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Starving Scholarship – An Examination of Student Poverty at BGSU

Honors Project Report

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ABSTRACT

This project sought to study issues of student poverty within the BGSU student population. To accomplish this, a survey was developed to gather data on student employment, material hardship, and financial status. The survey returned 1,502 responses, equating to a response rate of approximately 5%. Students reported substantial levels of financial anxiety across class standing and employment status, and a sizable minority reported frequently being unable to purchase basic necessities such as groceries, sanitary products, and laundry services. Though most respondents (71.69%) identified as female, enough identified as male to allow for a comparison between the reported financial anxiety and status of these two groups. Female respondents reported substantially higher anxiety levels than males, while financial status and employment outcomes were roughly identical between these groups. This study identifies several areas where further study and analysis is warranted, and the results provide university administration with some information with which to ameliorate some problems/hardship faced by the BGSU student population.

INTRODUCTION

The idea behind this project originated during an Honors project development seminar, in which we were asked to identify potential topics for our projects. Although it is apparently and evidently difficult to examine student poverty, attempting to do so seemed the most compelling direction to take with this project. The practical goals of this project were to assess the overall prevalence of student poverty at BGSU and produce results that would be of some use to university administration, in terms of ameliorating the issues assessed by this study.

There have been a number of studies on student poverty and related issues among students at a number of colleges (Goldrick-Rab et al. 2015; Martinez et al. 2016). However, a broad-scale survey designed to gather student poverty-related information from BGSU students has not been previously attempted. There have been some prior studies on food insecurity among BGSU students, but these did not attempt to study broader economic issues faced by students (Koller 2014). We are aware of some adverse effects of poverty within the general population, but it is difficult to apply traditional, income-based poverty measures to students (Haveman 2009). For the purposes of this study, the following four dimensions define student poverty: food insecurity, housing insecurity, personal debt, and non-academic workload. A student who is doing well across all four of these dimensions would be of little concern, at least from an economic perspective. A student who is seriously struggling on even one would be of some concern; a student doing poorly across all of them would be of serious concern. This study attempts to gather and analyze more comprehensive information on students' overall economic status. It serves as a necessary precursor to the development of a widely-applicable measure of student poverty.

Development of this measure would allow for a more methodical and potentially more effective means of determining which students should be of greatest concern to university administration. University and community services, such as food pantries, would almost certainly be better utilized if students who were found to be struggling were specifically targeted and informed about the availability of such services. There are also potential implications regarding student retention; a link between food insecurity and reduced grade-point average has been established by prior research within the University of California system (Martinez et al. 2016). Further, issues related to poverty have been shown to produce disparate academic outcomes at every level of education (Lacour & Tissington 2011). As mentioned before, this study seeks to provide the information necessary for university administrators to effectively address issues related to student poverty. The rest of this report discusses the extant literature on this subject, the way in which the research was conducted, and the outcomes of said research.

LITERATURE REVIEW

Goldrick-Rab, Sara, et al. Hungry to Learn: Addressing Food & Housing Insecurity Among Undergraduates. 2015, pp. 1–21, Hungry to Learn: Addressing Food & Housing Insecurity Among Undergraduates.

This research, conducted by the Wisconsin HOPE Lab, involved distributing a survey to students at 10 participating community colleges. This survey asked questions pertaining to the students' food & housing security, as well as their mental status. For their assessment of food security, they asked six standardized questions from the USDA, and found over 50% of students faced some level of food insecurity. 21% faced "very low" food insecurity. Likewise, over 50% of students surveyed faced some level of housing insecurity, with 13% dealing with issues of

homelessness. It also found, unsurprisingly, that students facing these food and housing security issues had great instances of mental health challenges than those who did not face such difficulties. This research also showed that most community college students do not receive public assistance of any form, due to more restrictive rules surrounding qualification for such assistance. Like a majority of research on student poverty, it focuses primarily on community colleges. The prevalence of similar issues at four-year colleges remains understudied. Likewise, the appropriate response to that level of prevalence is dependent on it. This research recommends several actions college professors and administrators might take, but without research to inform those actions, they're liable to utterly fail in solving the issue at hand.

Griffin, Keith. "Problems of Poverty and Marginalization." Workingpaper Series, no. 51, Oct. 2000, pp. 1–29.

This article, written by a Distinguished Professor of Economics at the University of California Riverside, starts out with the bold claim that neoclassical economics has no conception of poverty. It goes on to provide a historical overview of the conceptions of poverty by Adam Smith, Karl Marx, and Thomas Carlyle, who all adopted reasonably similar conceptions of poverty. Their overarching idea was that poverty was relative to the society an individual found themselves in. The paper goes on to discuss income poverty, and some issues with measuring poverty based purely on income, such determining how the size of a household changes the level of income below which it is considered in poverty. Some societies lack a concept of income altogether, limiting the international applicability of these measures. Of particular interest to this research is the "Poverty and marginalization in rich countries" section of this paper. In this, Griffin discusses how there is ample evidence that poverty in the United States is disproportionately concentrated to "members of racial or ethnic minorities," along with

uneducated workers. This seems at odds with the idea of students being in poverty, but it seems important to acknowledge that until college graduation, students only have a high school level of education. The remainder of the paper discusses some potential policy solutions to mitigate poverty, which may be applicable in the discussion portion of my project.

Haveman, Robert. "What Does It Mean to Be Poor in a Rich Society?" Focus, vol. 26, no. 2, 2009, pp. 81–86.

This article, written by a Professor of Economics and Public Affairs Emeritus at the University of Wisconsin-Madison, provides an overview of the concept of poverty, the official poverty U.S. poverty measure, and the issues with measuring economic poverty. It goes on to discuss several alternative measures of poverty, noting pros and cons of each. Beyond poverty, the author also discusses some proposed multi-dimensional measures of deprivation, including proposals in the United Kingdom and European Union to measure poverty alongside social exclusion. He goes on to propose a multi-dimensional examination of poverty in the United States, looking at factors of deprivation beyond income (minimum standards of food and shelter, ability to access and participate in the labor market, etc.). This is consistent with other works proposing a reexamination of how poverty is measured, and representative of an apparent trend in academic poverty literature.

Lacour, Misty, and Laura D. Tissington. "The Effects of Poverty on Academic Achievement." Educational Research and Reviews, vol. 6, no. 7, July 2011, pp. 522–527.

This paper outlines evidence for poverty's negative impact on academic achievement in children, from kindergarten to high school aged; it concludes the achievement gap between students who are poor/impoverished and students who are not is supported by ample evidence.

