Impact Evaluation of Community Nonprofit Partner Program - South Bend's Mayors Challenge: Final Report

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Executive Summary

The City of South Bend launched the Community Nonprofit Partner Program (CNPP) in October 2021. The program provides free transportation benefits in the form of bus passes and rideshare rides to individuals utilizing the services of 13 nonprofit social services providers in South Bend. The Lucy Family Institute for Data & Society at the University of Notre Dame partnered with the City to do an impact evaluation of the program to study the program's impact on participants and the broader community.

The CNPP program serves an especially vulnerable population. This population has limited means of transportation which mostly include asking for rides from friends, and family members. The existing modes are expensive and cause stress.

Through a combination of quantitative and qualitative approaches, this report presents the findings of the evaluation which are summarized below.

1. **Effect on the accessibility of places**: The program is helping enrollees access critical services they had difficulties accessing before enrolling in the program, including medical treatments that can be life-saving, food for themselves and their families, and better job opportunities. The discounted rides through the program are partly substituting existing modes of transport, resulting in money savings, but also enabling individuals to go to places they wouldn't have gotten to otherwise, suggesting the program increased overall access to places.
2. **Effect on money saved by enrollees**: Because of the program, 90% of the enrollees were able to spend less on transportation and more on other needs. These money savings come through less money spent on Uber/Lyft rides, paying friends for rides, and bus fares. An important channel for these savings is reduced spending on items and services as with the program, enrollees can travel to places where these items and services are available at a cheaper price.
3. **Effect on stress related to transportation**: Enrollees are 53.3% less likely to feel "very stressed" about their ability to travel after enrolling in the program. Enrollees worry less about how to get where they need to go because they do not have to ask someone for rides, as well as the security of getting a ride when needed.
4. **Effect on overall transportation security**: Enrollees' Transportation Security Index, an index that captures how easy it is for people to travel around as needed, improves by 19.6% after enrolling in the program. This implies an improvement in the overall transportation situation.
5. **Effects on the broader community**: The program has broader effects on the community by allowing enrollees to spend more time with their families as well as allowing the social service providers to focus on non-transportation issues of the community by reducing the burden of providing transportation.

1 Introduction

Lack of reliable transportation is a primary barrier to employment for 1 of 3 low-income workers in South Bend (enFocus (2016)). The City of South Bend (City) has been working to reduce this barrier by providing reliable transportation options to its residents. In 2018, the City was awarded a three-year, $1 million grant from Bloomberg Philanthropies to develop a transportation-as-a-benefit program to address this issue. Since 2019, the City has implemented two different programs to address the transportation barriers faced by the residents. This includes a work-travel subsidy program in 2021 and the Commuters Trust Community Nonprofit Partner Program, which is the focus of the report.

1.1 Work-travel subsidy program

The first model that the City implemented focused on helping workers get to the workplace when their regular mode becomes unavailable. This can be thought of as "insurance" for situations when the regular mode of transportation breaks down (e.g. when a shared household car is unavailable at the required time, or to reach the workplace outside of bus operating hours.). The program is not intended or designed to solve chronic transportation problems. The program gives discounted Uber/Lyft rides and free bus passes to program enrollees at select local employers. While there are cases of an employer providing public transport passes to employees, the Uber/Lyft rides subsidy is a novelty, as is the objective to solve short periods of transportation problems through a transportation-as-a-benefit model. A distinguishing characteristic of the program is that this is trying to solve a problem using existing transportation options in the market (rather than new public investment). A few findings from the previous impact evaluation of these versions were (i) women are more likely to enroll and use the program, (ii) the program helps reduce stress related to transportation, and (iii) the program results in savings for the enrollees in the form of reduced transportation costs(Swapnil Motghare and Danice Guzmán 2021).

1.2 Commuters Trust Community Nonprofit Partner Program

Armed with learnings from the previous versions of the program, the City launched the Commuters Trust Community Nonprofit Partner Program (CNPP) in October 2021. The program provides free transportation benefits in the form of bus passes and Uber rides to individuals utilizing the services of 13 social service providers in South Bend. These organizations provide a variety of housing, education, job training, healthcare, and other essential services aimed at alleviating poverty.[1] The program is jointly funded by the City and United Way of St. Joseph County and is expected to continue through September 2023. United Way of St. Joseph County also helped screen the social services providers to be part of the program.

Both programs differ in terms of their target population and intended use of the rides. Those enrolled in the work-travel subsidy program are workers who have regular employment and the rides are intended to be used to travel to and from work. In contrast, those enrolled in the CNPP program are individuals working with social services providers, and the rides are not restricted by location.

[1] United Way of St. Joseph County is a nonprofit social services provider dedicated to reducing poverty in the community. Because United Way believes that reducing poverty requires the efforts of more than one single agency, it collaborates with and invests its funds in over 20 local nonprofits (United Way (2022)).

1.3 Scope of report

The Lucy Family Institute for Data & Society at the University of Notre Dame partnered with the City to do an impact evaluation of the CNPP program to study the program's impact on participants and the broader community. This report presents the findings of the evaluation focusing on 13 social service providers located in South Bend, Indiana. The focus of the evaluation is to study the program's impact on multiple outcomes including users' transportation security, stress related to transportation, and access to critical services such as healthcare, education, and food. The evaluation was performed using data collected using surveys, interviews, and ride data from bus and rideshare providers (See Appendix 10.1 for more details.) and a combination of quantitative and qualitative approaches.

1.4 Report Structure

We first explain the program design and delivery. We then look at the program enrollments and the options selected by enrollees. We then study the demographics of program enrollees and their transportation situation. The main question that drives the analysis is: Who enrolls in the program and what are the transportation needs of the enrollees? In the next section, we study the program usage by looking at the number of rides taken and places the rides were used to get to. We then discuss some findings from the telephonic interviews followed by program impacts. We conclude the report by giving recommendations about improving the program's effectiveness and conclude by discussing the generalizability of the results.

1.5 Literature review

We did not find any programs focused on providing free Uber and bus rides to low-income individuals. There are examples of cities making public transport free for all residents. For example, Tallinn, the capital city of Estonia made all public transit in the city free for residents in 2013. Then there are examples of cities that do not have public transit systems that have adopted a ride-pooling service operated by private service providers but subsidized by cities. E.g. Arlington, Chicago, and London. Some programs provide discounted rides to workers to reach workplaces. For example, the work-travel subsidy program discussed above, and the Wheels-to-work program in the west Michigan region, are designed to help workers get to work by sharing the cost of the ride between employers and workers. More information regarding these programs is provided in the Appendix.

2 Program design and delivery

2.1 Eligibility criteria

Individuals satisfying the following criteria are eligible to enroll in the CNPP program

1. A resident of St. Joseph County, age 18+
2. Active participant in programs/services provided by the social service provider
3. Have 1 or more applicable use cases for transportation benefits (any of the following: food, health- care, work, education, social services, or childcare)
4. Have a cell phone to participate in text-based surveys or phone interviews
5. To use Uber benefit: Have a smartphone

2.2 Program options

The program enrollees can choose between two benefit packages:

1. 4 free Uber rides per month + unlimited monthly Transpo bus pass (digital or physical)
2. 10 free Uber rides per month

The City provides bus passes to social services providers who then complete enrollment online on behalf of interested individuals utilizing their services and provide them with physical bus passes. To get access to Uber rides, individuals have to fill out an online form, after which a voucher for the Uber app is delivered to their phone. Individuals can choose to enroll in any month and can choose to stay enrolled for any number of months.

3 Program enrollment

3.1 Options selected by enrolees

Table 1 shows that a total of 298 individuals belonging to 13 social services providers in the City of South Bend (City) have enrolled in the program as of August 2022.[2] There are more enrollees selecting the bus pass + 4 Uber rides option compared to 10 Uber rides option.[3] There is some difference across organizations in terms of the option selected. Four out of five organizations with the highest enrollments prefer the bus pass + 4 Uber rides option while the rest prefer the 10 Uber rides option. The table also shows the number of seats allotted to each organization, which is the maximum number of active enrollees each month enrolled in either option.

