**Financial Aid and Work Hours**

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**EXECUTIVE SUMMARY**

In the fall of 2021, the Sociology/Anthropology 371 course conducted research on student work-study employment at St. Olaf College. We sent an anonymous online survey to 2,249 student employees at St. Olaf College. We received 557 responses, a 24.8% response rate.

Prior studies have examined college student campus employment in terms of job satisfaction, co-worker relationships, academic stress, pre-professional development, and the topic of our team’s research, financial aid, and work hours. Our research focuses on four main questions:

* How do St. Olaf students understand and feel about their financial aid and work award?
* What factors influence students’ feelings about and understandings of the work award?
* What is the relationship between financial aid, work hours, and student demographics?
* Do students in some demographic categories experience more financial stress than other students?

https://www.youtube.com/watch?v=LGkMZga7GmE

The most important results of our research are:

1. 59% of respondents reported that they struggle financially and worry about personal expenses.
2. More than 4 in 10 (43.4%) of respondents reported that the amount of their work-study award does not satisfy their financial needs.
3. 40.1% of respondents believe that the college’s calculation of their financial aid package is lower than their actual financial needs.
4. First-generation students at St. Olaf have greater financial needs and struggles than continuing-generation students.
5. BIPOC students tend to (78%) work more hours (6-21+) in their work-study jobs than white students (68.1%).

Based on our research, we offer the following four recommendations:

1. Provide more resources to students to help them better understand their financial aid package and work award. When sending financial aid letters to incoming students, the financial aid office could include a separate document defining terminologies and answering frequently asked questions (FAQ).
2. Provide separate resources created specifically for first-generation students and BIPOC students to ensure that they have the same improved understanding of their financial aid and work-study award as continuing-generation and white students.
3. Raise the minimum wage per hour for all jobs so that students will not need to increase their work hours at the expense of their academic success and health just to complete their work award.
4. Provide more flexible shift schedules for on-campus jobs in order to put students’ needs and academic work first and their paid work second, and ask work supervisors to keep students’ academic priorities in mind when creating students’ work schedules.

**LITERATURE REVIEW**

*Topics, scholarly definitions, and importance*

Many studies have examined college students’ experiences with financial aid, work hours, and stress. These studies tend to share a set of terms and definitions.

*Financial Aid* refers to the package that a college/university awards as a means to help a student pay for college, including tuition, room and board. Each student receives a different amount, determined by information on the FAFSA form (Free Application for Federal Student Aid) filled out and submitted by the student before enrollment. Included within the package are grants, scholarships, loans, and work awards.

*Work award* refers to the amount the student can earn through work-study (most campus jobs) during an academic year. In order to receive the money, a student must work for it. For example, if a student received $1,000 in work award, they are allowed to work on campus until they reach that amount. If a student has a job that pays $10/hour, they can only work a total of 100 hours in a year. If that student works less than 100 hours, they will receive less than the full work award. The number of hours that the student works is what is referred to as *work hours.*

*Work behavior* refers to whether or not a student works off campus and the amount of hours a student works per week, more specifically it alludes to extensive work hours (20+ hours per week). Being conscious about these behaviors is critical in understanding the effect that other variables may have on them, for this research there is a greater focus on the extensive hours and overall hours worked per week aspect of the definition.

*Academic performance* refers to how well a student is doing academically. This could be measured by GPA, if the student is able to submit their homework at the deadline, if they are able to attend class regularly, and if the student is engaged within their classroom setting.

*Social engagement* refers to the degree of attention and optimism that students show when they are learning, which extends to the level of motivation they have to learn and progress in their education and proceed to participate in extracurricular activities like sports, academic clubs, community service and more.

*Impact of student work hours on burnout, student well-being, and academic performance*

According to prior research, students who work a large number of hours may experience negative impacts on well-being and academic success. Benner and Curl (2018) examined the reasons behind burnout the consequences of student employment on academics and physical and mental health among graduate and undergraduate social work students from a large public midwestern university. Benner and Curl found a significant effect of work status on academic competence. Non-employed students rated their academic competency as less compromised and took more credit hours than students working 20 or more hours per week. Similarly, Social Work students overwhelmingly reported negative consequences of employment, including impaired academic competence and taking fewer courses at a time, leading to longer collegiate careers and presumably higher costs.

In a study conducted across 129 undergraduate institutions across all US regions, Lederer (2015) examines the relationship between students’ work and volunteer hours and feeling overwhelmed, feeling depressed, sleep and physical activity. She emphasizes that as work hours increase, the probability of feeling overwhelmed increases, sleep is negatively affected and students are less likely to meet physical activity guidelines. This has an indirect effect on undergraduate students’ academic performance that requires healthier conditions to succeed academically. This study, however, states that work hours benefits student’s financial income, increases structure discipline helping students gain skills in time management, and enhances their self-awareness.

Furthermore, Cadelwood (2017) and Gabriel (2017) add nuanced findings to the body of literature on the impact of work hours of students’ academic performance. This specific study samples undergraduate students from the southeast working in a paid employment position for at least 20 hours per week. The results show that students who work more were impacted by work specific demands which are the physical, psychological, social or organizational aspects of the job that require a great physical and/or psychological effort.

*Impact of socioeconomic status, financial aid, and grants on work behavior and well-being*

Prior studies have examined the effects that certain financial elements have on the number of hours students work per week and their well-being. Broton, Goldrick-Rab, and Benson (2016) examined how financial aid and grants influence student work behavior, which he defined as: a student's choice to work on campus or off as well as the number of hours worked per week. The sample of this study consisted of 1,438 undergraduate students from Wisconsin who received the need-based Wisconsin Scholars Grant (WSG). The results showed that the students who were awarded this grant reported working less hours and were less likely to work at all. Students with the grant were also less likely to work extensively (20+ hours) and worked less hours off-campus. Family background was recorded in terms of parental education and income to measure the variation of impact due to these factors. Overall students granted the WSG that had parents with higher incomes worked less hours and less extensively than those with parents with lower incomes. First-generation college students were also more likely to work extensively than continuing-generation students, even with the WSG.