The authors discuss several factors contributing to this achievement gap, including familial education levels, public assistance, government policies, and community attitudes toward education. It cites ample research indicating that children on welfare tend to do more poorly in school. Interestingly, it finds a great deal of support for the mother's education level having a significant effect on children's academic achievement. This effect may be worth further exploration in my project. Moving right along, the article discusses the observed and negative impacts of the "No Child Left Behind" policy, instituted by the Bush administration, on low-income school districts. Lastly, the article discusses ways a negative community attitude towards formal education impacts student achievement, and potential means of addressing that attitude (community outreach, etc.). This article relates to my project quite nicely, as one of my project's goals will be to examine correlations between student poverty and academic/demographic factors, using grade point average as a gauge of overall academic performance. Extending the examination of poverty's adverse academic impacts to the university level will prove useful to university educators and administrators in their efforts to combat the issue of poverty on and off college campuses.

Martinez, Suzanna M., et al. Student Food Access and Security Study. University of California, 2016, pp. 1–26, Student Food Access and Security Study.

This research concerns food insecurity among students within the University of California system. In an effort to better understand the scope of this issue, the UC Food Access and Security group distributed a survey to all universities within the UC system, with a response rate of 14%. This survey, along with the Wisconsin HOPE Lab survey, used standard USDA questions to assess food insecurity among students. It may be prudent to incorporate those in my project, for consistency with other literature on this subject. Of those who responded, 42%

indicated some level of food insecurity. As the inability to afford food is an obvious indicator of underlying issues of student poverty, such a prevalence of food insecurity within numerous four-year colleges gives a strong indication that this issue exists at more traditional four-year institutions, and not just community colleges. This survey also found students who reported food insecurity to have lower grade averages, and that undergraduate students were more likely to be food insecure. This may be a result of the survey responses mostly coming from undergraduates (73%). It also found that Hispanic and non-Hispanic Black students experienced higher prevalence of food insecurity, but that food insecurity did not vary based on gender.

METHODOLOGY

Information gathering of data related to student poverty was accomplished using a 13-question survey instrument, which was electronically distributed to every single BGSU student via email. All BGSU student email addresses were retrieved from the BGSU campus directory, which is public information. These emails were compiled (rather painstakingly) into a contact list for distribution purposes. Due to the manner in which these email addresses were gathered, it was not possible to distinguish between undergraduate and graduate/doctoral students in the distribution of the survey instrument. Further, it became necessary to send an anonymous link to each individual student, as a result of some fundamental limits within Qualtrics (the service used to construct the electronic survey). After the instrument was constructed, necessary documentation for IRB approval was created and submitted. Once approval for this project was granted, email distribution began in clusters of roughly 8000 students at a time (a BGSU email address can only send that many emails in one day).

Results were collected over a period of two weeks, from April 22nd to May 5th. Most of the analysis within the “RESULTS” section was done through Qualtrics, which allows users to break down response data by responses. For example, a user can examine differing responses to various survey questions by class standing, gender, employment status, or other factors. When this proved insufficient (particularly when outliers needed to be removed), the data was exported into Excel, and analyzed through that program. Most of the analysis of the survey data has occurred at the univariate or bivariate levels. Future, more intense, multivariate analysis remains a goal of this research, though not one compatible with the time constraints currently being negotiated. Regardless, this project and the survey instrument used for data gathering have produced some interesting results.

RESULTS

The survey instrument returned 1,502 responses from 33,671 emails distributed to BGSU students. This equates to a response rate of approximately 5%. The response rate may have been biased downward by the manner in which email addresses were gathered; there is no way to distinguish between current and former BGSU students within the campus directory, so a number of former students were likely emailed. Regardless, the unprecedented number of responses allows for a reasonably substantial analysis of the information returned from this survey. The following subsections will break down the differences in responses by various self-reported groups, wherever possible and interesting.

Class Standing

An overwhelming majority of respondents (82.16%, n=1,129) reported themselves as being undergraduate students, which is roughly consistent with the proportion of undergraduate

to graduate students at BGSU. Respondents of higher class standing (seniors or graduate students) reported working at greater proportions than underclassmen (freshman or sophomores) did. Figure #1 (see Appendix) summarizes this change in further detail. There was a notable difference in the proportion of sophomore/junior respondents compared to that of freshmen/seniors, though there is not apparent reason for this disparity. Among those who reported their typical monthly salaries, there was a similar trend. On average, respondents who reported higher class standing reported earning more (see figure #2). Important here is an understanding of the survey instrument's design. To assess approximate monthly salaries, respondents who responded "Yes" to question #6 (employment) were asked to submit it into the text box provided within the survey. Some potential misunderstanding of the question (discussed later on in the aptly named "Discussion" section) may have led to respondents reporting absurdly high monthly incomes (e.g. \$73,000, \$53,000). These outliers have a fairly substantial effect on the means for each class, and contributed to wildly high standard deviations within each class.

A trimmed mean analysis was used to account for these outlier reports. Monthly incomes reported at \$10,000 or above were removed based on the assumption that those reporting said values misunderstood the question. This analysis (see figure #3) showed substantially higher average incomes for underclassmen than previously reported, and the difference in reported salaries becoming far less pronounced. Similarly, respondents were asked to report their typical monthly working hours, and some outliers were found (see figure #4). When these were removed from the data set (see figure #5), the difference in average hours worked between different classes decreased dramatically. According to this analysis, the typical college student who works (regardless of their class standing) works between 10-20 hours a week. A perfectly reasonable result, given the time constraints associated with college classes and schedules.

Undergraduates reported being unable to purchase basic necessities at a far greater proportion than graduate or doctoral students. This is particularly pronounced for freshman, 30% of whom reported being unable to purchase basic necessities twice a week or even more frequently. By contrast, only 11% of graduate or doctoral students reported facing this issue with a similar frequency. Though the vast majority of respondents from every class reported being unable to purchase necessities as either never occurring at all or occurring infrequently, undergraduates still seem to face this particular problem at a greater rate than graduate students (see figures #6 and #7).

Curiously, the frequency of reported financial anxiety was rather high, and fairly consistent between different classes. Nearly 50% of students reported experiencing anxiety about their financial situation on a weekly basis or more frequently (see figure #8). The question did not assess the level of this anxiety, but these results indicate anxiety (at least related to financial status) is quite prevalent throughout the BGSU student body. There is no apparent relationship between the level of financial anxiety between classes and the frequency at which they report finding themselves unable to purchase basic necessities. However, there is an apparent negative relationship between the levels of personal debt and the inability to purchase basic necessities. As levels of personal debt rise, the inability to purchase basic necessities decline, potentially indicating that students are using debt to finance the purchase of said necessities. A more in-depth analysis will take place in the future to determine the true strength and significance of this apparent relationship.

Gender

There was a sharp difference in survey respondents by gender. 25.75% (n=333) respondents indicated they were male, while 71.69% (n=927) indicated they were female. The

remaining 2.54% (n=43) indicated they were transgender, non-binary, or had another gender identity. Due to the comparatively small sample of respondents within the last categories, it would not be reasonable to conclude anything from an analysis of these responses. The responses from males and females, however, can be reasonably compared simply due to the number of responses received being much closer to a representative sample. Males and females reported roughly identical grade point averages. Although there were some outliers in each sample's data, as a result of the grade point average being a submission box, removing these outliers had no measurable effect on the average grade point average for either group. Each self-reported grade point average appeared rather high; it seems unlikely that the average BGSU student has roughly a 3.5. This could indicate some sort of bias in the collection of this information.