Table 1: Total enrollments in the program

Name of participating organization	Total enrollments	Option 1 (Bus pass + 4 Uber rides)	Option 2 (10 Uber rides)	Total seats (per month)
La Casa de Amistad	53	25	28	35
Center for the Homeless	49	37	12	25
Hope Ministries	45	33	12	25
REAL Services	43	29	14	30
Catholic Charities	22	21	1	20
South Bend Heritage Foundation	21	3	18	25
YWCA North Central Indiana	20	5	15	25
St. Margaret's House	11	4	7	10
RiverBend Cancer Services	10	1	9	10
United Religious Community	10	1	9	15
Center for Positive Change	8	0	8	10
United Health Services	5	0	5	24
Green Bridge Growers	1	0	1	6
Total	**298**	**159**	**139**	**260**

Program enrollments between October 2021 - August 2022
Data source: Enrollment data provided by the City of South Bend.

3.2 Demographics of enrollees

Figure 1 shows the demographic characteristics of program enrollees collected using a baseline survey given to all enrollees. All age groups are represented in the enrollees. 66% of enrollees are women, higher than their population share in the city (53%). 67% of enrollees have an annual household income of less than $10,000.[4] Black or African American enrollees are 46% of enrollees - higher than

[2]A participant is counted as enrolled if the person receives a bus pass or Uber rides for at least one month from November 2021 to the most recent data available. A small number of enrollees change their options across months in which case we consider the option that was most commonly selected.

[3]Reasons for preferring the bus over Uber include familiarity with the bus system, being able to use more trips, and the reliability of the bus service. See Figure 18 for more reasons.

[4]We did not ask about the employment status of enrollees in the baseline survey. We did ask for this information during the qualitative assessment in the follow-up telephonic interviews where 65% of the respondents indicated that they are not

the population share in the city (25%).[5]

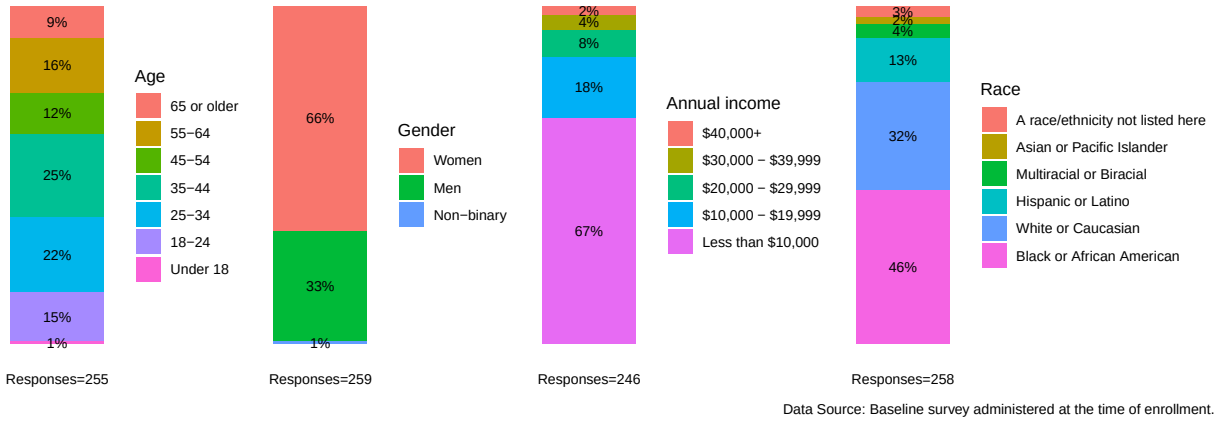

Figure 1: Demographics of enrollees

We determine the transportation situation of the enrollees by calculating their Transportation Security Index (TSI). The TSI indicates how easy it is for people to travel around as needed (Gould-Werth, Griffin, and Murphy (2018)). It can have a value of 0-6 with the following interpretation. 0: transportation secure, 1-2: minimally insecure, 3-4: moderately insecure, and 5-6: severely insecure. Thus, lower values imply users can travel around easily. For example, a "transportation secure" person can have no difficulties getting to places when needed. Figure 2 shows the transportation situation of those enrolled in the program as reported in the baseline survey. Among the respondents, 88% are either severely or moderately insecure, and only 12% are minimally insecure or transportation secure.[6]

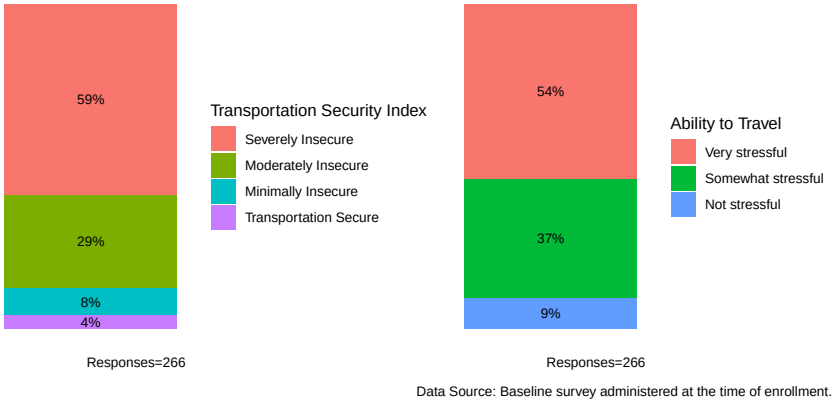

Figure 2: Transportation situation of enrollees

employed (Figure 6). This is also consistent with the fact that a majority of enrollees have an annual household income of less than $10,000.

[5]https://www.census.gov/quickfacts/southbendcityindiana

[6]Previous research has found that the non-White population experience the greatest transportation insecurity (Murphy et al. 2022). In Figure 14, we show that TSI for enrollees does not vary much by race. This could be because of the self-selection nature of the program, where those with difficulties with transportation enroll in the program.

Additional evidence on the transportation situation of the enrollees is obtained by asking them about stress related to their ability to travel in the baseline survey. Around 54% indicated that their ability to travel has been very stressful, and an additional 37% indicated that their ability to travel has been more or less stressful or somewhat stressful. Only 9% indicated that their ability to travel has not been stressful.

Figure 3 shows the places and services that enrollees had difficulty accessing due to transportation constraints before enrolling in the program. A majority of enrollees (58%) reported that transportation issues prevented them from completing medical treatment. A significant proportion of enrollees also reported that they were unable to get to the grocery store or food bank (54%), medical appointment (53%), or work or job fair (35%).

