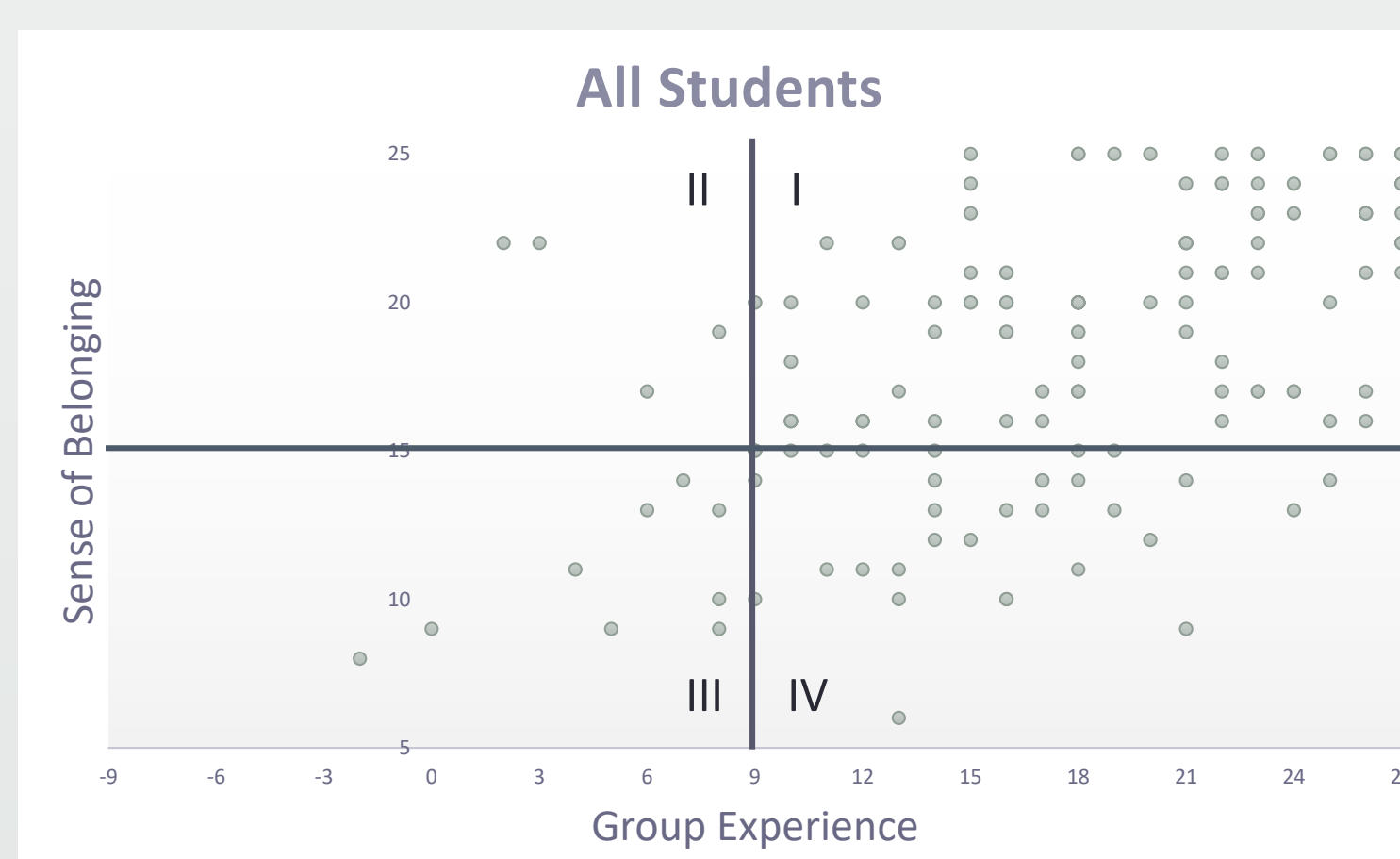


Figure 1. A total of 156 students completed the survey. 71% of students were in quadrant 1 (QI), 4% in QII, 9% in QIII, and 16% in QIV. Overall the Pearson correlation coefficient (ρ) between Group Experience and Sense of Belonging was 0.55.