Furthermore, Peltz (2021) investigated the influence of undergraduate students’ work hours on sleep disturbances and depressive symptoms. The sample consisted of 792 undergraduate students from medium to large sized institutions in upstate New York. The results indicated that students who worked a higher amount of work hours per week experienced more depressive symptoms than those who worked fewer hours. Students who reported higher levels of financial stress were the most susceptible to experiencing depressive symptoms caused by higher work hours. Students who reported comfortable family financial situations were less likely to work higher hours or feel higher levels of depressive symptoms. Additionally, female students from families with a lower socioeconomic status were more likely to work more hours per week and reported higher levels of sleep disturbance and depressive symptoms.

Students who come from lower socioeconomic backgrounds are more at risk of depressive symptoms and sleep disturbance due to needing to work more hours. This illustrates how financial need affects the number of hours a student may need to work in order to pay for their education and/or simply to feel financially secure. Socioeconomic status therefore indirectly affects a student’s mental health state due to having to work more hours.

*Relationship between financial aid and academic and social engagement*

Prior studies have also examined the relationship between financial aid and the engagement of students of color. A study by Boatman (2016) investigated the effects of a generous financial aid award on student engagement among low-income, high-achieving, students of color. The sample included 5,500 students from 4 cohorts of Gates Millennium Scholars (GMS) finalists who began college between 2000 and 2004 who provided survey data on their family background, college choice, and academic and community engagement. Boatman constructed a comparison group for the GMS recipients that included students with similar characteristics and backgrounds who did not receive the GMS award. Students who received the GMS award reported a slightly higher GPA in their third year than similar non-GMS students and were also more likely to engage academically with faculty and peers outside the classroom. Receiving a GMS award also increased the probability of student participation in community service activities, therefore increasing their social and community engagement.

Boatman’s study illustrated the positive effects of the Gates Millennium Scholars award, as it created a greater incentive for students to perform better and participate in community service. Because of the GMS award, students who are high achieving, low-income, and minorities have a reduced burden to work more in order to make money, so they are more available to engage in the classroom and participate in community service. Therefore, awards like the GMS act as a cushion as they allows recipients to work fewer hours and enables students to be more involved in academic and co-curricular activities than non-recipients.

Broton, Goldrick-Rab, and Benson (2016) also focused on figuring out if offering students from low-income families additional grant aid prompts changes in work behaviors. The results indicated that being offered the Wisconsin student grant (WSG) made students likely to work fewer hours or at all, both on campus and off. For first-generation students, the positive effect was even larger. Offering additional grants to students from low-income families tends to promote positive changes in work behaviors.

*Relationship between prior research and current project*

St. Olaf College, where we conducted our research, follows the same definition of work award used in prior research and defined earlier in this section. Students receive limited work awards and are not guaranteed to earn the full amount they are awarded. If students go over their work award limit, they do not receive compensation for extra hours worked. The maximum award amount a student can receive annually is $2,700 (2020-2021). If a student needs more financial assistance after they’ve exhausted their work award, they may request to be put on payroll. Payroll refers to a form of payment separate from their work award for working at on-campus jobs that allow students to work more hours and in turn earn more money. This is separate from students’ financial aid packages and is more commonly used by international students.

Based on our literature review, it is clear that students from lower socioeconomic statuses tend to work more hours than those of higher socioeconomic background. We wanted to see if this is true within the St. Olaf student population. Within our survey, we asked students to provide information on parent education, which serves as a surrogate for socioeconomic status, and their work hours. This enabled us to examine the relationship between socioeconomic status and hours worked.

Much of the literature we reviewed investigated stress in relation to financial aid and work hours. However, we wanted our research to focus more on the relationship between students’ demographics with their financial struggles, their understanding of their work-study award, and the number of hours they worked. We also wanted to ascertain the extent to which the financial aid package that St. Olaf College offers helps its students with their actual financial needs and whether students still struggle to pay their tuition and meet their actual financial needs even with financial aid, including a work award

Based on our review of scholarly literature and our specific research interests at St. Olaf College, our research examines the following questions:

1. How do St. Olaf students understand and feel about their financial aid and work award?
2. What factors influence students’ feelings about and understandings of the work award?
3. What is the relationship between financial aid, work hours, and student demographics?
4. Do students in certain demographic categories experience more financial stress than other students?

**RESEARCH METHODS**

*Data Collection*

We conducted this research at St. Olaf College, a small private liberal arts college in southern Minnesota, in the fall of 2021, as part of a larger study on student employment. The data were collected through an online anonymous survey that was sent to students with work-study jobs through an email alias and was available for 7 days. The survey consisted of questions developed in collaboration with several other research groups studying other aspects of work study. These questions were composed based partly on conversations with seven St. Olaf students about their work award and financial aid in a focus group that was conducted prior to creating our survey. The survey consisted of close-ended and open-ended questions. Our questions were designed to collect information about students’ experiences and feelings about their financial aid and how their aid is related to the number of hours worked. We asked about students’ financial struggle, their sense of the clarity of their financial aid award, and the number of hours they worked. We sent our survey to 2,249 work-study students, and 557 responded, providing a response rate of 24.8%.

*Variables*

In our conceptualization of financial aid, we established that the financial aid students receive varies and that not all students agree that their financial aid package fully covers heir college tuition and expenses, and that students have different understandings of their awards, shaped by their backgrounds. Our dependent variable was students’ understanding of their financial aid package (which we call “award clarity”), and our independent variables are the demographic variables of international/domestic status, parent education (a surrogate for Socio-Economic Status and the determinant of first- or continuing-generation status), and Race and Ethnicity.

We created a matrix for our dependent variable of Award Clarity. Within this matrix, we asked students for their level of agreement or disagreement regarding five statements that addressed whether they clearly understood what their work-study award entails, such as: “It was clear from the start that the work-study award is a potential amount to earn rather than an amount I am guaranteed to receive” and “It was clear to me from the beginning that I might need to work a large number of hours to complete my work award by the end of the year”. We provided five response categories: “Strongly agree”, “Somewhat agree”, “Neutral”, “Somewhat disagree”, and “Strongly disagree”. After we received our survey responses, we summed the response scores for each of the five items to create an index we called the Award Clarity Index.