A higher proportion of females (69.73%) than males (65.96%) reported that they were currently employed. This result may reflect the fact that there were simply more female respondents than male, resulting in the female respondents being a more representative sample of female BGSU students. That said, the difference in employment by gender was not particularly stark. The average monthly income by gender was remarkably close, with females (\$826.67) ever so slightly higher than males (\$823.78). In addition, the number of hours worked by male and female respondents were virtually identical (see figure # 12). Both worked approximately 67 hours a month, translating to 10-20 hours per week. The consistency of these results seems to indicate that behaviors and choices related to employment are relatively consistent between male and female students.

A greater proportion of female respondents reported frequently experiencing financial anxiety than did male respondents (see figure # 15). The reasons for this difference are unclear, given the proportion of male and female respondents reporting a frequent inability to purchase

basic necessities and high levels of outstanding debt are roughly identical (see figure # 16 and figure # 17). A cursory examination of psychological literature suggests that anxiety disorders are more prevalent among women than men; that difference in prevalence by gender may contribute to this result (McLean et al. 2011). This relatively substantial difference in anxiety levels between genders is one of the more interesting results found in this study, and may indicate that adverse mental health effects associated with financial or material hardship propagate disproportionately across gender lines.

Employment

Overall, 68.17% of respondents reported that they currently work. The survey instrument did not ask respondents to specify whether they worked on or off-campus, or whether respondents engaged in any unpaid labor; this matter will be discussed further in the discussion section. A much greater proportion of respondents who were working reported receiving no financial assistance from their families (48.3%) than respondents who reported not working (30.46%), indicating, to some extent, that students who receive financial assistance substitute that “income” for that they would gain via employment. Those who receive no assistance compensate for that in some sense, by choosing to work. The rate of employment among respondents increases as they move up in class ranks (see figure #1), and the proportion of students living off-campus increases simultaneously and dramatically with class standing (see figure # 21). These trends imply a fairly logical financial progression: students start their undergraduate careers on campus, and transition to living off-campus as they progress. To compensate for the additional costs associated with living off-campus, and the lack of a meal plan, they tend to start working in order to afford groceries and other basic necessities.

A substantially higher proportion of those who reported working reported substantial levels of personal debt than those who did not report working (see figure # 22 and figure # 23). This difference could indicate that employed students are more willing to take on personal debt, on account of their potential ability to pay it using their income. Those who are not working seem less willing to take on personal debt, based on their survey responses; they may also be unable to access credit due to their apparent lack of steady employment. Interestingly, working respondents reported frequently experiencing financial anxiety at a much greater rate than non-working respondents (see figure # 24). This is potentially attributable to working respondents' relatively higher levels of personal debt; there has been a reasonable amount of literature establishing the link between personal debt and anxiety levels (Drentea 2000). The difference in anxiety levels may also be related to the different living situations experienced by upperclassmen, who report working at substantially higher rates than underclassmen (see figure #1). Future analysis of this connection should shed further light on how these variables interact.

DISCUSSION

To reiterate, the two primary goals of this study were to assess the overall prevalence of student poverty at BGSU and produce results that would be of some use to university administration, in terms of ameliorating the issues assessed by this study. The results indicate that the majority of BGSU students are not in serious financial distress and do not suffer from extreme material hardship. Most do not have unreasonable levels of personal debt, most rarely find themselves unable to purchase necessities, and a majority receive at least some financial assistance from BGSU or their families. There is, however, a sizable minority that indicated they regularly suffer from these issues. Further, the results indicate that working students and females

are more likely to suffer from anxiety related to their financial situations, although anxiety levels remain fairly consistent across class standing.

From an administrative perspective, specifically reaching out to the aforementioned demographics would seem the most productive way of rendering assistance to, or increasing service utilization by, those students. Anxiety has a serious negative impact on academic performance and overall health; this impact can be magnified by similar negative impacts associated with financial and material hardship associated with poverty (Lacour & Tissington 2011; Owens et al. 2012). It would seem a reasonable aim of university administration to attempt to mitigate these effects, which could be accomplished by encouraging the utilization of student mental health services (e.g. the BG Counseling Center). Doing so (to a greater extent than is already done, or in a more targeted manner) would likely have an impact on student retention. The precise impact such actions have could be explored through further research.

Limitations

This study had a number of technical, methodological, and fundamental limitations. First, the data used in this study was gathered through a survey instrument. These suffer from inherent issues of unreliability. One particular area highlighting this fundamental issue was the grade point average response in this study. The average grade point average, according to respondents, was roughly 3.5/4, placing the typical respondent on the dean's list. Further, approximately 22% of people who responded to the grade point averages question reported they had a perfect 4.0. It seems highly unlikely that these responses reflect a representative sample of BGSU students. This apparent upward bias may have several sources: respondents may not have been honest, or respondents may be a self-selecting sample of the student body with higher than average grade

point averages. It is unclear to what extent the inherent biases associated with survey data collection affected the results of this or any other question.

In addition to these potential biases, there were technical issues with the survey itself. First, it was not possible to send out every email to all BGSU students simultaneously. These emails were sent out in clusters of around 8000, though it is not clear how this method of distribution might have biased the responses or response rate. Another technical issue occurred with question #4, which asked respondents to identify their race. Respondents were supposed to be able to select multiple racial identities in order to more accurately define themselves along that dimension, but were only able to select one category once the survey was published. This may have resulted in substantial bias regarding racial categories, and was the primary reason the survey results were not broken down by race. In any event, respondents overwhelmingly identified themselves as “White/Caucasian,” making it difficult to justify comparing results between racial groups (see figure # 25). It is not reasonable to compare a sample of 1121 to a sample of 4. Future research should account for these issues and results, and strive to obtain as representative a sample as possible in order to accurately analyze the issues of poverty by race.

There are a number of changes to the survey instrument (found in Appendix) that might have produced some additional interesting information. First, it would seem prudent to add a question gauging the perceived quality of housing students find themselves in. Such a question could attempt to determine the prevailing quality of housing students find themselves in, and see if there are any disparities in perceived housing quality by demographic factors. It would also be beneficial to add a survey question asking if (and to what degree) respondents receive financial assistance in any form from the government. This question would allow for a more thorough understanding of how students receive financial support. Further, it might be interesting to break

down student employment by on-campus and off-campus jobs, allowing for an exploration of how these differing modes of employment are related to student outcomes.