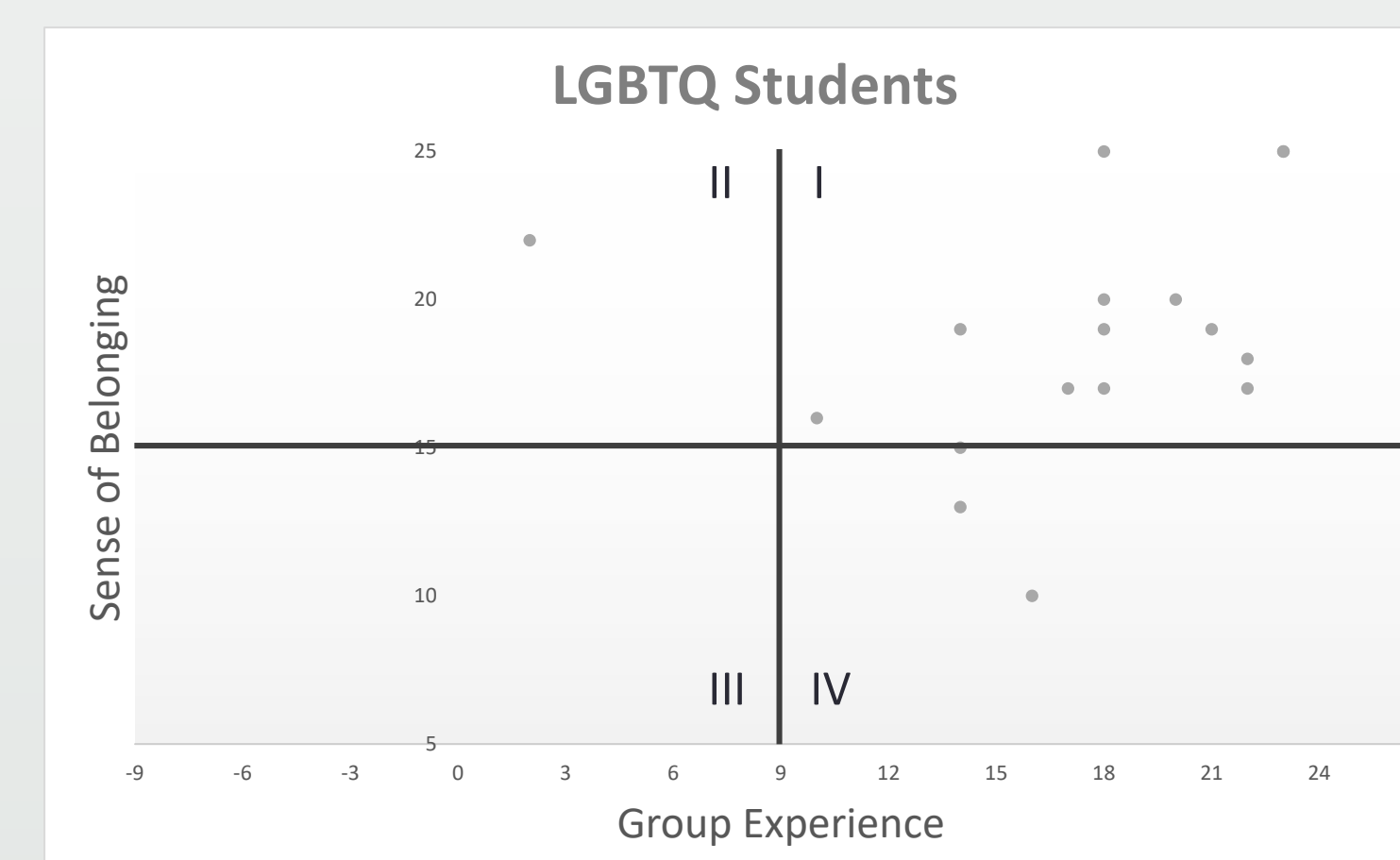


Figure 2. A total of 17 students who self identified as LGBTQ completed the survey. 76% of students were in QI, 6% in QII, 0% in QIII, and 18% in QIV. $\rho = 0.23$.