To further examine students’ financial aid, we created an additional dependent variables: financial struggle. We created a matrix for this variable, asking students to indicate their level of agreement or disagreement with six statements about their financial situation and its relationship to their work-study award, such as: “The amount of my work-study award satisfies my financial needs.” and “I need a larger work-study award than what St. Olaf grants me.” The response options were the same as in the matrix for Award Clarity. We then summed the response scores to create another index, the Financial Struggle Index.

We also created another dependent variable, St Olaf’s Calculation versus Actual Needs. To measure this variable, we asked the question, “How does St. Olaf's calculation of your demonstrated financial needs (Cost of Attendance - Expected Family Contribution = Demonstrated Needs) compare to your actual financial needs?”. We provided four response options: “higher than”, “about the same as”, “lower than”, and “much lower than.” .

The data for these financial struggle and calculation versus needs variables, along with the others used in this research, are self-reported. We believe that students generally have an accurate judgment of their financial situation and needs.

*Validity and Reliability*

Our research uses Neuman’s model and explanation of validity and reliability in quantitative research. Neuman defines validity as the extent to which our measurements or operational definitions actually measure our concepts (Neuman 2012). To investigate how financially comfortable student workers are at St. Olaf, we conceptualized a definition of Financial Need based on previous studies, the focus group we conducted, and reviewing other research teams’ variables that indirectly impact St. Olaf’s students’ financial comfortability.

The study of Broton, Goldrick-Rab, and Benson (2016) investigated how financial aid and grants influence student work behavior, which he defined as: a student's choice to work on campus or off as well as the number of hours worked per week. Through using this definition, we made sure to include students’ need to work in on-campus and off-campus jobs to meet their financial need in our concept. Moreover, our focus group showed that multiple St. Olaf students struggle financially on campus despite having financial aid and a work award. Some students ask to extend their work award at the end of the year to help their financial situation while others resort to working off-campus jobs like Doordash to mitigate this need. We drew upon our literature review and focus group to refine our conceptualization and created a precise definition of financial need that we used to draft the questions for our survey. Similarly, our focus group guided our conceptualization of award clarity by surveying students’ understanding of their financial aid. Multiple students pointed out that their award letters and the terminology used in them were not clear enough to understand their financial aid.

To achieve content validity, we specified the full content of our conceptual definition of financial need and award clarity and made sure that our survey included exhaustive questions that will allow us to gather data about every aspect of conceptual definitions. For example, the aspect of our award clarity conceptual definition about students’ understanding of their financial aid letters was represented in the matrix item “I have a clear understanding of the work-study part of my financial aid package”. Additionally, we achieved face validity by having other SOAN 371B research teams and professor Sheppard review our survey questions; they agreed that the indicators we used measure our financial need and award clarity (Neuman 2012).

To ensure reliability in our study, defined by Neuman methods as the degree our measurement is dependable, consistent and stable (Neuman, 2012), we used precise indicators of our measures. Our response categories “To a small extent”, “To a moderate extent”, “To a large extent”, “To a great extent”, “Not Applicable”, “Not at all”, are ordinal measures that allowed us to achieve a high level of precision. To further increase reliability, we pilot-tested the survey and incorporated feedback before we administered the final version to our target population. This enables us to clarify our conceptual definition of financial aid and award clarity and improve our measures.

*Sampling*

The target population for our research project was St. Olaf students who are employed by the college. We wanted to focus on students who are currently in St. Olaf work-study jobs because we believe that this group would give us the most accurate and representative responses to the survey questions on financial-work study and student employment. We sent the anonymous survey invitation through email to the alias of 2,249 current St. Olaf work-study students, along with resident assistants (RAs) and junior counselors (JCs). We received 557 responses, a response rate of 24.8%.

We found interesting patterns in our sample. Juniors were slightly over-represented and first-year students were slightly underrepresented. There was also a continuing pattern over the past couple of years that showed females were over-represented in the sample while the percentage of non-binary respondents had increased. Of the respondents who answered our demographic questions, 69.8% were female (352), 23.0% male (116), and 7.1% were non-binary (36). In terms of international and domestic status, international students were 11.4% of the sample and 10.2% of the student body. In terms of generation, 19.8% of the sample was first generation while 80.2% was continuing generation. In terms of parent education, more than 50% of the sample reported having a parent who has a graduate, medical, or professional degree. Students who provided their race and ethnicity were 11.0% Asian (6.3% in the student body), 3.3% Black (3.3% in the student body), 8.2% Latinx (7.5% in the student body), 5.8% multiracial (4.3% in the student body), and 72.1% white (67.1% in the student body). Our sample is relatively close to the student body demographics in terms of BIPOC and White students: 27.9% BIPOC and 72.1% white in our sample, and 32.9% BIPOC and 67.1% white in the student body (2021). A small minority of our respondents, 8.9% (47 students) declined to answer the question about race and ethnicity. Furthermore, the sample is close to the student body statistics with 26.6% Seniors, 30.3% Juniors (slightly over-represented), 25.4% Sophomores, and 17.7% First-year students (slightly underrepresented).

*Ethics*

To adhere to the ethical principles of research with human subjects, we made sure we complied with the Institutional Review Board’s (IRB) standards. Prior to our research process, we each completed the Collaborative Institutional Training Initiative (CITI) Program, an online ethics certification required by the IRB. The training ensured that those involved in conducting research are trained to handle private information and protect respondents’ identities and rights.

Before a student could participate in our survey, we ensured informed consent via email. In the email, we provided the survey link, included the purpose of our research, emphasized that all responses are anonymous, and that participation is completely voluntary, and students could skip any questions on the survey. We offered incentives to complete the survey: a drawing for one of twenty $20 gift cards. To protect students’ privacy, we kept their responses anonymous. Students who wanted to enter the drawing had to email faculty member Ryan Sheppard, which allowed us to keep respondents’ survey responses separate from their names. Additionally, the survey did not ask for personal identifying information and we did not attempt to identify respondents throughout our research process.

**RESULTS AND DISCUSSION**

**Research Question 1: How do St. Olaf students understand and feel about their financial aid and work-study award?**

*Univariate Analysis: To what extent do student workers feel financially comfortable at St. Olaf?*

We asked students several survey questions about their sense of being financial comfortable, if their work-study award satisfies their needs, and if they need to work extra jobs. Many of the survey respondents reported struggling financially despite their financial aid and work awards, as shown in Table 1 below.