Generally speaking, there were several issues with survey design that future studies ought to take into account and correct. In an ideal world, the survey would be set up so respondents had to complete each question in its entirety in order to submit their survey. Doing so would reduce the differences in response rates between questions, as the number of people answering each question would be identical to the number of complete responses. Unfortunately, requiring respondents to answer each question is made complicated by IRB regulations on survey-based human research. It remains challenging to avoid outliers in any questions requiring respondents to type in their responses, as these questions can be misinterpreted fairly easily. Still, they could be structured to garner more accurate and relevant responses. In this case, the income and hours-worked questions might be better phrased in weekly terms. This would seem to be more in line with how periodic working hours and income are conceptualized.

CONCLUSION

This project surveyed a substantial number of BGSU students, gathering useful information about their financial and material status. Although there were several limitations in the analysis of the data, due to time constraints, responses to various questions, and issues of survey design, the survey still returned useful information about the prevalence of financial anxiety within the BGSU student population. Further, this study highlighted potential relationships between anxiety and gender, as well as anxiety and level of personal debt among respondents; curiously, there is no obvious relationship between financial anxiety and the frequent inability to purchase basic necessities. It also showed how employment status among

students tends to change over the course of their academic careers, and the employment status of students is functionally identical when examined by gender.

Beyond these empirical results, the study serves as an exploration of this issue within the BGSU student body, and a potential starting point for further research on this subject. Future researchers may find the information garnered about BGSU students, as well as the explanation of how this information was obtained, valuable. Future multivariate analysis of this dataset may yield interesting trends among the surveyed demographics, and produce actionable information for university administration at BGSU. More broadly, this research will hopefully inspire similar examination of student poverty at other universities within Ohio and around the United States. A problem can't be addressed until it's understood.

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Appendix Part A: Figures & Visualizations

Figure #1: Percent working by class standing

| <i>Class Standing</i> | <i>Percent Working</i> |
|-----------------------|------------------------|
| <i>Freshman</i> | 47.9592 |
| <i>Sophomore</i> | 61.6114 |
| <i>Junior</i> | 69.8347 |
| <i>Senior</i> | 74.8387 |
| <i>Graduate/Ph.D</i> | 89.4068 |

Figure #2: Raw self-reported monthly incomes

| # | Field | Minimum | Maximum | Mean | Std Deviation | Variance | Count |
|---|------------------------------|---------|----------|---------|---------------|-------------|-------|
| 1 | Freshman | 0.00 | 8000.00 | 528.06 | 774.75 | 600244.14 | 125 |
| 2 | Sophomore | 0.00 | 5000.00 | 495.31 | 680.01 | 462407.90 | 115 |
| 3 | Junior | 1.00 | 5200.00 | 674.13 | 828.89 | 687063.37 | 162 |
| 4 | Senior | 0.00 | 53000.00 | 965.18 | 3701.09 | 13698047.47 | 220 |
| 5 | Graduate or Doctoral Student | 1.00 | 73000.00 | 2963.36 | 9216.24 | 84939082.19 | 195 |

Figure #3: Trimmed self-reported monthly incomes

| <i>Class Standing</i> | <i>Mean Monthly Income (Trimmed)</i> |
|-----------------------|--------------------------------------|
| <i>Freshman</i> | \$703.28 |
| <i>Sophomore</i> | \$893.46 |
| <i>Junior</i> | \$799.12 |
| <i>Senior</i> | \$863.13 |
| <i>Graduate/Ph.D</i> | \$902.17 |

Figure #4: Raw self-reported monthly hours worked

| # | Field | Minimum | Maximum | Mean | Std Deviation | Variance | Count |
|---|------------------------------|---------|---------|--------|---------------|----------|-------|
| 1 | Freshman | 0.00 | 216.00 | 55.73 | 40.51 | 1641.38 | 123 |
| 2 | Sophomore | 5.00 | 230.00 | 52.87 | 40.67 | 1653.73 | 117 |
| 3 | Junior | 4.00 | 1000.00 | 64.46 | 84.56 | 7149.80 | 164 |
| 4 | Senior | 0.00 | 400.00 | 66.64 | 52.67 | 2773.65 | 218 |
| 5 | Graduate or Doctoral Student | 10.00 | 1600.00 | 111.66 | 161.04 | 25933.34 | 199 |

Figure #5: Trimmed self-reported monthly hours worked

| <i>Class Standing</i> | <i>Hours Worked (monthly)</i> |
|-----------------------|-------------------------------|
| <i>Freshman</i> | 63.56 |
| <i>Sophomore</i> | 72.19 |
| <i>Junior</i> | 64.16 |
| <i>Senior</i> | 66.52 |
| <i>Graduate/Ph.D</i> | 71.59 |

Figure # 6: Percent reporting frequent material hardship by class standing

| <i>Class Standing</i> | <i>Percentage Reporting Frequent Issues Purchasing Basic Necessities</i> |
|-----------------------|--|
| <i>Freshman</i> | 30.0781 |
| <i>Sophomore</i> | 26.6667 |
| <i>Junior</i> | 19.4915 |
| <i>Senior</i> | 24.3151 |
| <i>Graduate/Ph.D</i> | 10.9589 |

Figure #7: Visualization of responses to question #11 (frequency of inability to purchase basic necessities)