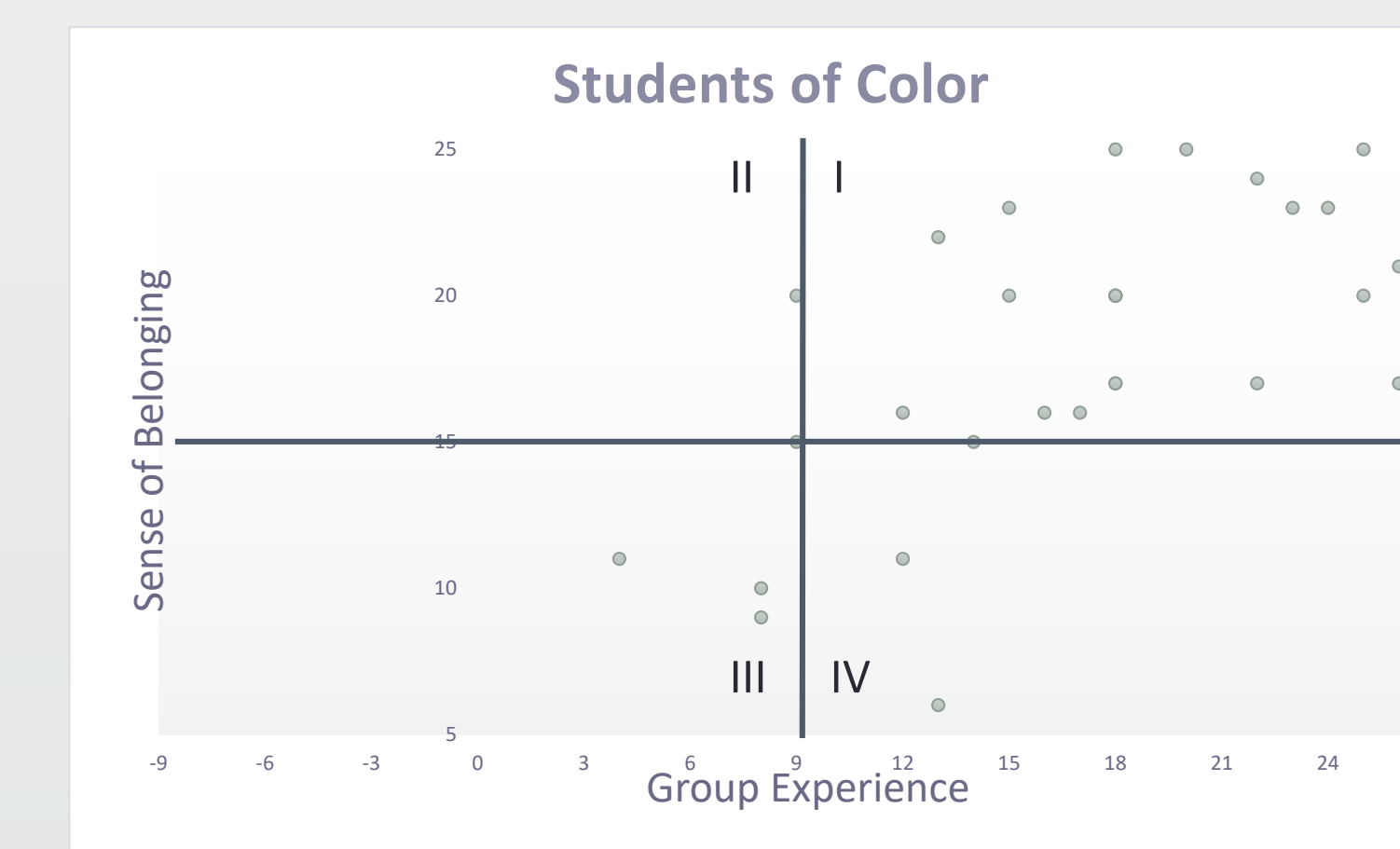


Figure 3. A total of 33 students who completed the survey self identified as being a student of color. 76% of these students were in QI, 3% in QII, 12% in QIII, and 9% in QIV. $\rho = 0.67$.