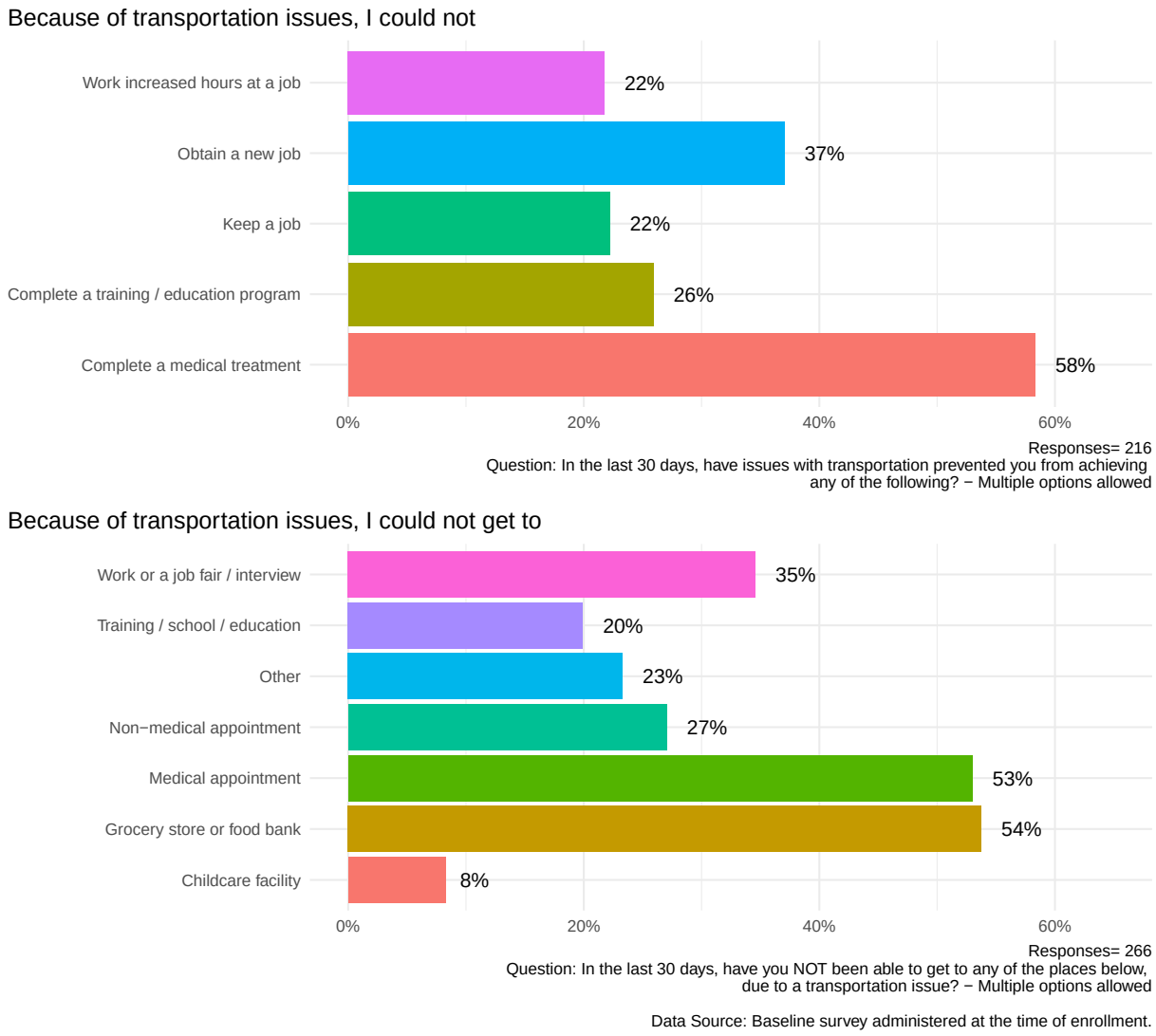

Figure 3: Difficulty in accessing places and services

Takeaways:

1. More enrollees choose the bus pass + 4 Uber rides option
2. The average program enrollee is a black woman aged 35-44 years with an annual income of less than $10,000.
3. A majority of program enrollees are transportation insecure and their ability to travel is stressful, which suggests that the program is targeting the correct audience.
4. A majority of program enrollees have difficulties attending medical appointments and grocery stores or food banks.

4 Program usage

Figure 4 shows the number of rides and users for uber and bus services. The program usage (the number of Uber and bus rides) has been increasing, which is likely driven by higher enrollments in later months. Some of this was likely because of an increase in the number of seats (maximum number of enrollees) offered to social service providers, partially because of an influx of families relocating from Afghanistan.

It may also be noted that most of the enrollees with the 4 Uber rides + bus pass option are not using the Uber benefit. So, henceforth, we will simply refer to them as Bus users.

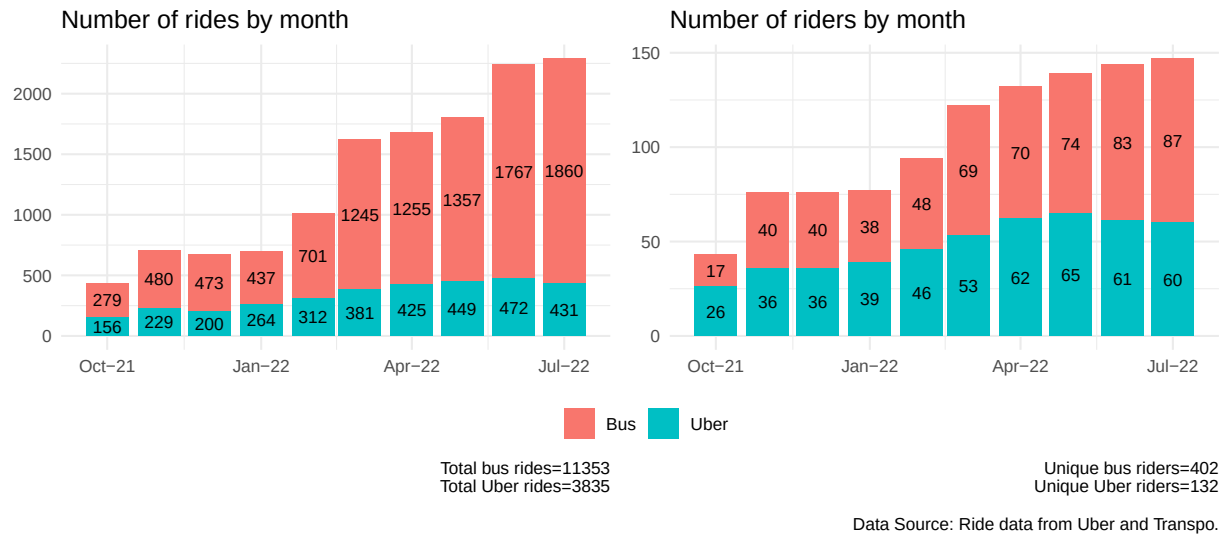

Figure 4: Rides and riders by month

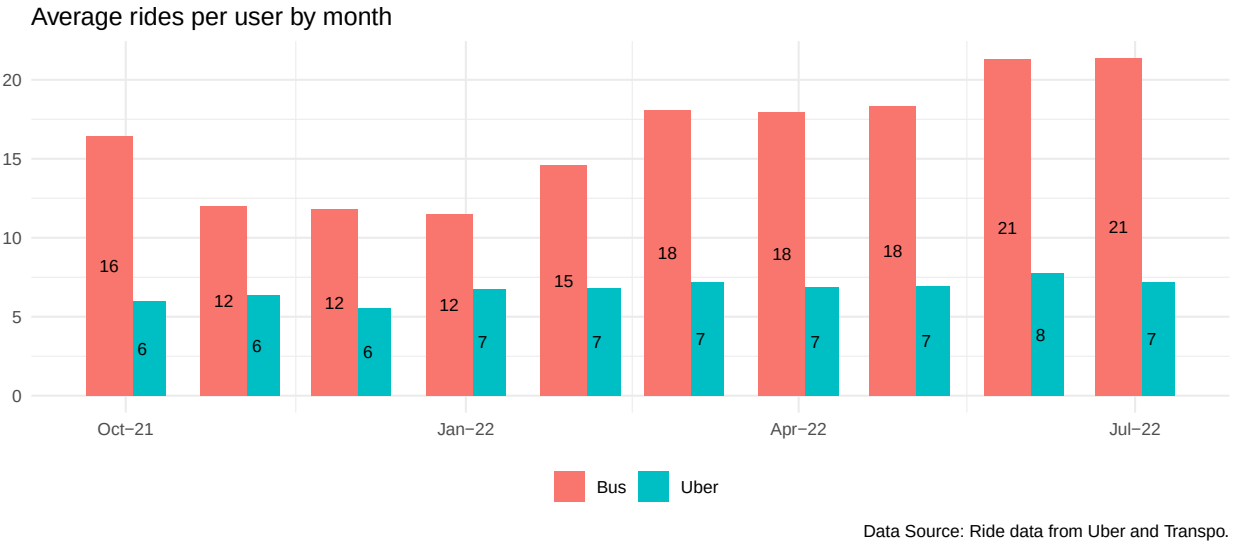

Figure 5: Average rides per user by month

Figure 5 shows the average rides per user for Uber and Bus. For Uber, the average number of rides per user is about 6-8, lower than the maximum of 10 rides per month. This suggests that some enrolees do not use all their rides. For the bus, the average number of rides is much higher, which is reasonable since the maximum number of rides is not capped. In Figure 17 we show that except in June 2022, each month about 20-40% of Uber users use all the rides.