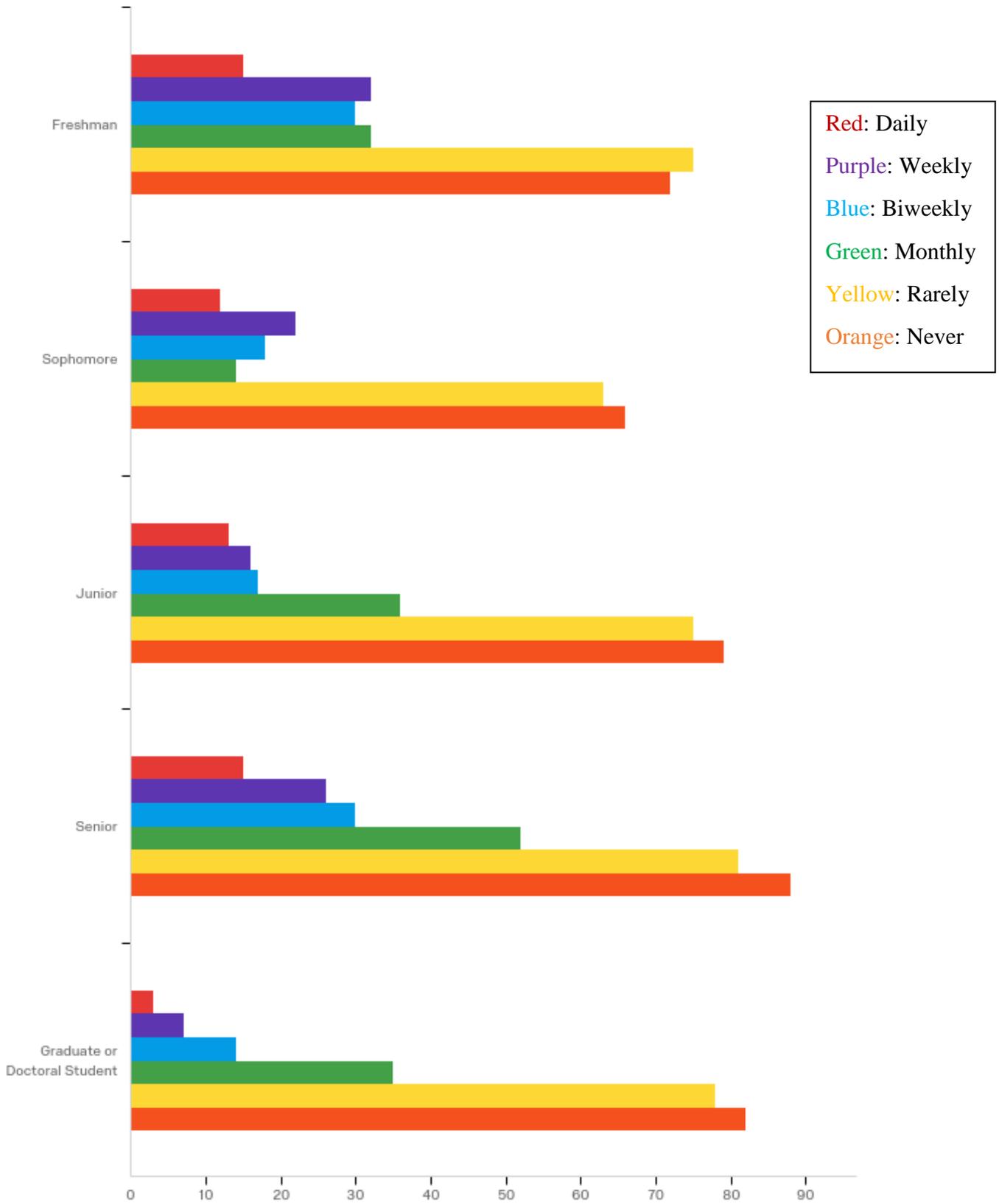


Figure #8: Frequency of financial anxiety by class standing

| <i>Class Standing</i> | <i>Percent Frequently Experiencing Financial Anxiety</i> |
|-----------------------|--|
| <i>Freshman</i> | 47.6562 |
| <i>Sophomore</i> | 52.3077 |
| <i>Junior</i> | 48.3051 |
| <i>Senior</i> | 47.9452 |
| <i>Graduate/Ph.D</i> | 47.0319 |

Figure #9: Visualization of responses to question #12 (frequency of finance-related anxiety)

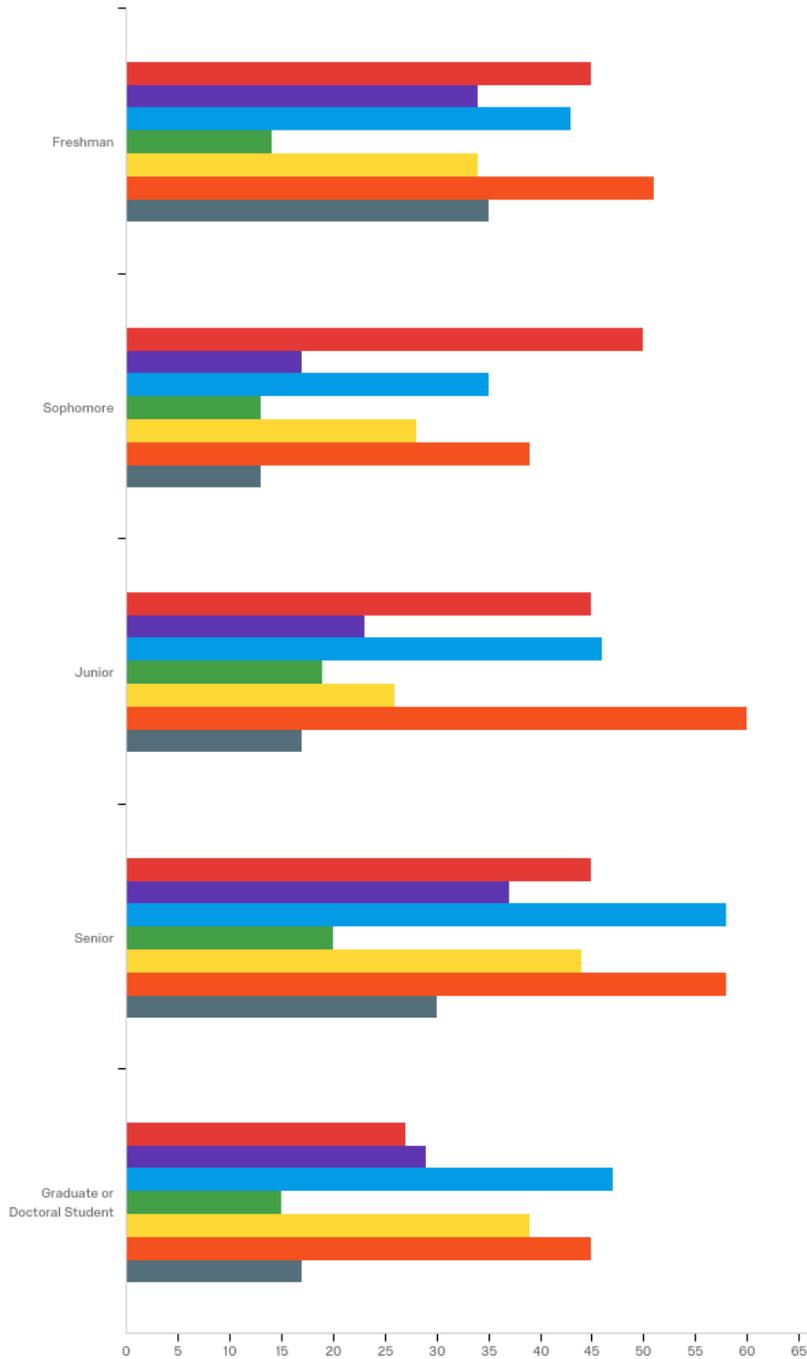


Figure # 10: Prevalence of differing genders among respondents

| # | Field | Choice Count |
|---|-------------|--------------|
| 1 | Male | 25.75% 333 |
| 2 | Female | 71.69% 927 |
| 3 | Transgender | 0.15% 2 |
| 4 | Non-Binary | 1.93% 25 |
| 5 | Other | 0.46% 6 |
| | | 1293 |