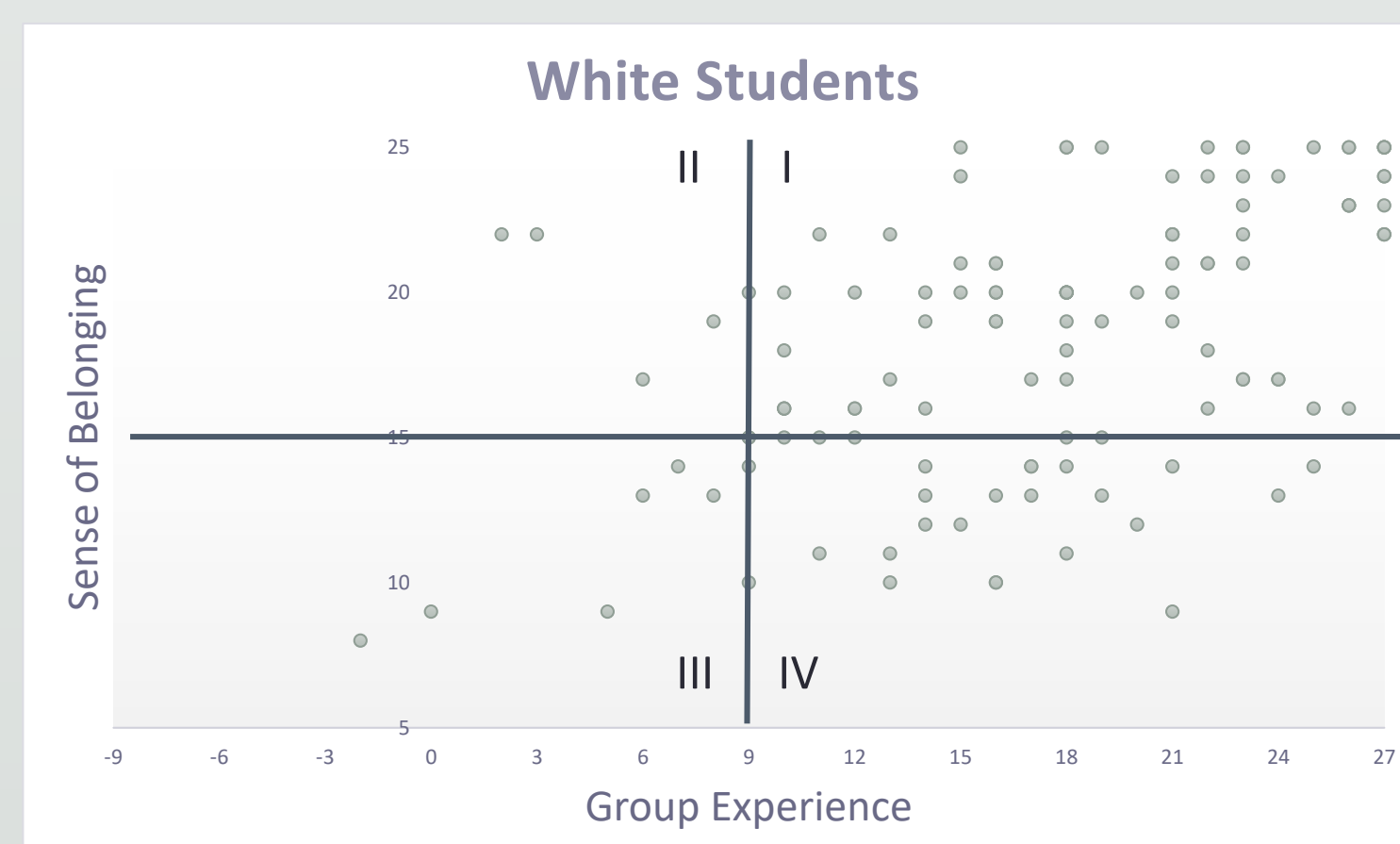


Figure 4. A total of 123 students who self identified as white completed the survey. 70% of students were in QI, 4% in QII, 7% in QIII, and 19% in QIV. $\rho = 0.52$.