Takeaways:

1. The total number of monthly rides and users has been increasing since the program's inception.
2. The average number of Uber rides is lower than that of bus rides. This is reasonable as, unlike bus rides, the maximum number of Uber rides each month is capped at 10.
3. The average number of Uber rides is less than 10 suggesting some Uber users do not use all their rides.

5 Learnings from personal interviews

To better understand the program users, situations in which the rides are being used, and program impacts, in-depth telephonic interviews were conducted in May and July 2022 with 17 program participants which represent around 6% of the beneficieres.[7]. Figure 6 shows the demographic characteristics of interviewees which look quite similar to those of all enrollees (Figure 1) except that Black or African American enrollees are overrepresented among the interview sample.

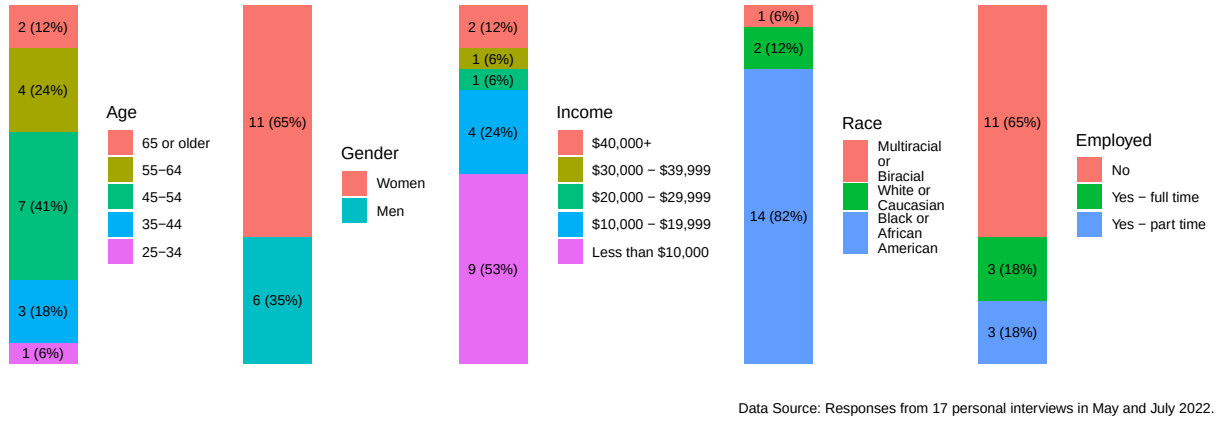

Figure 6: Demographics of interviewees

A few takeaways from the interviews are mentioned below. Related quotations from interviewees are highlighted.

1. *The CNPP program is serving an especially vulnerable population*

   As seen in the quantitative analysis, 67% of all users are low-income individuals, with an annual income of fewer than $10,000. The vulnerability of this population was reinforced during the in-depth interviews where we found that a majority of respondents have no source of income because they do not have a job and are looking for one or because they are dependent on social security or disability insurance. A number of them have health issues that prevent them from getting regular employment. Not surprisingly, many do not have stable housing and live at social services provider locations. Others who have housing are utilizing social services providers services such as rental and utility assistance.

> "My dad helped me this last time to go to Sam's Club and buy the bigger packages of things, so that I won't have to go to the store, you know, and spend on toilet papers and stuff. He helped me out like that and then that way I have more money for transportation."

> "If you have a choice between getting groceries, are getting toiletries and you know catching the bus you're like Oh my goodness. I have walked like 4 four blocks to go and get some toiletries and bring them back to my house [to avoid paying for the bus]."

[7] 11 from REAL services and 6 from Hope Ministries.

> "When I can't afford it [transportation], I might, you know, skip out a couple of days stay at home or even go to the closest places that I can ride my bike."

2. *This population has limited means of transportation*

   Only 2 out of 17 respondents have access to a car, that needed repairs, and a majority do not have a driver's license. Given their financial vulnerability, getting a car is the least of their priorities. Pubic transport usage is also restricted sometimes due to health issues. For example, one respondent mentioned that he has to carry an oxygen tank with him. Another respondent mentioned that she suffers from schizophrenia and is not very comfortable traveling on the bus. For one mom, traveling with her child is difficult on the bus. Consequently, getting a ride from friends and family members is often the only option in addition to walking. The bus and Uber ride through the program are the primary mode of transport for the enrollees.

> "I had to walk many times you know, without having any money to pay for it [transportation]. I had to walk to location."

> "[Before the bus pass] I was paying people to take me back and forth and then sometimes they would come and sometimes they wouldn't, and sometimes they'll take your money and do what they wanna do with it. I was tired of giving people my money."

3. *Their travel needs are irregular but there are a few commonalities*

   Since this population is often without regular employment, many do not need transportation every day to the same location but only need one-off rides. Consistent with the weekly survey responses (Figure 3), the two most common needs are attending doctor's appointments and grocery stores.

4. *Their current mode of transport is expensive and stressful*

   Rides from friends and family members typically involve payments, which could be a significant financial burden in addition to the emotional stress of asking for rides.

> "The last time I got a ride from a friend we went to a Housing Authority we went to voc rehab, and to the food stamp office and to Walmart. She charges me like $25 when I need her to help me go some places or more depending on how many places I got to go. It gets pretty pricey. I pay big time [to the friend who gives rides] and the thing is it is kind of a hardship. Because I get Social Security disability. I don't work because of disabilities. And you know, paying that kind of money out of my check has been kind of stressful. Has been stressful for real."

5. *5. Familiarity with the bus is an important reason for a relatively higher number of bus users*

Why do some people prefer to have access to the bus? Most of the interviewees are very comfortable, and almost prefer using the bus over rideshare. Mostly because they have experience traveling by bus and it works well for occasional doctor visits. The respondents also rated the reliability of the bus service as very good, which may also explain their preference for the bus. Some also expressed unfamiliarity with smartphones as a constraint for using rideshare and digital bus pass. Reasons for rideshare enrollments are health issues that restrict bus pass usage, in addition to limited coverage and inconvenient timings of the bus system.

6. *The CNPP program does not solve all the transportation issues*

   For example, the limited Uber rides are insufficient for one participant who works the night shift and has to get to work when bus service is unavailable. Another interviewee mentioned that she knows someone who takes the last bus available to get to work, even when it means reaching the workplace a couple of hours before the shift start time.

7. *The City and social services providers have done a tremendous job of distributing the bus passes*

   All interviewees said it was very straightforward to get the bus pass and renew it when needed. Also, they were very positive about City's ability to solve minor problems as they arise and still get participants the passes.

> "[Lynn] She's a sweetheart. I like her a lot. She's very, very nice to me and has a very, very good demeanor. She won't escalate a problem but deescalates if anything and then makes me feel better about what I'm doing. Not really taking anybody side and she's doing what she can to straighten things off of me and I appreciate her a lot."

8. *The program has important idiosyncratic effects*

   During the interviews, enrollees mentioned other effects which are likely not generalizable but highlight the potential effects of expanding the program to other populations and regions. For example, one interviewee mentioned that having a bus pass makes them feel independent, as they do not have to rely on friends or social services providers for rides. A few participants also reported being able to search for jobs using the program and felt confident about keeping a job they find knowing that they have the bus pass. One participant uses the bus pass to get to classes to get a GED certificate which is likely to have long-run effects.

6 Program impacts

6.1 Effect on the accessibility of places

To understand if the program helped enrollees reach places, we ask enrollees how they used the rides each month.[8] Figure 7 indicates that the three most common uses of rides are for getting to a medical appointment, grocery store or food bank, and work or job fair/ interview. We also ask about activities they were able to do because of the rides. The three common activities are getting to complete medical treatment, keeping a job, and maintaining their housing situation. These responses are consistent with those from the baseline survey (Figure 3) and indicate that enrollees now have better access to the places and services that were initially harder to access. So the rides seem to be helping enrollees reach these places more easily now. Additionally, this should also allay concerns about rides being used for non-essential purposes.