***Table 1: Financial Need Items***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Financial need item** | **Strongly agree** | **Somewhat agree** | **Neutral** | **Somewhat disagree** | **Strongly disagree** |
| I am comfortable financially at St. Olaf. | 13.0% | 30.8% | 18.7% | 25.8% | 11.7% |
| I struggle financially and worry about my expenses. | 23.2% | 35.8% | 15.0% | 18.1% | 7.9% |
| The amount of my work-study award satisfies my financial needs. | 9.5% | 27.3% | 19.7% | 29.0% | 14.4% |
| I need a larger work-study award than St. Olaf grants me. | 22.8% | 27.2% | 24.85 | 14.6% | 10.6% |
| I need to work at extra on-campus jobs beyond my work award (such as at Bon Appetit or the Bookstore) to meet my actual financial needs. | 12.5% | 13.4% | 25.2% | 21.0% | 27.9% |
| I need to work at extra off-campus jobs (such as Kwik Trip, Doordash, or Target) to meet my actual financial needs. | 15.8% | 11.6% | 21.9% | 21.2% | 29.5% |

More than half of the respondents agreed that they struggle financially and worry about personal expenses (59%, or 23.2+ 35.8). In addition, more than one-third indicated that they do not feel comfortable financially (37.5%, or 25.8+11.7, disagreed with the item about being comfortable financially). More specifically, almost half of the respondents reported that the amount of work-study does not satisfy their financial needs (43.4%, 29.0+14.4, disagreed that their work-study amount satisfies their financial needs). Moreover, half reported that they need a larger work-study award than St. Olaf awarded (50.0%, or 22.8+27.2). These responses indicate that many students struggle financially despite having a financial aid package and a work award.

Additionally, we want to highlight that in order to meet their actual financial need, more than one-quarter of respondents agreed that they need to work at extra on-campus jobs beyond their work award, such as with Bon Appetit or at the bookstore (25.9%, or 12.5+13.4). Another quarter agreed that they need to work at extra off-campus jobs such as at Kwik Trip, Doordash or Target.

However, student workers’ financial struggles do not necessarily mean that the solution is to provide them with more hours or more jobs. From our literature review, it is evident that working an increased number of hours may result in negative impacts on students’ personal and academic life such as burnout, depression and impaired academic competence.

To create an overall measure of the items listed in Table 1, we created a Financial Need Index by combining the scores of all six items. In order to sum the items, we “reverse-coded” the items about being comfortable financially and having a work-study award that satisfies the student’s need. The lowest possible score on the index is 0, which would indicate no financial need, and the highest possible score is 25, which would indicate the highest financial need. Figure 1, below, shows the distribution of index scores among all respondents. The graph has an overall normal distribution, with most respondents indicating mid-range need while others indicate need that is low, non-existent, or high, sometimes very high.

Figure 1. Histogram of Financial Need Index

Chart, histogram

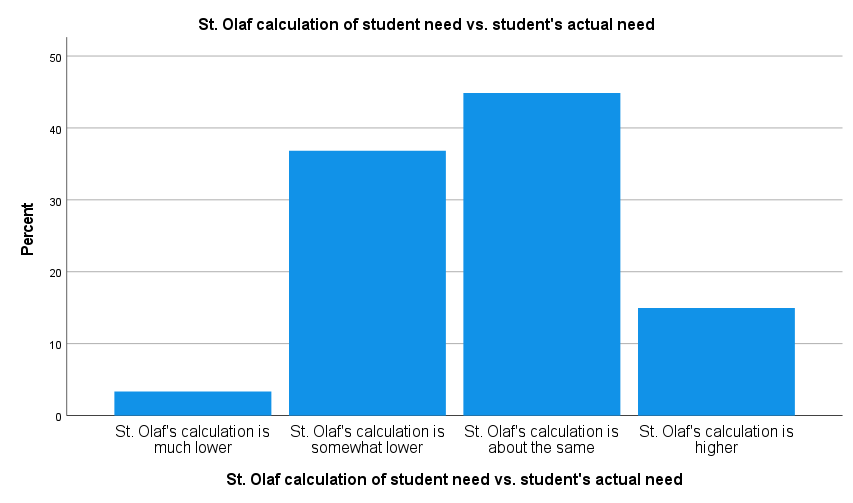
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*Univariate analysis: Does St. Olaf’s calculation of demonstrated needs align with students’ actual financial needs?*

We also asked students about the relationship between the college’s calculation of their financial needs as compared to the students’ own views of their actual financial needs. As shown in Table 2 and Figure 2 below, more than four in ten respondents reported that the school’s calculation of their financial aid package is lower than their actual financial needs (40.1%, or 36.8+3.3), while a slightly larger portion believe St Olaf has accurately calculated their financial needs (44.9%) and a small minority believe St. Olaf has overcalculated their financial needs (15.0%). These results indicate that many students need more, or at least perceive that they need more, financial aid than what is awarded to them. These results reinforce the results regarding the lack of financial comfort indicated by the 37.5% of students who disagreed that they are financially comfortable, as shown in Table 1. Since St. Olaf College has a work-study award that is supposed to mitigate students’ financial burdens, it is notable how many respondents report receiving insufficient financial aid.

***Table 2: St. Olaf calculation of demonstrated needs v. student’s actual financial need***

|  |  |
| --- | --- |
| **St. Olaf calculation vs actual financial need** | **Percentage** |
| St. Olaf's calculation is higher than my actual financial needs | 15.0% |
| St. Olaf's calculation is about the same as my actual financial needs | 44.9% |
| St. Olaf's calculation is somewhat lower than my actual financial needs | 36.8% |
| St. Olaf’s calculation in much lower than my actual financial needs | 3.3% |

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*Figure 2: St. Olaf calculation of demonstrated needs v. student’s actual financial need*

To further explore this topic, our survey included an open-ended question that asked students to elaborate on their experience as student workers at St. Olaf and to recommend ways to improve the experiences of student workers. More than half of the responses (106 out of 194, or 54%) indicated that the financial aid and the wage per hour should be increased in order for students to feel more financially comfortable at St. Olaf, reinforcing the results found in Tables 1 and 2. The two quotes below, all from student workers with on-campus jobs, illustrate the struggles with financial aid and work awards discussed above:

*“Even if I have 3 jobs, I still experience financial difficulties”*

*“On-campus jobs do not pay enough per hour. Although I was given a needs-based work award, it would be much more effective to get an off-campus job that pays 5$ more per hour. Although I would love to not have to have that job, I simply cannot afford only working on-campus.”*

**Research Question 2: What factors influence students’ feelings about and understanding of the work award?**

*Univariate Analysis: Award Clarity*

Our survey also asked about the extent to which students clearly understood their work awards.