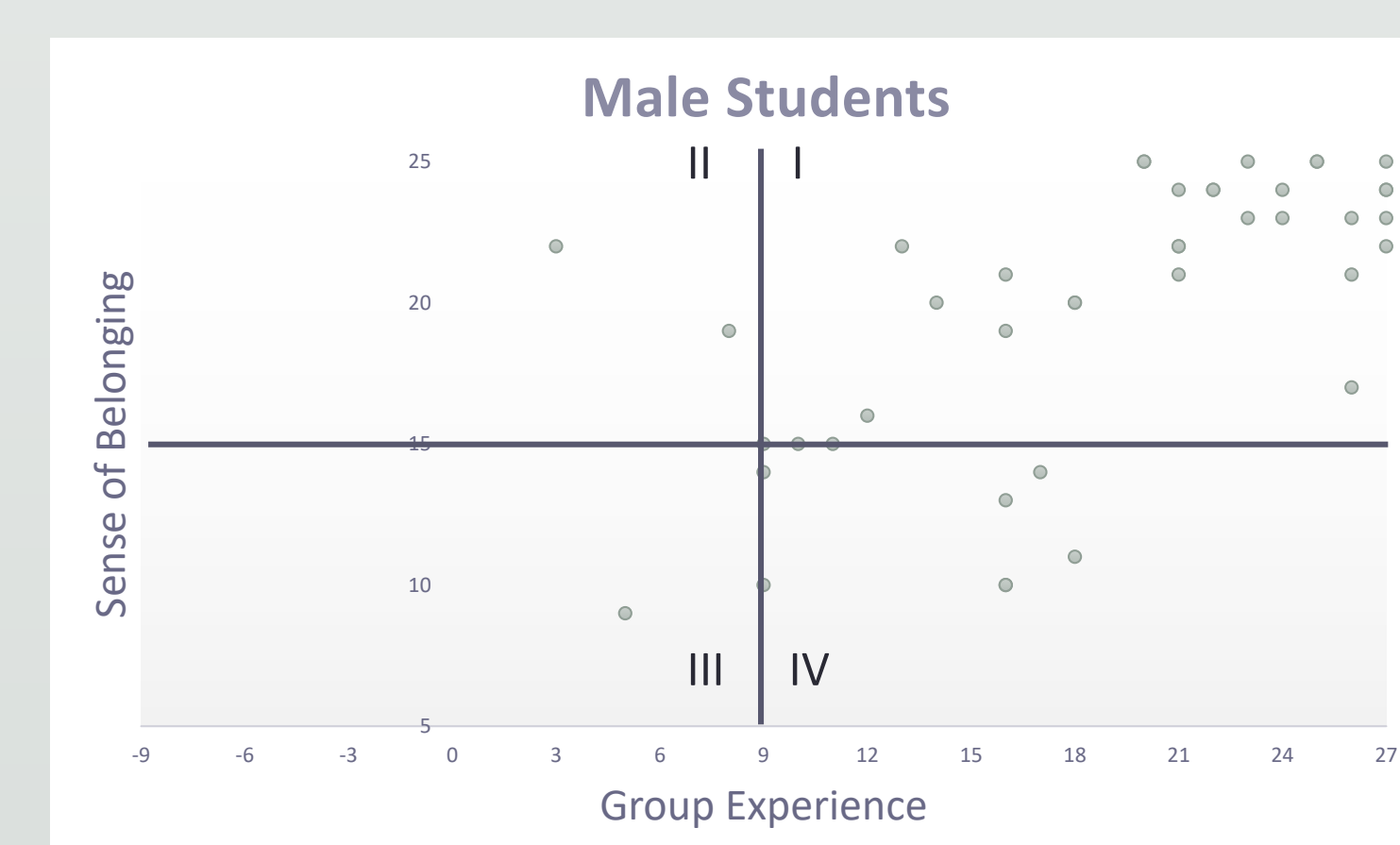


Figure 5. A total of 42 students who completed the survey self identified as being male. 71% of these students were in QI, 5% in QII, 10% in QIII, and 14% in QIV. $\rho = 0.64$.