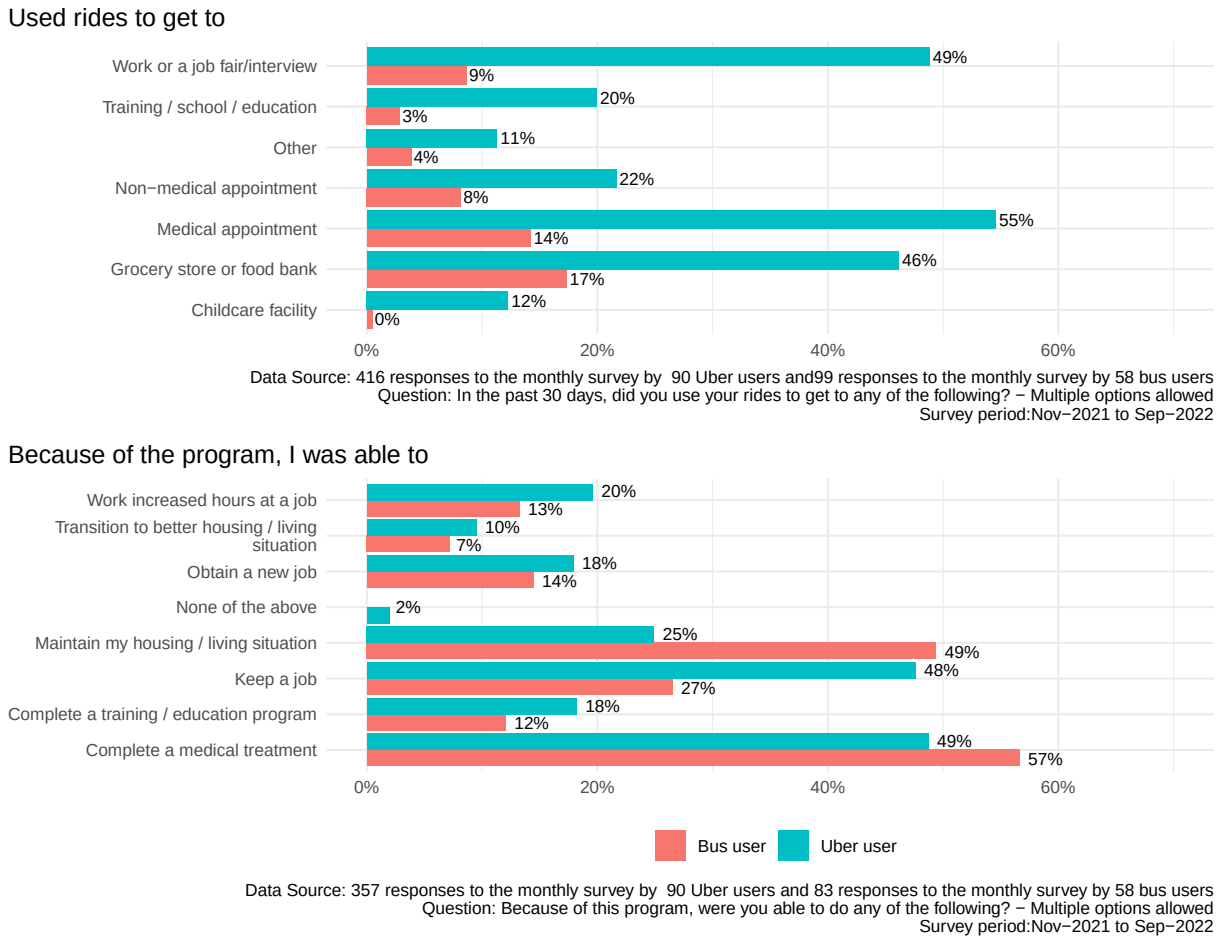

Figure 7: How were the rides used?

This increased accessibility can occur in two ways. Either by letting enrollees get to places they wouldn't

[8] An enrollee can take this monthly survey multiple times. Each of these responses is treated as an independent response of someone who has used rides in the previous month.

have been able to otherwise or by replacing existing modes of transport. In the first case, there is an increase in overall accessibility while in the second case, there are cost savings through discounted rides. Although both are desirable, we want the program to increase access to places and not just replace existing modes of transport. To study if the program replaced other means of transport, in the monthly survey, we ask the enrollees what might have happened in absence of the program. The responses shown in Figure 8 indicate that 64% of Uber users and 47% of bus users indicated that in absence of bus/Uber rides, they would have been unable to get to places they needed to go. For these enrollees, the program increased access to places. For the enrollees, who would have used full-price Uber or bus rides in absence of the program, the program acts as a direct cost subsidy without affecting their usual mode of travel (Bus/ Uber). This also suggests that the program works as a complement to existing modes without crowding out existing modes of transport.

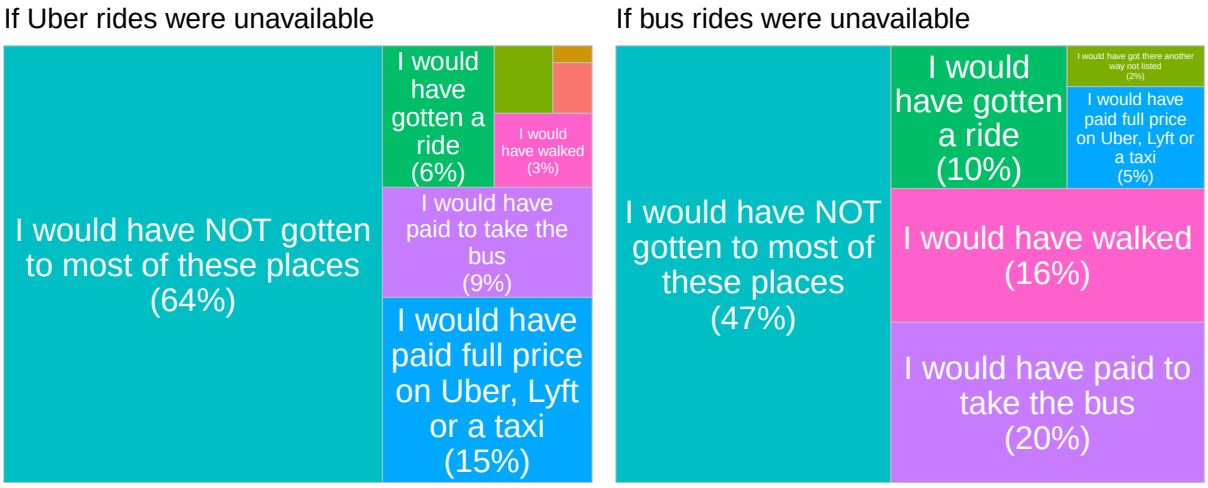

Figure 8: What would have happened if bus/Uber rides were unavailable?

The program is thus helping enrollees access critical services they had difficulties accessing before enrolling in the program, including medical treatments that can be life-saving, food for themselves and their families, and better job opportunities. The discounted rides through the program are partly substituting existing modes of transport, resulting in money savings, but also enabling individuals to go to places they wouldn't have gotten to otherwise, suggesting the program increased overall access to places.

6.2 Effect on money saved

To understand how the program helps enrollees save money, in the monthly survey, respondents are asked the question "Because of this program, have you spent less on transportation and been able to spend more money on other needs?".[9] 90% answered the question as yes. Evidence of how the money

[9]Theoretically, for the bus users, the maximum savings per month can be up to $35 (the cost of the monthly bus pass) + $160 (maximum discount on 4 Uber rides). Similarly for Uber users, the maximum savings can be up to $400 (maximum

was saved comes from the endline survey administered to all enrollees. The responses shown in Figure 9 suggest that savings come through less money spent on Uber/Lyft rides, paying friends for rides, and bus fares. Interestingly, about a third of respondents indicated savings through being able to get items and services at a cheaper rate. The responses are broadly consistent with observations from the interviews where respondents gave similar responses.