Prior to enrollment, the college will send a student receiving financial aid a financial aid letter that details the types of awards they will receive, including their work-study award. The letter includes the total amount in dollars the student is allowed to earn through work-study. For work-study at St. Olaf, the maximum amount a student can receive annually is $2,700 (2020-2021) and, for any given student, that amount can change each academic year.

As shown in Table 3 below, most respondents reported that they have a clear understanding of the work-study award element of their financial aid package (76.3%, or 36.6+39.7) and most also agreed that it was clear from the start that a work-study award is a potential amount to earn rather than a guaranteed amount to receive (74.7%, or 48.0+26.7). However, 17.3% (12.7+2.4) and 18.3% (12.7+5.6) of students, respectively, disagreed with those statements. While most students report that these aspects of their award letters are clear, ideally all students would be in the agreement categories, or at least nearly all students. Students who lack a clear understanding of the work award may be less able to earn their full work-study award amount, feel more confused and irritated by the lack of clarity, and be less likely to thrive.

***Table 3: Award Clarity Items***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Award Clarity Items | **Strongly agree** | **Somewhat agree** | **Neutral** | **Somewhat disagree** | **Strongly disagree** |
| I have a clear understanding of the work-study part of my financial aid package. | 36.6% | 39.7% | 6.4% | 14.9% | 2.4% |
| It was clear from the start that the work-study award is a potential amount to earn rather than an amount I am guaranteed to receive. | 48.0% | 26.7% | 7.1% | 12.7% | 5.6% |
| Before I enrolled at St. Olaf, I was aware that I might need to combine 2 or more jobs in order to complete my work award. | 24.9% | 17.8% | 10.9% | 22.7% | 23.8% |
| It was clear to me from the beginning that I might need to work a large number of hours to complete my work award by the end of the year. | 28.2% | 22.6% | 11.3% | 20.8% | 17.1% |
| It was clear to me from the beginning that some work-study jobs might involve mainly physical labor (such as at the cafeteria). | 7.6% | 11.3% | 17.3% | 11.3% | 7.6% |

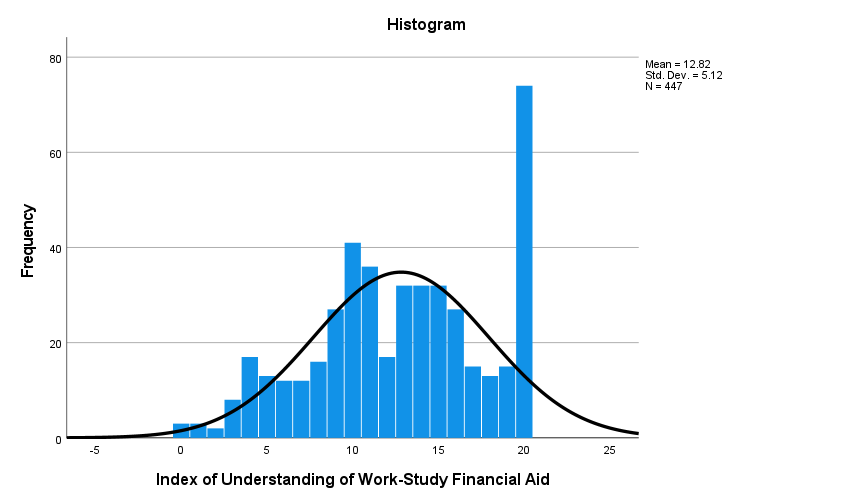
Furthermore, when we asked students if they had been aware from the start that they might need to work more than two jobs and to work a large number of hours to complete their work award, around half agreed (42.7% and 20.8%, respectively). However, one out of every two or three respondents had not understood these aspects of their work-study award (46.5 and 37.9 disagreed, respectively). Once again, St. Olaf should aim for closer to 100% understanding of these things because, although not all students need to work multiple jobs and a large number of hours, not having that information ahead of time can be detrimental to their schedule planning. It can leave them having to work extra hours at the end of the semester, subsequently cutting down on study time which may hurt their academic performance, or unable to complete their work-study award by the end of the year and thus receiving less financial aid than they had been awarded.

Based on these responses, it is clear that many St. Olaf student workers did not fully understand what their work-study award actually entailed. This is also supported by comments from students in our pre-survey focus group who pointed out that a big reason why they didn’t have a clear understanding of their financial aid was the *unfamiliar jargon and terminology* included in the work award part of their financial aid package and award letter. *Some students didn’t realize that the work-award meant that they needed to get a job rather than it being a guaranteed amount to receive, some didn’t understand how to find a job or how to fulfill their work-award completely, and others were confused by the acronyms and abbreviations and the various types of loans.* Additionally, responses from the open-ended questions indicated that some students do not understand how taxes affect work payments.

A small change that could improve work award clarity would be to provide an embedded link, separate from the financial aid letter sent to first years, that would connect to a list of the relevant terms, acronyms, abbreviations, and definitions, along with a list of “Frequently Asked Questions.” This way, students who are unfamiliar with the financial aid terminologies and have nobody to explain the terms can click on the link and gain a better understanding of their award package and how to fulfill their work-study award. Overall, there should be more resources available so that students can better understand financial aid information.

In order to gain an understand of students’ clarity about their awards, we create an Award Clarity Index by combining the scores for the six items shown in Table 3. In this index, the lowest score a respondent can get is 0, which indicates little to no work award understanding, and the highest score they can receive is 20, which indicates a high or very clear work award understanding. Figure 3 below shows the distribution of scores (histogram) for the Award Clarity Index. The wide distribution indicates that students vary widely in their work award understanding, with some having a very good understanding, shown by the nearly 80 respondents who had a score of 20 and by the many students with lower scores extending all the way down to zero. This distribution supports the findings detailed in the previous paragraphs.