Figure # 11: Self-reported GPA's by gender

| # | Field | Minimum | Maximum | Mean | Std Deviation | Variance | Count |
|---|-------------|---------|---------|------|---------------|----------|-------|
| 1 | Male | 1.50 | 4.30 | 3.43 | 0.53 | 0.28 | 330 |
| 2 | Female | 0.00 | 5.00 | 3.55 | 0.50 | 0.25 | 914 |
| 3 | Transgender | 3.11 | 4.00 | 3.55 | 0.45 | 0.20 | 2 |
| 4 | Non-Binary | 2.90 | 4.00 | 3.45 | 0.35 | 0.13 | 24 |
| 5 | Other | 0.00 | 4.00 | 3.07 | 1.45 | 2.09 | 6 |

Figure # 12: Percentage of respondents working by gender

| <i>Gender</i> | <i>Percent Working</i> |
|---------------|------------------------|
| <i>Male</i> | 65.96 |
| <i>Female</i> | 69.73 |

Figure #13: Average monthly income by gender

| <i>Gender</i> | <i>Average Monthly Income (trimmed)</i> |
|---------------|---|
| <i>Male</i> | \$823.78 |
| <i>Female</i> | \$826.67 |

Figure #14: Average working hours by gender

| Gender | Average Monthly Hours Worked (trimmed) |
|--------|--|
| Male | 67.71 |
| Female | 67.25 |

Figure #15: Frequency of financial anxiety by gender

| Gender | Percent Frequently Experiencing Anxiety |
|--------|---|
| Male | 40.76 |
| Female | 50.18 |

Figure #16: Visualization of responses to question #11 (inability to purchase necessities) by gender

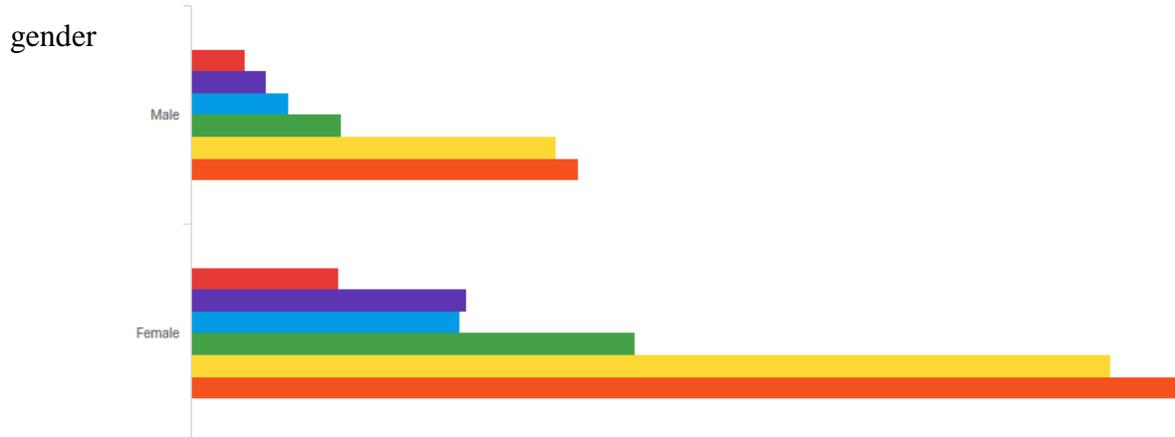


Figure #17: Visualization of responses to question #10 (personal debt levels) by gender

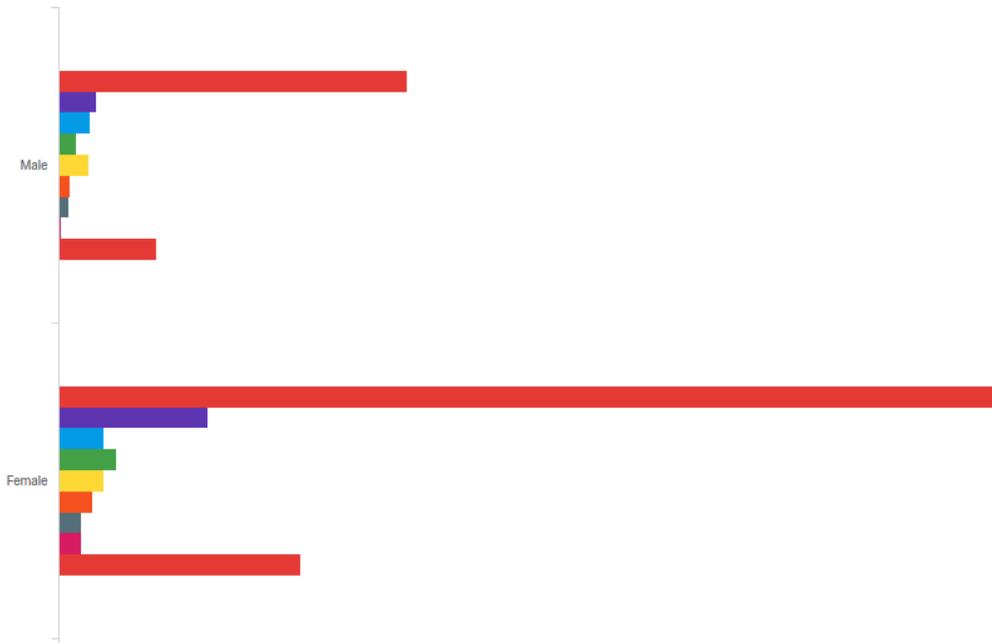
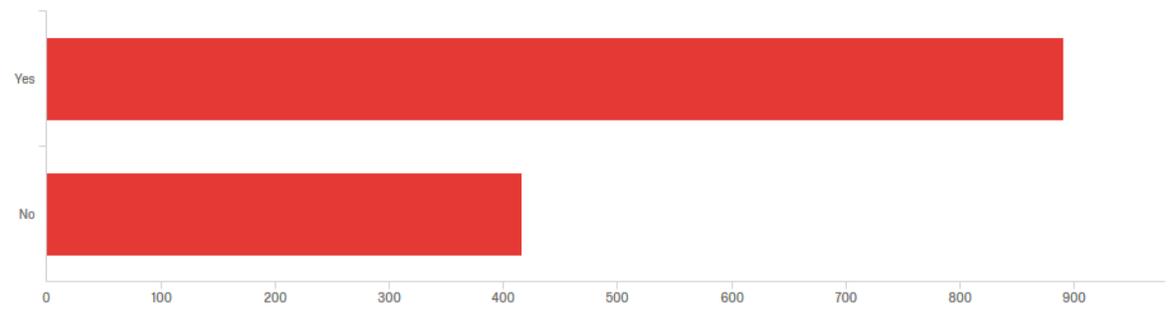


Figure #18: Visualization and table of employment status



| # | Field | Minimum | Maximum | Mean | Std Deviation | Variance | Count |
|---|--|---------|---------|------|---------------|----------|-------|
| 1 | Do you currently work, on or off-campus? | 1.00 | 2.00 | 1.32 | 0.47 | 0.22 | 1,307 |

| # | Field | Choice Count |
|---|-------|--------------|
| 1 | Yes | 68.17% 891 |
| 2 | No | 31.83% 416 |
| | | 1307 |