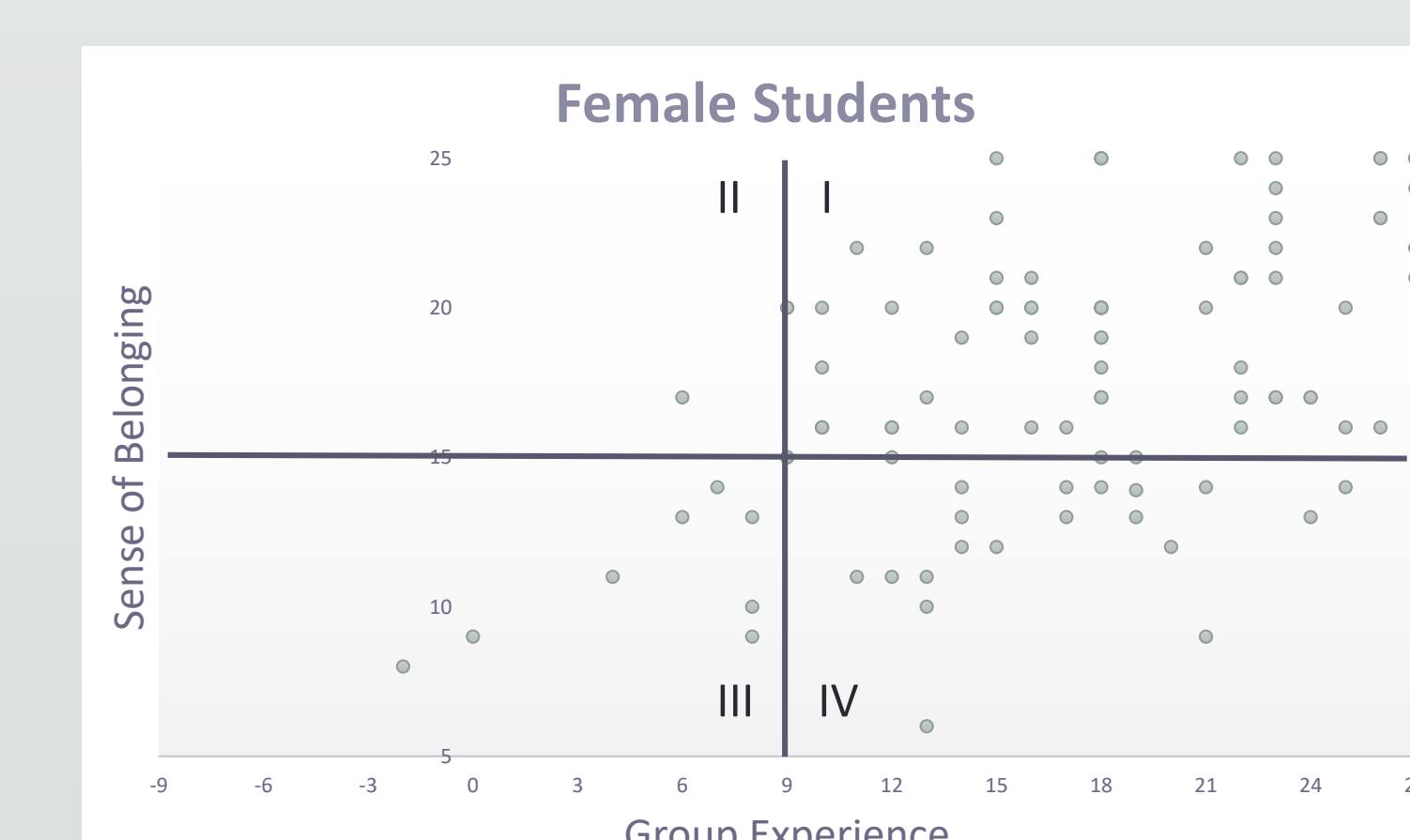


Figure 6. A total of 109 students who completed the survey self identified as being female. 70% of these students were in QI, 2% in QII, 10% in QIII, and 21% in QIV. $\rho = 0.55$.