*Figure 3: Histogram of Work Award Clarity Index*



*Bivariate Analysis: Award Clarity and Demographics*

We also wanted to explore the relationship between the Award Clarity Index and the binarized student demographics. We conducted three Mann-Whitney U tests to gain a greater understanding of award clarity among the respondents, comparing the average Award Clarify Index scores of students in the different binarized student demographics of international/ domestic status, race and ethnicity, and generation. The results of the demographics tested are shown in Table 4 below.

***Table 4: Award Clarity Index & Student Demographics***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Demographic and group** | **Group 1 Mean**  **Index Score** | **Group 2 Mean**  **Index Score** | **M-W test score** | **p-value** |
| Generation:  1=First generation; 2=Continuing Gen. | 12.52 | 14.02 | 13928.500 | **p < .05** |
| Race and Ethnicity:  1=BIPOC; 2=White | 12.39 | 13.88 | 14625.000 | **p < .05** |
| International/Domestic Status:  1=International; 2=Domestic | 12.80 | 13.17 | 10272.000 | p > .05 |

As shown in Table 4, we found no significant statistical difference between international/domestic in terms of award clarity. This means that a clear understanding of the work award, or absence thereof, is not related to international/domestic student status.

However, we did find a significant difference between first-generation students and continuing-generation students. The mean score for award clarity in first-generation students (12.52) was significantly lower than the mean score for continuing-generation students (14.02). This indicates that first-generation students tend to have less clarity about their work award packages than continuing-generation students.

*We also found a significant difference between BIPOC students and white students. The mean score for BIPOC students (12.39) was significantly lower than the score for white students (13.88), indicating that BIPOC students tend to have less clarity about their work award packages compared to BIPOC students.*

To further understand the clarity of understanding of the work award among St. Olaf student workers, we examined the relationships between the Award Clarity Index and parent education (SES) and year in school. We ran a Spearman’s rho test for each relationship, and the results are presented in Table 5 below.

***Table 5: Spearman’s rho test for Award Clarity Index (AWI)***

|  |  |  |
| --- | --- | --- |
| **Variables** | **Spearman rho score** | **p-value** |
| ACI x Parent Education | -0.076 | p > .05 |
| ACI x Year in School | 0.020 | p > .05 |

As seen in the table above we found a weak non-significant correlation (r(441)=-.076, p>.05) between Award Clarity and parent education and also for year in school (p>.05). This indicates that the clarity of a student’s understanding of their financial aid award is not related to their socioeconomic status (we used parent education as a surrogate measure for socioeconomic status, or SES) or their year in school. Students that come from higher socioeconomic status and with a higher year in school do not tend to have a clearer understanding of their work award than those from lower socioeconomic status or with a lower year. In school

In summary, while most of the student demographic comparisons we examined did not show statistically significant differences in award clarity, we did find significant relationships between first- and continuing-generation students and between BIPOC and white students, indicating that first-generation and BIPOC students tend to have less clarity about their work award in comparison to continuing-generation and white students.

This inequity in overall award clarity could perhaps be resolved by having or at least offering specialized resources and financial aid meetings for first-generation and BIPOC students. In fact, student recommendations point in this direction:

*“There need to be meetings between students and financial aid officers. It feels that the admin at St. Olaf assumes every student’s parent is taking care of their every expense, and as a student who is financially independent and financially struggling, the financial aid people are really hard to reach and hard to work with. I often feel that they don't know how to deal with a person whose parents aren't paying for everything - it seems to confuse them, and confuse them that I want to be informed of my financial package and options. It is never and has never been clear to me (my financial package or options).”*

*“I'm not certain, exactly, but I would say for first-gen students like me, that it would be appreciated when sending out aid awards (especially for freshman year), explaining what each part means, and especially explaining how many hours a week you can/need to work, and that it is normal to have more than one job to reach those hours.”*

**Research Question 3: What is the relationship between work hours and student demographics?**

*Univariate Analysis: Work Hours (St. Olaf jobs only)*

We also asked St. Olaf student workers about the number of hours they work at their St. Olaf job or jobs every week (during fall semester 2021-22; this could include work-study jobs and St. Olaf College payroll jobs). As shown in Table 6 below, almost half of the respondents (47.3%) work 6-10 hours per week on average. However, in order to fulfill the standard work award amount of $2700 by the end of the school year, students need to work approximately 8 hours per week. A notable percentage of our respondents (17.0%) work 11-15 hours and another 4.2% work 16-20 hours. Moreover, 2.1% of the respondents work 21 hours or more per week. These last three numbers combined show that 23.3% of our respondents work more than 10 hours per week on average at their St. Olaf jobs.

***Table 6: Work hours at St. Olaf job(s) per week***

|  |  |
| --- | --- |
| **Hours** | **Percent** |
| 1-5 hours | 28.4% |
| 6-10 hours | 46.3% |
| 11-15 hours | 17.0% |
| 16-20 hours | 4.2% |
| 21+hours | 2.1% |

Although it is not the focus of our analysis, it is worth noting that 88 of our respondents reported working at non-St. Olaf jobs, 24 of whom reported working 11 or more hours per week at those jobs. There was no statistically significant difference in having or not having non-St. Olaf jobs between first-generation and continuing-generation students or between BIPOC and white students, although the relatively small number of students in non-St. Olaf jobs makes this result unsurprising.

While it is expected that almost half the respondents work 6-10 hours a week, the percentage of students working more than 10 hours raises two main questions that need to be addressed: How do students find a large number of hours to work on campus, and why are St. Olaf students working more than 10 hours per week at their St. Olaf jobs?

Through our focus group and student comments on our survey, we learned that students often ask to increase their work awards near the end of the year in order to help their financial situation or to avoid quitting jobs abruptly. We also learned that many students work payroll jobs on campus like at the cafeteria, the Cage and the bookstore where their work hours don’t count towards their work award. This grants students more financial flexibility as they are not completely dependent on the work award and don’t have to search for jobs off-campus.