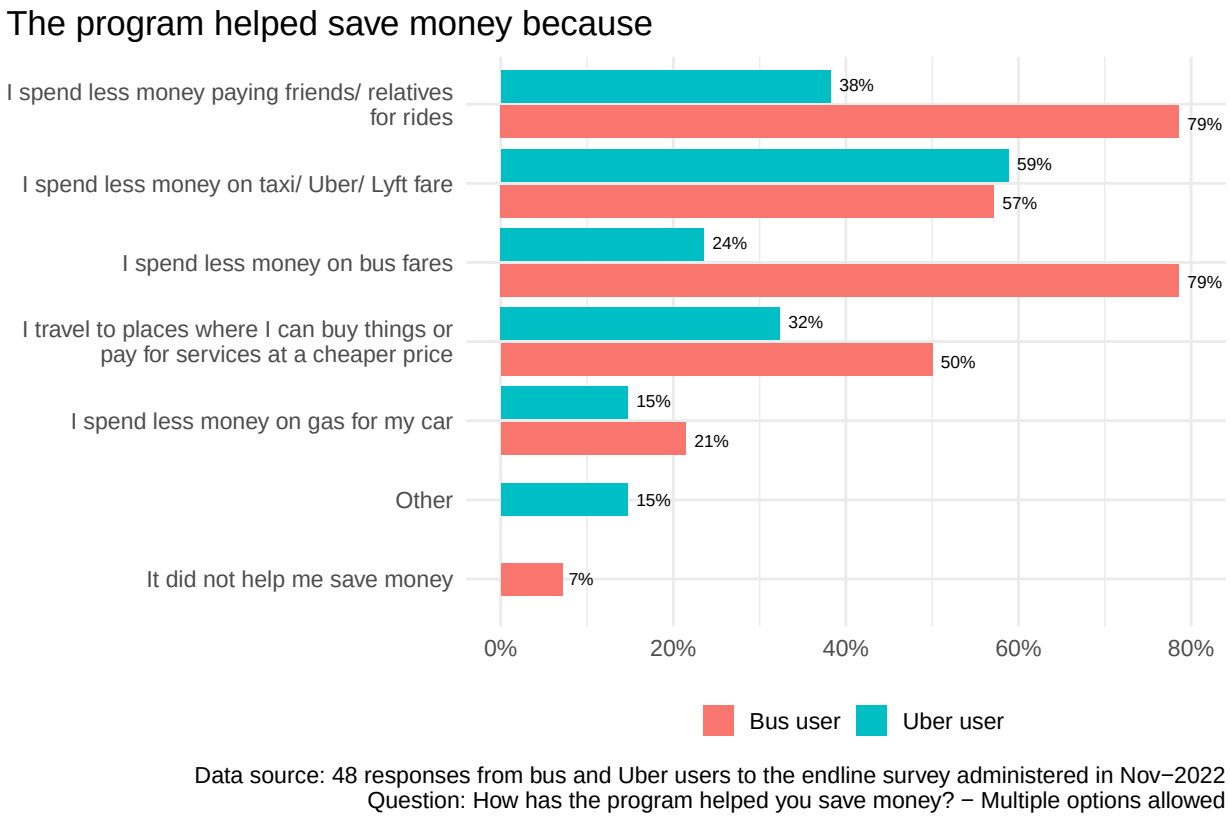

Figure 9: Ways through which the program saved money

6.3 Effect on stress related to transportation

Around 54% of enrollees had indicated that their ability to travel had been very stressful before enrolling in the program. We now study if the program affected this transportation-related stress. We focus on understanding if the likelihood of enrollee feeling very stressed about their ability to travel was affected by program enrollment. The first plot in Figure 10 shows enrollee stress levels associated with their ability to travel by months since enrollment into the program. The proportion of enrollees reporting feeling very stressed about their ability to travel is about the same for up to 6 months after enrolling in the program suggesting that likelihood of high transportation stress was unaffected.

We note that there is a big difference in the response rate to the baseline and monthly surveys (Table 2). This can cause bias if those who respond to the surveys are systematically different from the average respondent. The transportation-related stress levels can also be affected by seasonality. For example,

discount on 10 Uber rides)

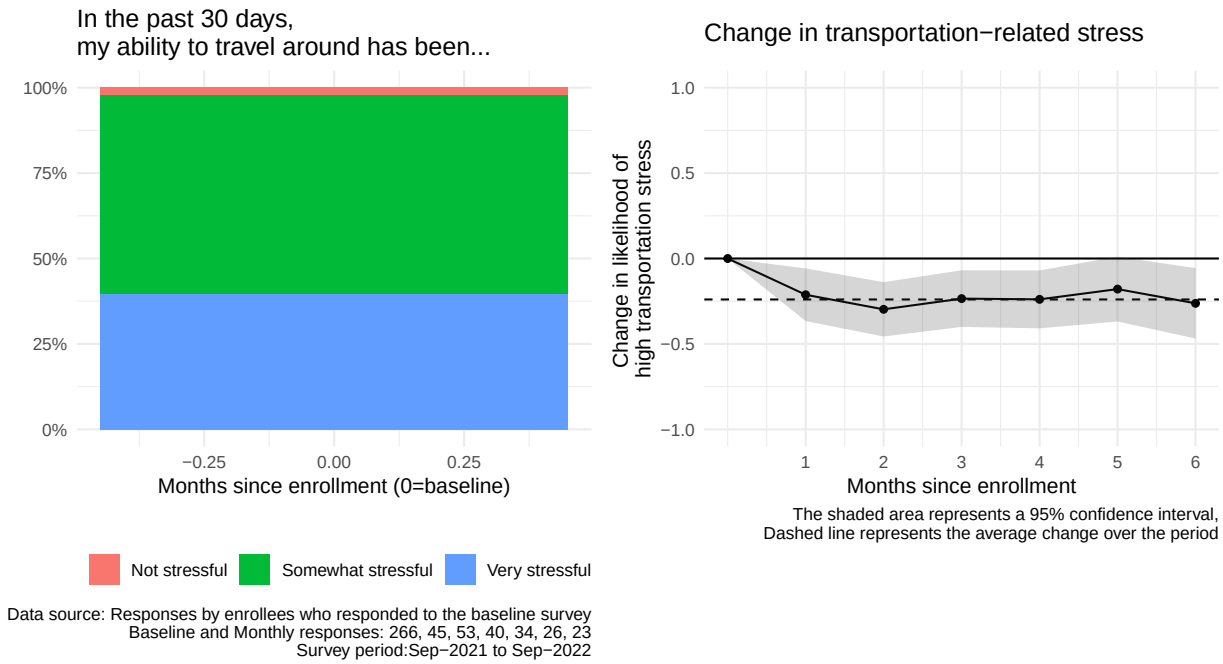

Figure 10: Transportation stress across time

stress can be higher during months of snow when it is difficult to travel, in general. To control for these issues, we use a multiple regression model that uses data from enrollees if they appear in the baseline and at least one monthly survey. Seasonality of stress levels is captured using fixed effect for the months of December-February.

The second plot in Figure 10 shows the change in the likelihood of high transportation stress for months after enrollment relative to the baseline controlling for seasonal effects. Relative to the baseline, enrollees are 0.25 percentage points less likely to report being very stressed about transportation. On the baseline of 0.45, this translates to a reduction of 53.3%. This should not be interpreted as a causal effect of the program as that requires the assumption that the stress levels reported in the baseline would have remained the same in absence of the program, which we may not hold. As we would expect, most of this change occurs in the first month after enrollment. It is also statistically significant as the error bars do not cross the zero line for most of the months. This should not be interpreted as a causal effect of the program as that requires the assumption that the TSI reported in the baseline would have remained the same in absence of the program, which we may not hold.