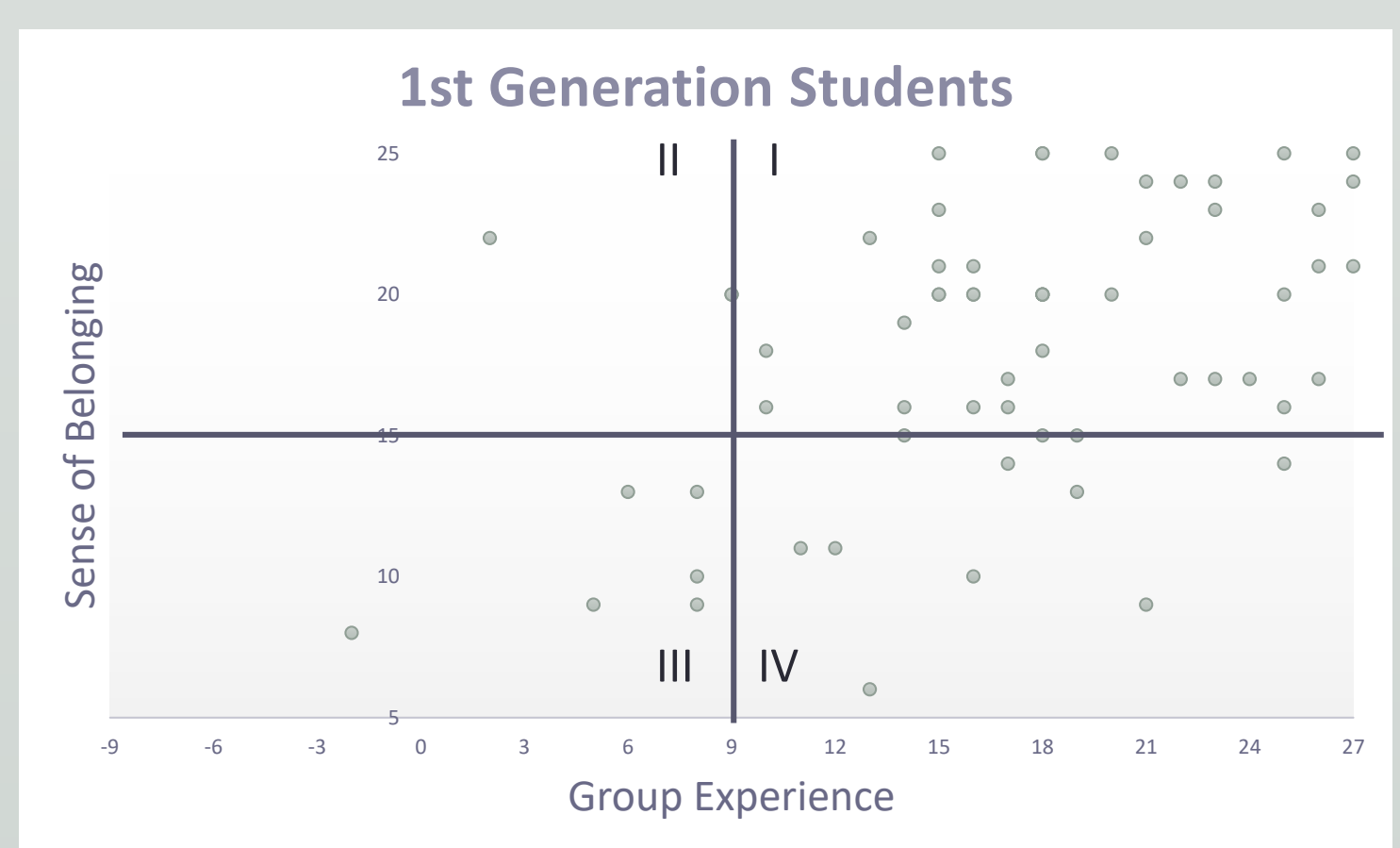


Figure 7. A total of 42 students who completed the survey self identified as being a first generation student. 68% of these students were in QI, 5% in QII, 10% in QIII, and 17% in QIV. $\rho = 0.47$.