Respondents’ complaints highlight their inability to finish their work award by the end of the year due to schedule conflicts mainly with school requirements but also with extracurriculars, and their inability to meet their work award due to low wages, despite working as many shifts as possible:

*“But other than the weekends, I am already working all the shifts that I can reasonably work. It's not that my work study award needs to be higher, it's that it needs to be more possible to meet it”*

*“I need more money, but I don't have time to work as much as necessary with my studies and extra-curriculars.”*

*“It is hard to work one job let alone two jobs while on campus. Personally, I have a hard time being able to work and keep up with my work-study award at being paid 10.10 an hour. I know I will be looking for another job just based on scheduling issues so that I might be able to work and keep up with my agreement.*

*“I would love to work another job to satisfy my financial needs and goals but I don't have the time. The pay rate is not satisfactory to my financial needs.”*

*“I've never come close to reaching my full work award amount. I would have to work ~10 hrs a week to get there, and that's SO much on top of being a full-time student with 4.50 credits. This year I might get to 80% of my award, which will be the most ever.”*

From the statements above and many others that we received through our survey, we noticed that many students are concerned with their inability to work enough hours to fulfill their work awards. Because of the negative impact of increased work hours on students' academic performance and well-being noted in our review of literature, we do not think offering more work hours or extending work awards alone will properly address this issue. We believe that the wage per hour needs to be increased for all jobs so that students do not work an increased number of hours at the expense of their academic success and health. Furthermore, increasing the pay rate will help alleviate the financial stress of students who are only able to work a limited number of hours per week and will address their concern with meeting work award amounts.

*Bivariate Analysis: Work Hours per Week and Demographics*

To examine the possible relationship between work hours per week and race and ethnicity, we calculated a chi-square test of independence comparing the frequency of hours worked for BIPOC and white students. We found a significant interaction (X^2(479)= 4.915, p<.05). As shown in Table 7 below, BIPOC students tend to work more hours per week than white students: 78% of BIPOC respondents work 6-21+ hours while only 68.1% of white students work the same amount. White students (31.9%) are more apt to work fewer hours per week (0-5 hours) compared to BIPOC students (21.6%).

***Table 7: Work Hours at St. Olaf Jobs and Race & Ethnicity***

|  |  |  |
| --- | --- | --- |
|  | **0-5 Hours/Week** | **6-21+ Hours/Week** |
| BIPOC students | 21.6 % | 78.0 % |
| White students | 31.9 % | 68.1 % |

We also tested the relationships between hours worked per week and first-/continuing-generation and again found a statistically significant interaction (X^2(513)= 4.062, p<.05). As shown in Table 8, first-generation students tended to work more hours per week than continuing-generation students: 78.2% of first-generation respondents reported working 6-21 hours per week as compared to on 68% for continuing-generation.

***Table 8: Work Hours and Generation***

|  |  |  |
| --- | --- | --- |
|  | **0-5 Hours/Week** | **6-21+ Hours/Week** |
| First-generation students | 21.8 % | 78.2 % |
| Continuing-generation students | 32.0 % | 68.0 % |

We also tested the relationship between hours worked per week and year in school, using a Spearman’s rho test, and found a weak significant relationship (r(514)= 0.241. p < .05). This tells us that there is a linear relationship between the two variables, specifically that students in higher school years (like juniors and seniors) tend to work a greater number of hours per week than students in lower years.

In sum, we found significant relationships between work hours and year in school and work hours and race and ethnicity, but not for work hours and parent education. The findings from both the univariate and bivariate analysis on work hours display the need to work extensively, especially for BIPOC students. This signals a problem in St. Olaf’s pay and flexibility with work hours which causes students to have to work a large number of hours, as illustrated by these student comments:

*“-… it needs to be more possible to meet [my work award] (without working a super time intensive job like SI)”*

*“Although I enjoy my work, I know some who felt hindered since their work hours were not flexible and they did not enjoy the work. I would encourage St. Olaf jobs to be flexible with what times and hours students work.”*

We recommend that St. Olaf College increase student wages and engender a greater understanding from supervisors about the extent of students’ academic stresses and more flexibility with students’ work hours.

**Research Question 4: Do students in certain demographic categories experience more financial stress than other students?**

*Bivariate Analysis: Financial Need Index and Number of Jobs*

To explore the relationship between students’ financial need and the number of St. Olaf jobs they hold, we performed a Pearson’s rho correlation coefficient test between scores on the Financial Need Index and number of jobs and found a moderate positive correlation (r(442)=.161, p<.05). This indicates that there is a significant linear relationship between the two variables. No surprisingly, students who scored higher in the financial need index, which translated into more financial struggle, tended to have more jobs on campus than those who scored lower.

*Bivariate Analysis: Financial Need Index and Demographics*

We also examined the relationships between financial need and various student demographics. We conducted independent samples t-tests to compare the mean Financial Need index score of students across gender (binarized), international/domestic status, generation, and race and ethnicity (binarized), with results shown in Table 9 below.

***Table 9: Financial Need Index and Binarized Demographic Categories***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Demographic and group** | **Group 1 Mean**  **Index Score** | **Group 2 Mean**  **Index Score** | **T-test score** | **p-value** |
| Gender (binarized):  1=female; 2=male | 12.55 | 11.30 | 1.865 | p >.05 |
| Generation:  1=First generation; 2=Continuing Gen. | 13.86 | 11.64 | 3.392 | **p <.05** |
| Race and Ethnicity:  1=BIPOC; 2=White | 13.29 | 11.47 | 2.942 | **p <.01** |
| International/Domestic Status:  1=International; 2=Domestic | 12.93 | 12.01 | 1.092 | p >.05 |

As shown in the table, we found no statistically significant differences across gender and international/domestic status. Students’ financial need scores were not related to these demographics.

However, we did find a significant difference between the Financial Needs Index scores of first-generation and continuing-generation students (p <.05) and of BIPOC and white students (p<.01). The mean score for first-generation students was higher than those continuing generations (13.86 and 11.64) and the same is true for BIPOC students compared to white students (13.29 and 11.47). These results shows that St. Olaf student workers who are first-generation students and those who are BIPOC are more likely to report a higher financial need compared to continuing generation students and white students. First-generation students and BIPOC students at St. Olaf have more financial needs and struggles, on average, than students who are from a continuing generation or who are white, even with financial aid; this is further supported by Broton, Goldrick-Rab, and Benson (2016).