Thus, enrollees -53.3% less likely to feel "very stressed" about their ability to travel around for up to 6 months after enrolling in the program. This finding of reduced transportation-rested stress was reiterated during the interviews where 12 out of 17 respondents (=70%) said that the program helps alleviate stress related to transportation. Not having to ask someone for rides and pay them reduces stress. Stress is further reduced through the use of the program because the program guarantees access to a bus ride or an Uber ride. Knowing that they can rely on the program helps the participants worry less about how to get where they need to go.

6.4 Effect on overall transportation situation

We now study how the program affected the overall transportation situation. We measure the overall transportation situation using the transportation security index (TSI) for enrollees using responses to the monthly survey. Recall that a person's TSI indicates how easy it is for the person to travel around as needed. The index can have a value between 0-6 with lower values implying users can travel around easily. We compare these monthly values with that at the baseline to study if the program affected the overall transportation situation of enrollees.

The first plot in figure 11 shows that the average TSI trends downward, indicating that respondents report feeling more transportation secure after enrolling in the program, for up to 6 months after enrolling in the program. It is assuring to see the downward trend, moving the average enrollee from "Severely Insecure" group to "Moderately Insecure" group.

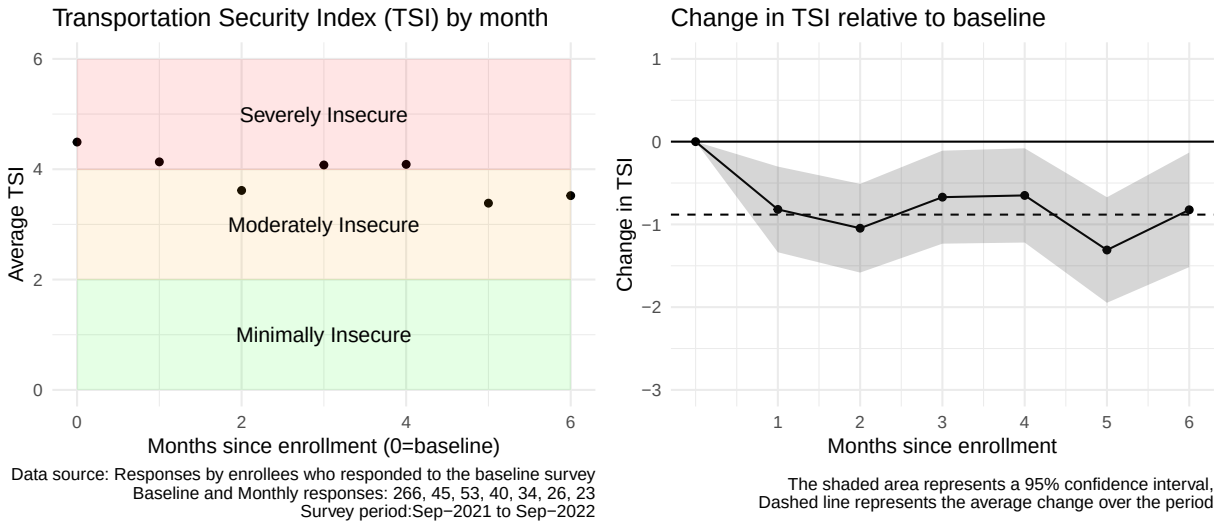

Figure 11: TSI across time for all respondents

To control for seasonality and missing responses to the survey, we used a multiple regression model that uses data from enrollees if they appear in the baseline and at least one monthly survey. Seasonality of stress levels is captured using fixed effect for the months of December-February.[10] The second plot in Figure 11 shows the change in TSI for months after enrollment relative to the baseline controlling for seasonal effects. Relative to the baseline, enrollees report lower TSI (becoming more transportation secure) by -0.88 units. On the baseline average TSI of 4.49, this translates to a reduction of 19.6%. As we would expect, most of this change occurs in the first month after enrollment. It is also statistically significant as the error bars do not cross the zero line. This should not be interpreted as a causal effect of the program as that requires the assumption that the TSI reported in the baseline would have remained the same in absence of the program, which we may not hold.

Thus, enrollees' TSI improves by 19.6% for up to 6 months after enrolling in the program, implying an improvement in the overall transportation situation.

[10]More details for the regression model are discussed in section 10.11

6.5 Effects on the broader community

A common theme across interviews was that having access to the program had spillover effects on the broader community in at least two ways. First, by allowing enrollees to meet friends and family members more often. Second, by reducing the burden for the social service providers of providing transportation themselves and allowing focus on other issues, which likely positively impacts the broader community. Thus, the program has broader effects on the community by allowing enrollees to spend more time with their families as well as allowing the social service providers to focus on non-transportation issues of the community.

7 Recommendations

We point out some ways in which the program can be made more effective.

1. Making Uber vouchers easily apply to scheduled rides: Uber vouchers are difficult to use for scheduled rides because they do not automatically apply to these rides. Unlike on-demand rides, individuals must complete extra steps to ensure their voucher applies to scheduled Uber rides. It would be helpful to ensure that Uber vouchers apply automatically to scheduled rides as they do for on-demand rides. 2.2. Training for using the Uber app: Some participants mentioned that they would like to try out using the Uber app but were unsure how to learn to do so. A training video or on-site visits to show how to use the app and a monthly voucher could help them use Uber.[11] These measures can help increase Uber usage.
2. Distributing a few weekly or daily passes: Given the intermittent travel requirements, some en-enrollees may need the bus only for a few days of the week for which a daily/weekly pass may suffice. This can potentially reduce the bus pass expense for the city but will likely add some administrative burden.

8 Conclusion

The objective of the report was to study how the CNPP program affects enrollees and the broader community. Using surveys, interviews, and ride data from bus and rideshare providers, we demonstrated that the program has statistically significant and economically meaningful impacts. The program allows enrollees to reach places they would not have reached otherwise, access critical services such as health and food, save money spent on transportation, reduces transportation-related stress, and improves the overall transportation situation. The program has spillover effects on the broader community by allowing- ing enrollees to spend more time with their families and reducing the burden on social service providers.

These effects must be understood keeping in mind the population the program serves. These are low-income residents of South Bend, a majority of whom do not have full-time employment, or stable housing and utilize services of social service providers such as rental and utility assistance. It is reasonable to assume that, for this population, the value of the bus pass and the limited number of Uber rides is very high, and we may not see similar effects if the program is made available to more resource-rich populations.

[11] Similar to the video here: https://www.commuterstrust.com/uee

It must also be noted that the program does not address all the transportation-related problems faced by the enrollees. The bus pass is not of help for someone whose health issues prevent traveling by bus. The limited Uber rides are insufficient to use for full-time employment.

Our overall assessment is that while the program does not completely solve the difficult problem of providing transportation to low-income residents, it does go a long way in helping a population that is facing a lot of other problems in addition to transportation. Easing one of the problems is difficult to estimate but likely a huge relief.

We hope that the benefits highlighted in the report, along with the costs of providing the bus pass and Uber rides, help the City of South Bend when considering continuing the program. More broadly, we help the report findings help other cities in bringing in similar programs for their residents.

9 References

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10 Appendix

10.1 Data collection instruments

10.1.1 Surveys

1. Baseline survey: This survey was given to enrollees when they first enroll in the program which would be anytime from October 2021 - August 2022. This contains demographic questions, TSI questions, and questions about stress related to transportation. The demographic questions help understand the enrollee population, while the TSI and stress-related questions capture these before enrolling in the program. The TSI and stress-related questions are asked later in weekly and monthly surveys to study how these change after enrolling in the program. We have responses from 266 out of 298 enrollees (89% response rate).
2. Weekly survey: This survey is given only to Uber users if they used at least one ride in the past week. This intends to understand places where the rides were used to get to and what would have happened if these rides were unavailable. This was done to ensure only a short time between using the rides and taking the survey so that recall bias is reduced.
3. Monthly survey: This survey was given to all enrollees. It contains the TSI questions and stress-related questions to study any effect on them after enrolling in the program by comparing them with baseline survey responses. Additionally, it also contains a question on what would have happened if the program wasn't available.
4. Endline survey: This survey was given to all enrollees. It contains questions related to money saved. A version of this survey was given to social service providers specifically asking about reasons for enrollees leaving the program.