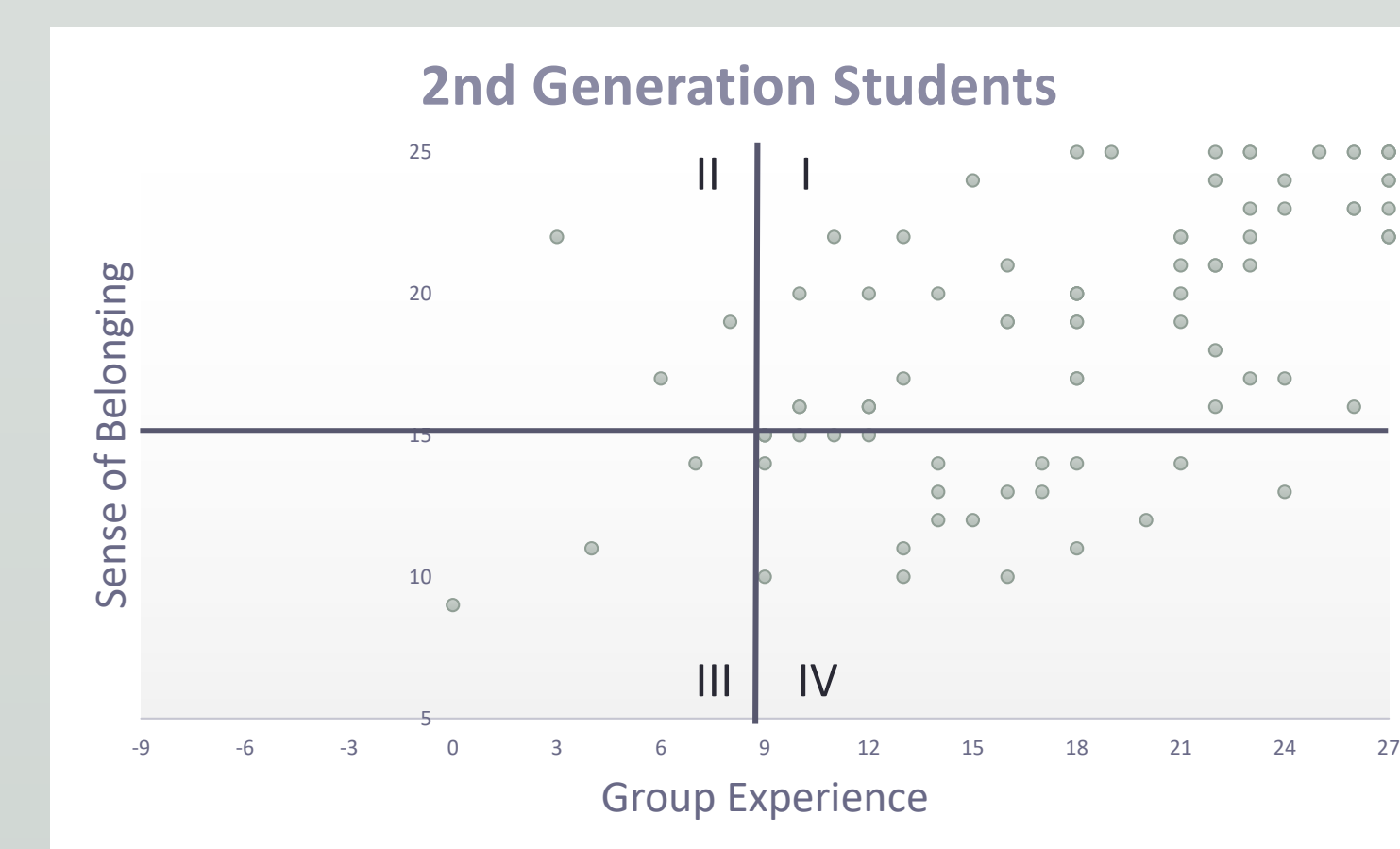


Figure 8. A total of 92 students who completed the survey self identified as being a second generation student. 71% of these students were in QI, 3% in QII, 9% in QIII, and 17% in QIV. $\rho = 0.62$.

METHODS

A *group experience value* was determined by adding the values of the responses to the six positive questions and subtracting by the value of the three negative questions. Therefore the possible range of the group experience score was -9 to +27. By this approach a neutral experience (a response of 3 to all nine questions) was determined to be 9.

A *sense of belonging value* was determined by adding the values of the responses of the five positive question. The possible range of the group experience score was +5 to +25. By this approach a neutral experience (a response of 3 to all five questions) was determined to be 15.

Scatter plots of sense of belonging versus group experience were made for the various different demographic groups. The scatter plots were divided into four quadrants based on the values of a completely neutral score (15 v 9).

Quadrant I represents students who had a positive group experience and a strong sense of belonging. We would like all students to belong to this quadrant.

Quadrant II represents students who had a negative group experience but maintained a positive sense of belonging.

Quadrant III represents students who had a negative group experience and felt a poor sense of belonging.

Quadrant IV represents students who had a positive group experience but nonetheless had a negative sense of belonging.

The Pearson's Correlation Coefficient (ρ) was determined for each group to see if there was any correlation between group experience and a sense of belonging. A ρ of 1 indicates a perfect direct correlation, a 0 indicates no correlation and a -1 indicates a perfect indirect correlation.

CONCLUSIONS

There is no convincing evidence from this study to indicate that the group work being done in the first-year seminar course at UWRF is leading to problems with feelings of belonging on campus or in the classroom. Nonetheless, care should be taken in forming and managing groups to avoid a group environment that may negatively affect some students (3,4).

A couple comparisons worth noting, though they are unlikely to have any statistical significance;

- 12% of students of color reported a negative group experience and a poor sense of belonging compared to 7% of white students.
- 31% of female students reported a poor sense of belonging compared to 24% of male students.
- LGBTQ students were least likely to report either a negative group experience (6%) or poor sense of belonging (18%).
- The highest correlation between a reported group experience and sense of belonging was seen for students of color ($\rho = 0.67$).
- 71% of all students reported both a positive group experience and a positive sense of belonging, a percentage that was relatively consistent across all demographic group.

While there are some intriguing observations here, a second round of the project with a refined survey and a higher sample size would be necessary to draw any meaningful conclusions.

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The survey used in this project was approved by the UWRF-IRB as protocol number H2018.