We also tested the relationship between the non-binarized demographics and financial need. We tested parent education and year in school by running Spearman's Rho tests, with results shown in Table 10 below.

***Table 10: Spearman’s rho tests for Financial Need Index (FNI) Bivariate Analysis***

|  |  |  |
| --- | --- | --- |
| **Variables** | **Spearman rho score** | **p-value** |
| FNI x Parent Education | -.213 | **p <.05** |
| FNI x Year in School | -0.002 | p > .05 |

As demonstrated in the table, we found no statistically significant relationship between financial need and year in school.

However, our findings do indicate that there was a statistically significant weak negative relationship between parent education and financial need (r(439)=-.213, p<.05). Students who reported higher levels of parent or guardian education tended to score lower on the Financial Need Index. St. Olaf student workers with parents with higher levels of education are likely to have less financial need than those who have parents with higher levels of education. This unsurprising result is similar to the findings in the study by Broton, Goldrick-Rab, and Benson (2016).

In sum, most of the demographic categories had no relationship with students’ financial need as measured by our index, but there was a relationship for both generational status and parent education. This makes sense since parent education and generation are both closely associated with social class. First-generation students are mostly associated with parents with lower levels of education which would explain the need for financial aid. Students in continuing generations typically have parents with a higher level of , which would decrease the need for financial aid.

*Bivariate Analysis: Comparison of St. Olaf Calculations and Demographics*

We measured St. Olaf’s calculation of financial need for students compared to the actual financial need reported by the respondents and compared it across demographic categories of race and ethnicity (binarized) and international/domestic status. We ran Chi-Square tests of independence and found no significant interaction between calculation accuracy and race and ethnicity (X^2(352)= 3.048, p>.05) and no significant interaction between international/domestic status and financial calculation accuracy (X^2(397)= .473, p>.05). BIPOC students and international students were no more apt than white and domestic students to indicate that St. Olaf’s calculation of their financial need is lower than their actual financial calculation. These two demographics are not related to financial need calculation accuracy.

We also examined the relationship between financial need calculation accuracy and socioeconomic status. To test this, we ran a Spearman’s Rho correlation coefficient test using Parent Education as a surrogate for SES. We found a weak, non-significant correlation (r(376)=-.033, p>.05) which indicated no linear relationship between the two variables. These findings indicate that students’ feelings about the St. Olaf calculation of their financial need is not related to their socioeconomic status; students who feel that St. Olaf is not providing enough financial aid could come from both higher, middle, and lower socioeconomic status.

In sum, there were no significant interactions between any of the demographics tested and St. Olaf’s financial need calculation accuracy. This lack of significant relationships suggests that students’ views of the relationship between their need as calculate by St. Olaf and their need as they experience it is not influenced by any of the demographics mentioned above.

**CONCLUSION**

Our analyses indicate a set of problems that St. Olaf students face in relation to their financial aid, their overall clarity of their work award, and the number of hours they work. Our results show that a high percentage of St. Olaf students struggle financially and have worries about their financial stresses. Many respondents believe that the school’s calculation of their overall financial need is lower than their actual needs, and many believe they need a higher work award.

Additionally, our results demonstrate that many students did not have a clear understanding of their work award from when they first received their award letter, specifically the extensive number of hours they had to work to complete their work award and the need to have for two or more jobs in order to have enough hours to work. The responses on the open-ended question further illuminate these findings, as many students expressed their confusion with the work award letter and the confusion about the extensive number of hours they were expected to work. There is an evident problem with the school’s award letter that St. Olaf should address to ensure that students know what their work award entails.

Finally, our results show that first-generation and BIPOC students face these problems disproportionately in comparison to continuing-generation and white students. Our findings concur with previous literature on first-generation students having greater overall financial need and stress. BIPOC students are more likely to work an extensive number of hours more than white students. More resources should be devoted to efforts to reduce these inequities and ease the path for BIPOC and first-generation students.

*Strengths and Limitations of this study*

Due to the high response rate of 24.8% (557 out of 2,249 student workers) and the similarity between our sample demographics and the St. Olaf student population, we were able to generalize our statistically significant results to the larger population of St. Olaf work-study students. Additionally, our qualitative data illuminated many of our quantitative findings. The qualitative data also enabled students to fully express their diverse opinions and recommendations.

Our research also encountered some limitations. First, our research was based on self-reported data. Students that have strong opinions about the work study program may have been more likely to participate in the survey. Next, given our one-semester timeline for our research, we were only able to review limited scholarly literature on financial aid and work hours.

**RECOMMENDATIONS**

Based on our research findings, we have four recommendations for St. Olaf College, specifically for the financial aid and human resources offices. These are intended to improve the experiences of St. Olaf College student workers.

1. Provide more resources to students to help them better understand their financial aid package and work award. When sending financial aid letters to incoming students, the financial aid office could include a separate document defining terminologies and answering frequently asked questions (FAQ). This document should highlight that the work-study award is a potential amount to earn, often by working multiple St. Olaf jobs, and that students will have to apply for jobs. It should also address how students can apply for jobs, the wage rates, and taxes affecting work payment. Moreover, the document should prominently highlight the contact information of the financial aid office in case a student needs further assistance.
2. Provide separate resources created specifically for first-generation students and BIPOC students to ensure that they have the same improved understanding of their financial aid and work-study award as continuing-generation and white students. We recommend that financial aid officers encourage these students to attend specialized meetings that address and support students with their specific situations. One-on-one meetings can help resolve questions and support students with their financial struggles.
3. Raise the minimum wage per hour for all on-campus jobs. To address students’ concern with not being able to meet their work-study award amount, it is better to raise the minimum wage than to increase students’ work hours and risk detrimental effects on their academic performance and well-being.
4. Provide more flexible shift schedules for on-campus jobs. Students should be able prioritize their academics before their paid work. We encourage supervisors to keep this in mind when preparing student workers’ shift schedules at the beginning of the semester and provide flexibility for students to cancel and/or reschedule their shifts. This way, students may also understand that their supervisors care about their academics and may thus feel more comfortable with their supervisors.

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