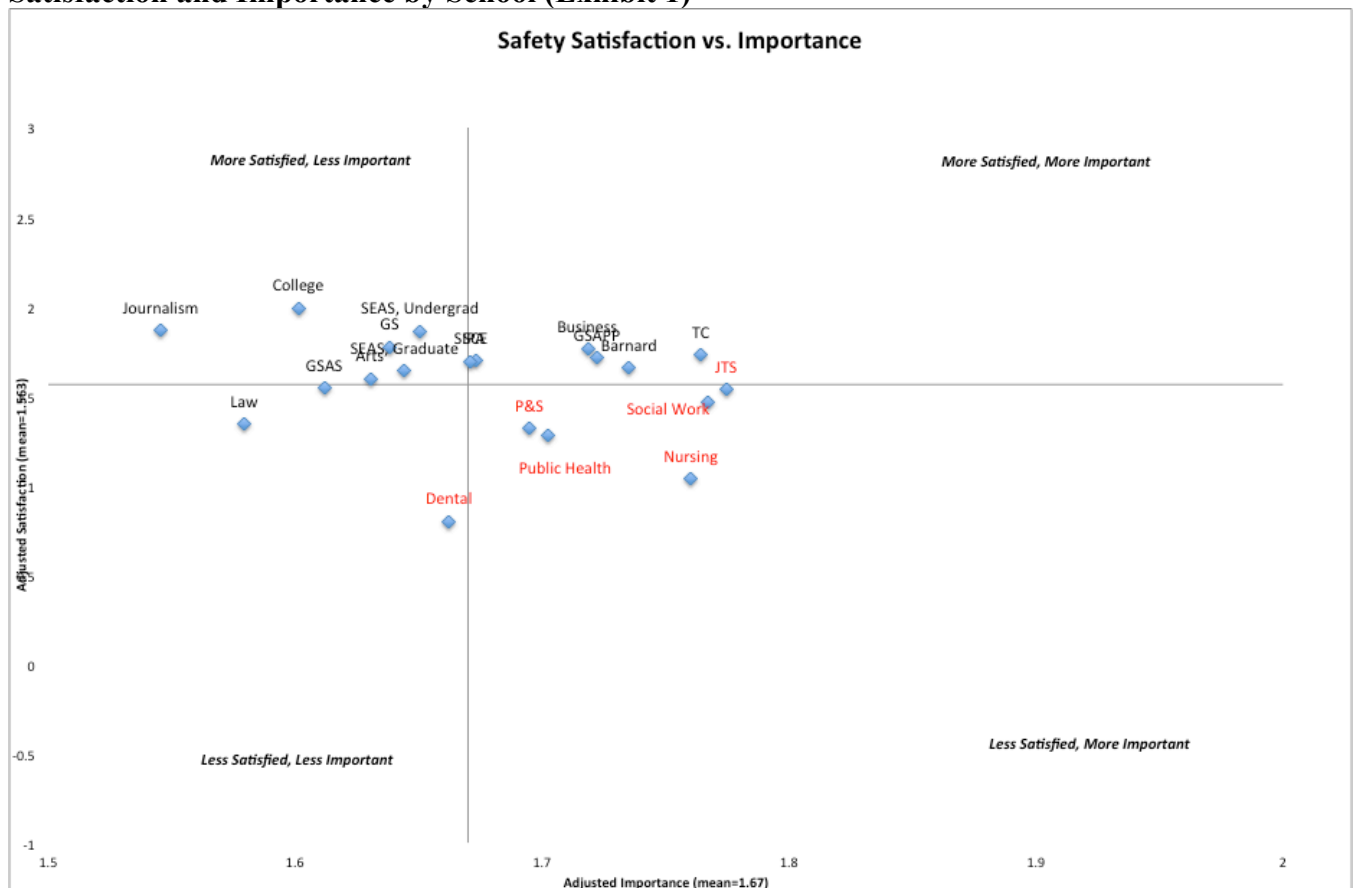


Quality of Life Survey: Safety Satisfaction Analysis

Introduction

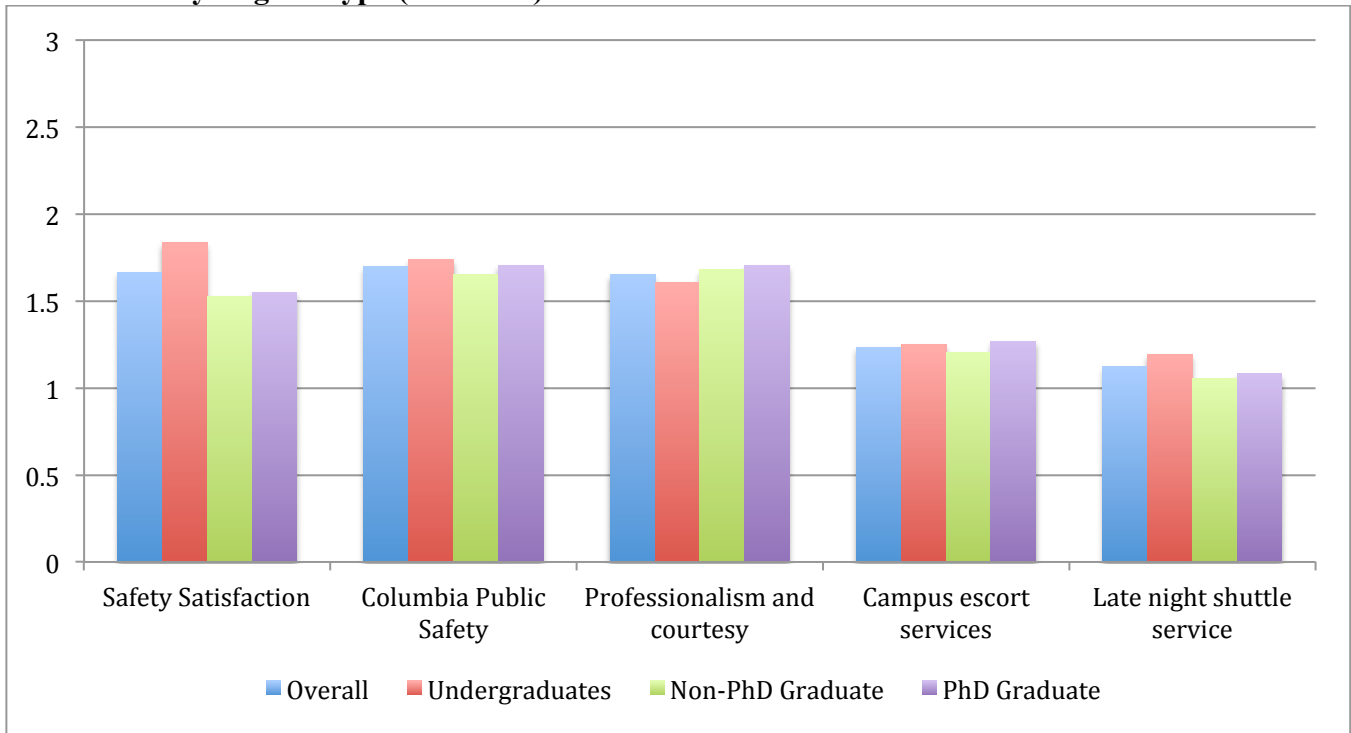
In April 2013, the Student Affairs Committee (SAC) of the University Senate completed Columbia’s first-ever University-wide student quality of life survey. Over 6,250 students from across Columbia’s 20 schools and affiliated institutions took the survey, which addresses a broad spectrum of wellness considerations including financial aid, housing, social life, academics, and administration. In seeing the survey through from its initial conception in 2012 to the completion of its first iteration, SAC partnered with the Business School’s Behavioral Research Lab and consulted with the Office of the President, the Office of the Provost, the Board of Trustees, and the Department of Statistics. The survey aims to empower key University policymakers with the tools and knowledge to make effective evidence-based strategic decisions.