Figure #19: Visualization of responses to question #7 (familial financial assistance) by employment status

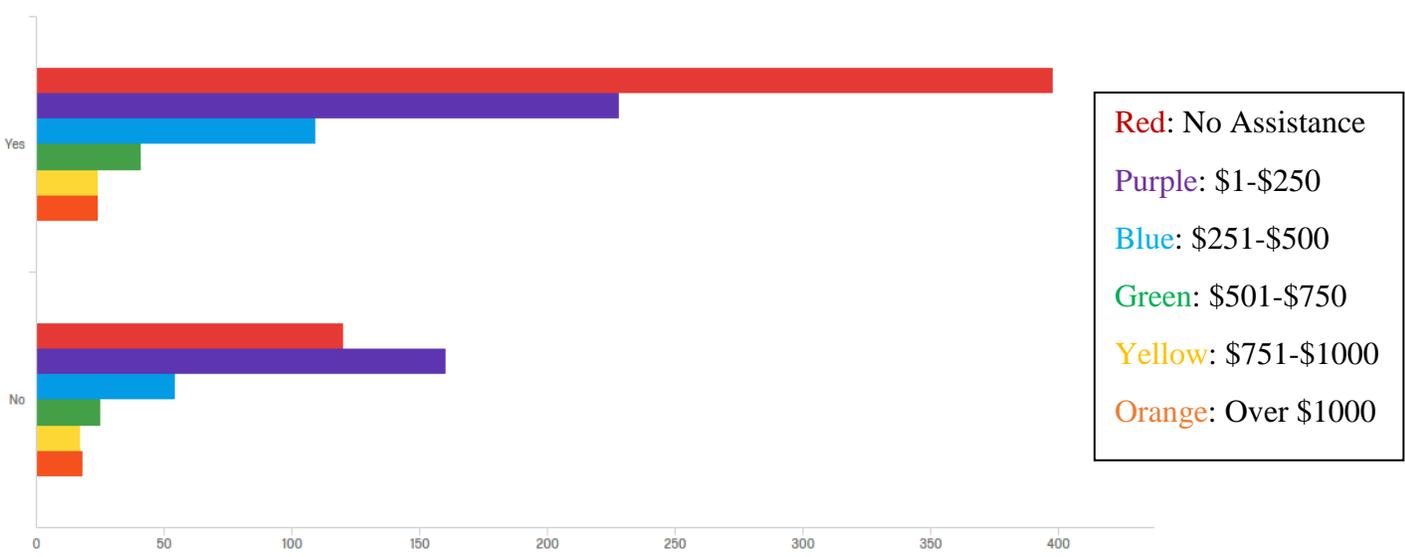


Figure # 20: Visualization of responses to question #8 (living accommodations) by class standing

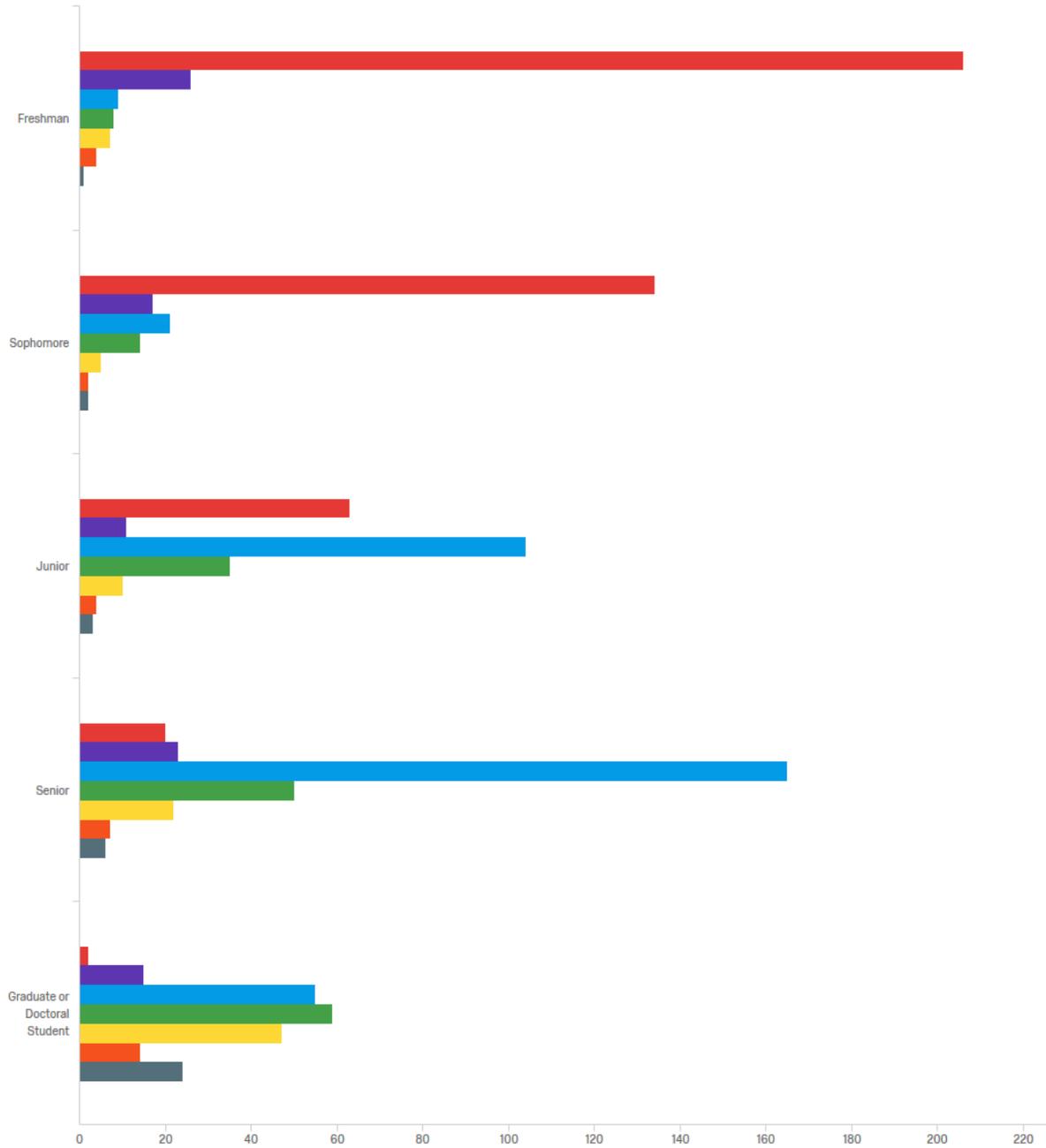


Figure #21: Percentage of students living on-campus by class standing

| <i>Class Standing</i> | <i>Percent Living On-Campus</i> |
|-----------------------|---------------------------------|
| <i>Freshman</i> | 78.93 |
| <i>Sophomore</i> | 68.72 |
| <i>Junior</i> | 27.39 |
| <i>Senior</i> | 6.83 |
| <i>Graduate/Ph.D</i> | 0.93 |