Satisfaction and Importance by School (Exhibit 1)



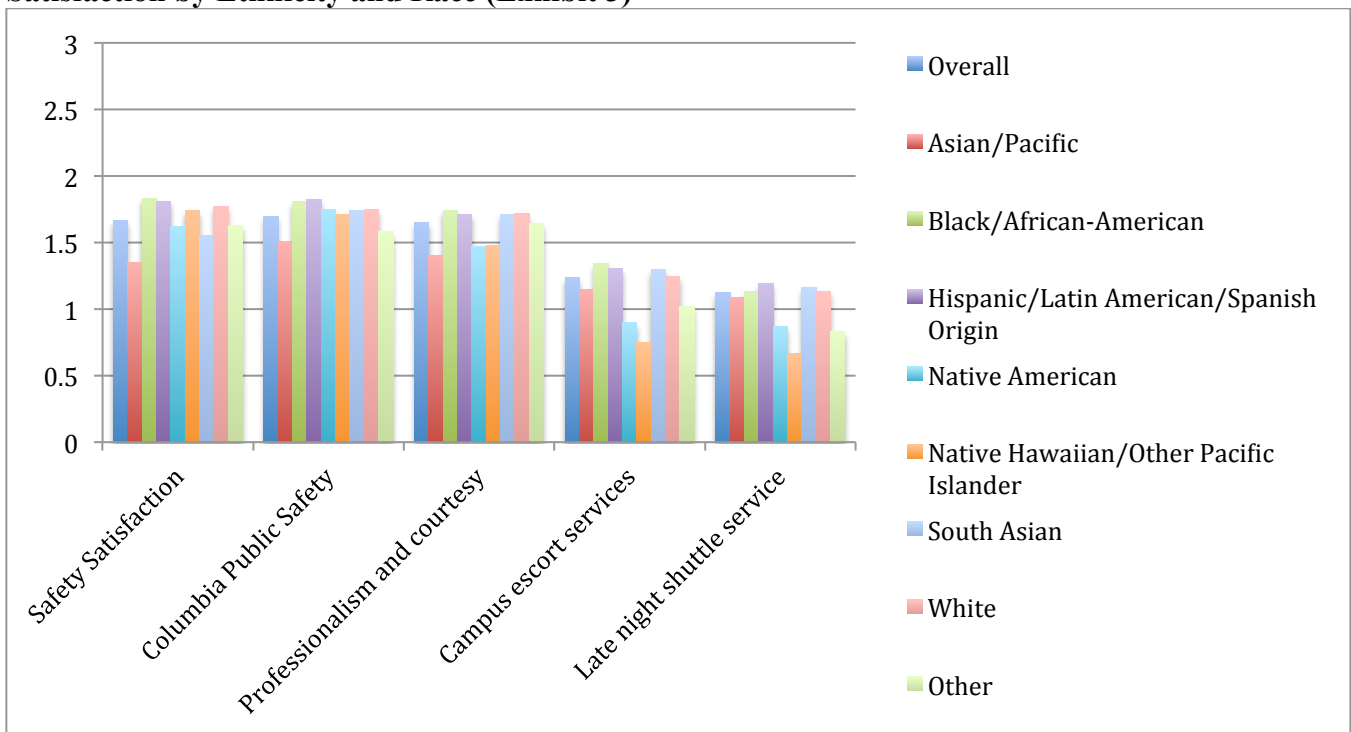
This scatterplot depicts safety satisfaction of students from different schools, as well as how important they deem safety to their quality of life. Importance is on a scale of 0 to 2 (for “not important,” “somewhat important,” and “very important”), and satisfaction is on a scale of -3 to 3 (with -3 being “very dissatisfied,” 0 being “neutral,” and 3 being “very satisfied.”). In the lower right quadrant, we see schools whose students feel that safety is more important, but who are nevertheless less satisfied. These schools, which are the medical campus schools plus JTS, are marked in red. Conceptually, resources should be distributed such that schools that deem safety more important receive more support.

Satisfaction by Degree Type (Exhibit 2)



Satisfaction is on a scale of -3 to 3, with -3 being “very dissatisfied,” 0 being “neutral,” and 3 being “very satisfied.” Note that graduate students are about 0.75 points less satisfied with safety than undergraduates. Differences are less pronounced with regards to the sub-categories of safety.

Satisfaction by Ethnicity and Race (Exhibit 3)



Satisfaction is on a scale of -3 to 3, with -3 being “very dissatisfied,” 0 being “neutral,” and 3 being “very satisfied.” Note that Asians are about 0.5 points less satisfied with safety than the overall average. Also note that Native Americans and Native Hawaiians report being about 0.5 points less satisfied with campus escort services and late night shuttle services.

Statistical Analysis

To determine what is driving differences in satisfaction with regards to Safety and Public Safety, we employed regression analysis, a statistical process for estimating the relationships among variables. Regression analysis helps one understand how one variable changes when all other variables are held fixed. In particular, we employed an ordered logistic model, which is particularly appropriate when dealing with variables that are ordered discretely on a scale instead of continuously.