Figure #22: Visualization of responses to question #10 (personal debt levels) by employment

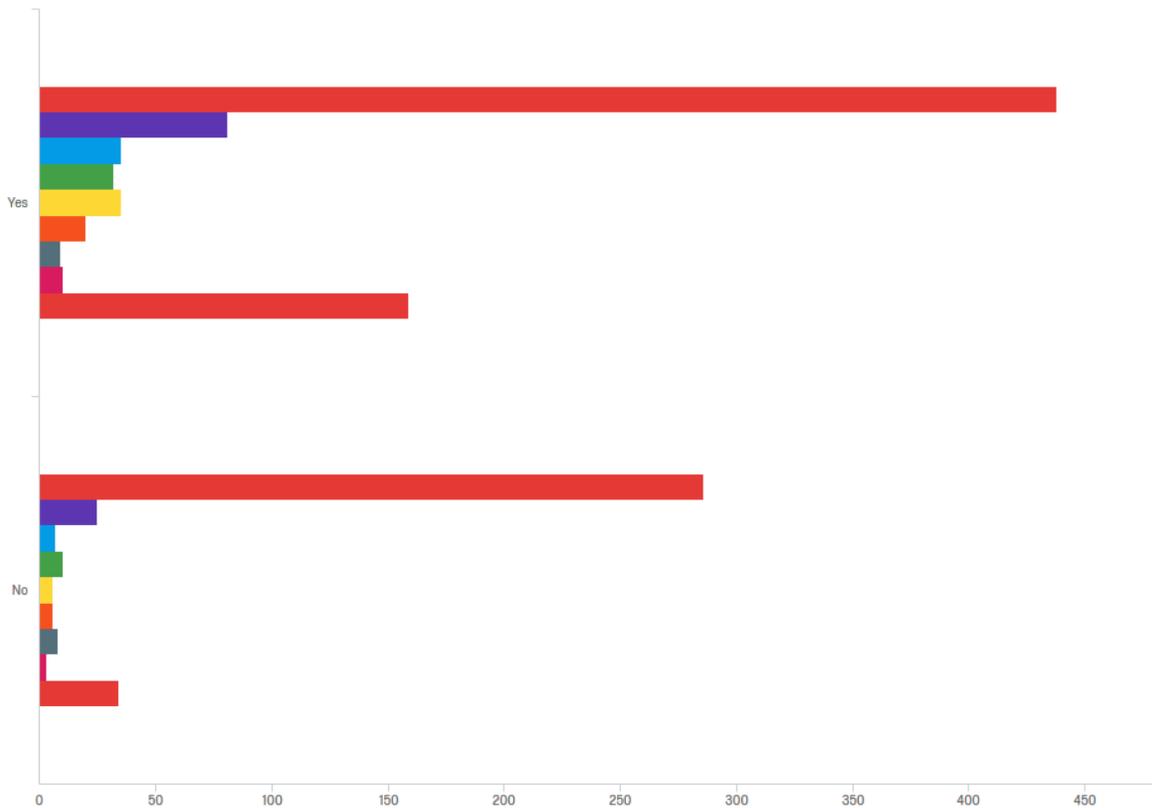


Figure #23: Personal debt by employment status

| <i>Employment Status</i> | <i>Percent with \$3000+ Personal Debt</i> |
|--------------------------|---|
| <i>Employed</i> | 19.41 |
| <i>Unemployed</i> | 8.83 |

Figure #24: Frequency of financial anxiety by employment status

| <i>Employment Status</i> | <i>Percent Frequently Experiencing Financial Anxiety</i> |
|--------------------------|--|
| <i>Employed</i> | 51.77 |
| <i>Unemployed</i> | 41.6 |

Figure #25: Results from question #4 (racial identity)

| # | Field | Choice Count |
|---|------------------------|--------------|
| 1 | White/Caucasian | 85.64% 1121 |
| 2 | Black/African-American | 5.12% 67 |
| 3 | Asian | 2.98% 39 |
| 4 | Hispanic/Latino | 3.06% 40 |
| 5 | Native American | 0.31% 4 |
| 6 | Other | 2.90% 38 |
| | | 1309 |

Appendix Part B: Survey Instrument

Question 1

What is your current age?

- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25+

Question 2

What is your current class standing?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate or PhD Student

Question 3

What is your current cumulative GPA?

- <2.0
- 2.1-2.5
- 2.6-3.0
- 3.1-3.5
- 3.6-4.0

Question 4

What race do you identify as?

- White/Caucasian
- Black/African-American
- Asian
- Hispanic/Latino
- Native American
- Other

Question 5

What gender would you identify as?

- Male
- Female
- Transgender
- Non-Binary
- Prefer not to answer
- Other:

Question 6

Do you currently work, on or off-campus?

- Yes
- No

If yes, what is your typical monthly income during the academic year, and how many hours do you typically work monthly?

[Submission box for income]

[Submission box for hours worked]

Question 7

Approximately what level of financial assistance do you receive from your family for living expenses per month? (E.g. groceries, rent, utilities; NOT tuition & fees)

- No assistance from family
- \$1-\$250
- \$251-\$500
- \$501-\$750
- \$751-\$1000
- Over \$1000/month

Question 8

Do you live off-campus, and if so, how much do you pay for rent per month?

- I Live On-Campus
- \$0-\$200
- \$201-\$400
- \$401-\$600
- \$601-\$800
- \$801-\$1000
- Over \$1000

Question 9

How much do you spend on groceries (food, drinks, household items, etc.) a month?

- \$0-\$50
- \$51-\$100
- \$101-\$150
- \$151-\$200
- \$201-\$250
- Over \$250

Question 10

How much personal debt do you currently owe? (Outstanding credit card balances, personal loans, NOT student loans)

- None
- \$1-\$250
- \$251-\$500
- \$501-\$1000
- \$1001-\$1500
- \$1501-\$2000
- \$2001-\$2500
- \$2501-\$3000
- Over \$3000

Question 11

About how often do you find yourself without enough money to purchase basic necessities (food, sanitary supplies, laundry services, etc)?

- Daily
- Weekly
- Biweekly
- Monthly
- Rarely
- Never

Question 12

Approximately how often do you experience anxiety related towards your financial situation?

- Constantly
- Daily
- Weekly
- Biweekly
- Monthly
- Rarely
- Never

Question 13

Do you receive financial aid from BGSU? If so, how much aid do you receive per semester?

- No financial aid
- \$1-\$1000
- \$1001-\$2000
- \$2001-\$3000
- \$3001-\$4000
- \$4001-\$5000
- Over \$5000/semester