First, we investigated what demographic factors are most strongly correlated with overall safety satisfaction. Demographic factors include:

- Socioeconomic status (10 brackets spanning less than \$15,000/year household income in high school, to more than \$300,001/year household income in high school)
- Whether the respondent is lesbian, gay, bisexual, or transsexual
- Whether the respondent is a parent
- Race/ethnicity
- Whether the respondent attends one of the medical campus schools
- Whether the respondent’s native language is English
- Whether the respondent is an international student
- Degree type (undergraduate, non-PhD graduate student, and PhD student)
- Gender (male, female, or transgender/genderqueer)
- Marital status (single, married, divorced, and widowed)

The analysis isolates the effect of individual variables, revealing statistically significant correlation in the following categories, stated in descending order of magnitude:

- School: Being from the Dental School dwarfs all other effects, and is strongly negative. Students from other medical campus schools (P&S, Nursing, and Public Health) also have lower satisfaction with safety, all else being equal.
- Gender: Females have lower satisfaction.
- Degree type: PhD students and non-PhD graduate students have lower satisfaction.
- Race: Asians and Pacific Islanders have lower satisfaction. Blacks, Hispanics, and Whites have higher satisfaction.
- Marital Status: Married individuals have lower satisfaction.

All other variables are statistically insignificant at the p -value = 0.05 cutoff.¹ In simple terms, this means that the isolated effects of other variables have a greater than 5% chance of being random statistical noise.

¹ We used Stata’s robust standard errors option to obtain conservative estimates of significance.

Given that it is possible that much of safety satisfaction is outside of Columbia's control, we then turn to an analysis to a sub-question, which asks one's satisfaction with Public Safety. Looking at demographics once more, we find correlation in the following categories, stated in descending order of magnitude:

- Race: Being Asian has the single largest effect on satisfaction with Public Safety. This effect is negative. Being Hispanic or of Latin American/Spanish origin has a positive effect.
- International students are more satisfied.
- Degree type: non-PhD graduate students are less satisfied.

Note that those who identify as transgender or genderqueer may be even less satisfied than those who are Asian, all else being equal—however, this is only statistically significant at a p-value = 0.10 level.

To find what might lead to these discrepancies in satisfaction with Public Safety, we add in the other Safety sub-questions, which cover satisfaction with the “professionalism and courtesy of Public Safety employees and contractors,” “campus escort services,” and “late night shuttle service”. We also add in the results of a five-question scale how often one feel discriminated against. The statistically significant variables, stated in descending order of magnitude, are:

- Professionalism and courtesy of Public Safety employees and contractors is by far the most important variable, with increased satisfaction in this one variable driving up satisfaction in Public Safety.
- Marital status: Widowed students are less satisfied. Note that this likely does not affect many—widowed students make up only 0.1% of our sample.
- Satisfaction with campus escort services is positively correlated, and satisfaction with late night shuttle service is also, to a lesser degree. This is expected, as people who are happier with some Public Safety services should be happier with Public Safety overall.
- Degree type: PhD and non-PhD graduate students are less satisfied.

Discussion

Note that after introducing the sub-questions, the statistically significant differentials in satisfaction we noticed with regard to race and whether one is an international student dropped off. Thus, this suggests that those populations are treated differently in the professionalism, escort, and/or shuttle service categories. Given that professionalism is the most impactful variable, our hypothesis is that for some reason, Asians perceive that Public Safety is treating them less courteously, whereas the opposite is true for Hispanics and international students.

However, being a graduate student is correlated with lesser satisfaction even after controlling for sub-questions, discrimination, and whether one is at the medical campus. Given that our sub-question only covered two Public Safety services (escort and shuttle), one hypothesis is that graduate students do not have comparable access to some other important Public Safety service relative to undergraduates.

Thus, possible action items include:

- Studying Public Safety and security contractor interactions towards students of different races, particularly those who identify as Asian or Pacific Islander.
- Exploring how Public Safety services can be made more relevant, accessible, or widely known to graduate students.

Any questions, comments, or concerns related to this analysis can be directed to the co-chairs of the University Senate's Student Affairs Committee, Matthew Chou (mc3429@columbia.edu) and Akshay Shah (ars2212@columbia.edu).