10.1.2 Telephonic interviews

Telephonic interviews were conducted with 17 program enrollees during May and July 2022 to better understand the program usage and identify impacts not captured in the survey.

10.1.3 Rides data

The data on rides taken by enrollees was provided by Uber and Transpo (bus service provider).

10.2 Programs around the world providing discounted rides

1. Free public transport in Tallinn, the capital city of Estonia: https://www.smarttransport.org.uk/features/how-tallinn-provides-free-public-transport-for-420-000-people
2. Subsidized ride-pooling in Arlington: https://www.fastcompany.com/90304594/can-ride-pooling-service-via-catch-up-to-uber-and-lyft-by-being-the-friendly-alternative
3. Wheels-to-work program in west Michigan region: https://ridewheelstowork.com/

10.3 Uber rides usage and counterfactual

A weekly survey is given to all those who have used at least one Uber ride in the past week asking about the places visited using the rides and what would have happened in absence of the rides. We are interested in knowing the places the rides were used to reach and the counterfactual scenario (when rides were not available). The purpose of asking this in the weekly survey in addition to the monthly survey was to reduce the recall bias as respondents are more likely to recall rides taken in the last week than in the last month.

Figure 12 shows that a large majority of users used the rides to get to a medical appointment (51%), work or a job fair/interview (50%), and a grocery store or food bank (38%). Figure 12 shows that 73% of respondents indicated that in absence of Uber rides, they would have been unable to get to places they needed to go. The results are consistent with those from the monthly surveys which suggest that recall bias is not an issue.

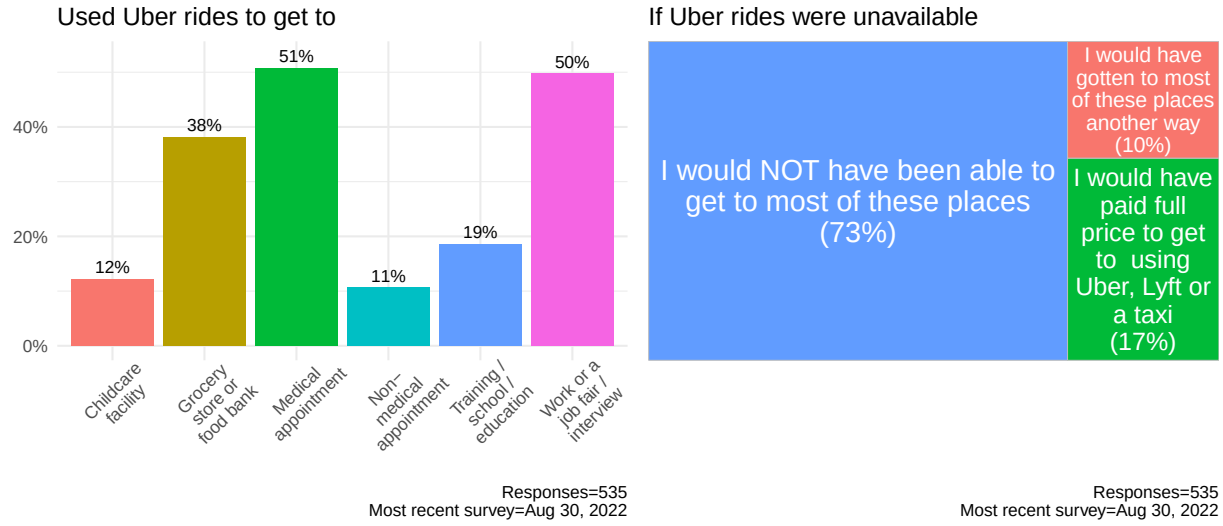

Figure 12: How were they used and what would have happened if they were unavailable?

10.4 Total rides by organization

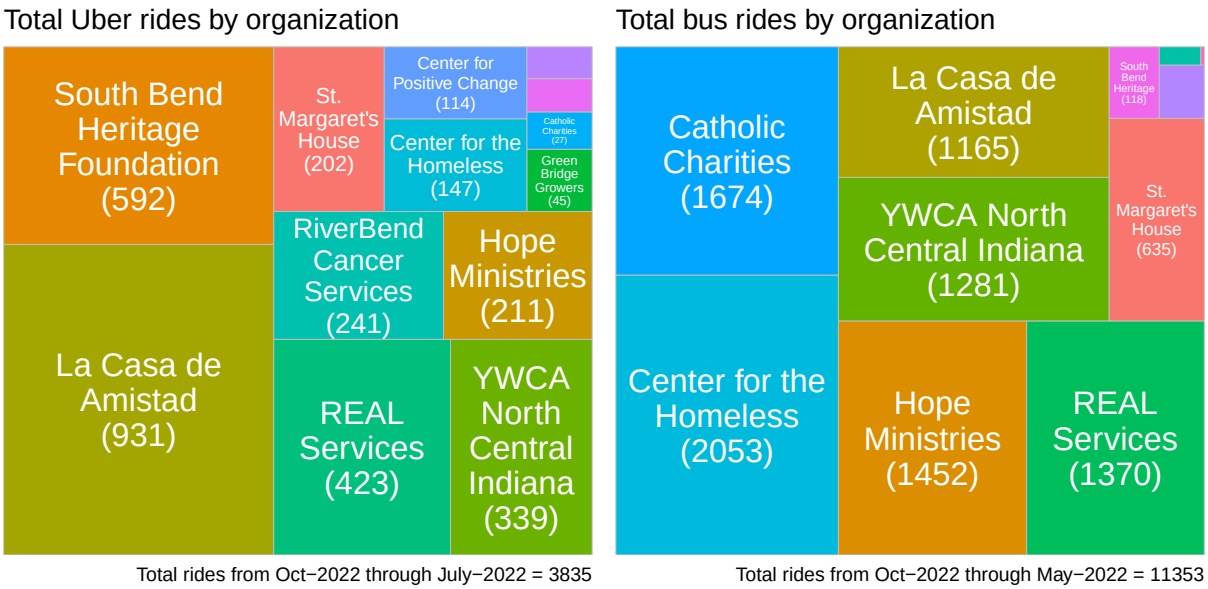

Figure 13: Rides by organization

10.5 Baseline TSI by race

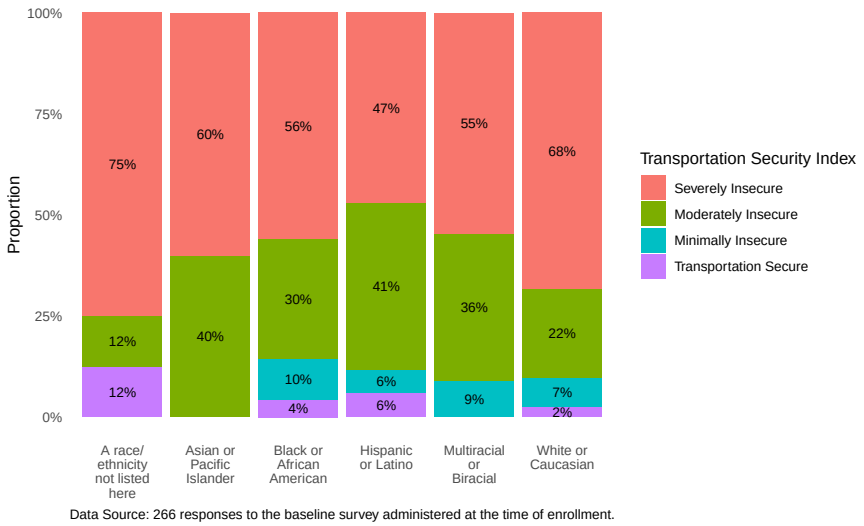

Figure 14: Transportation situation of enrollees by race

10.6 Reasons for exiting the program

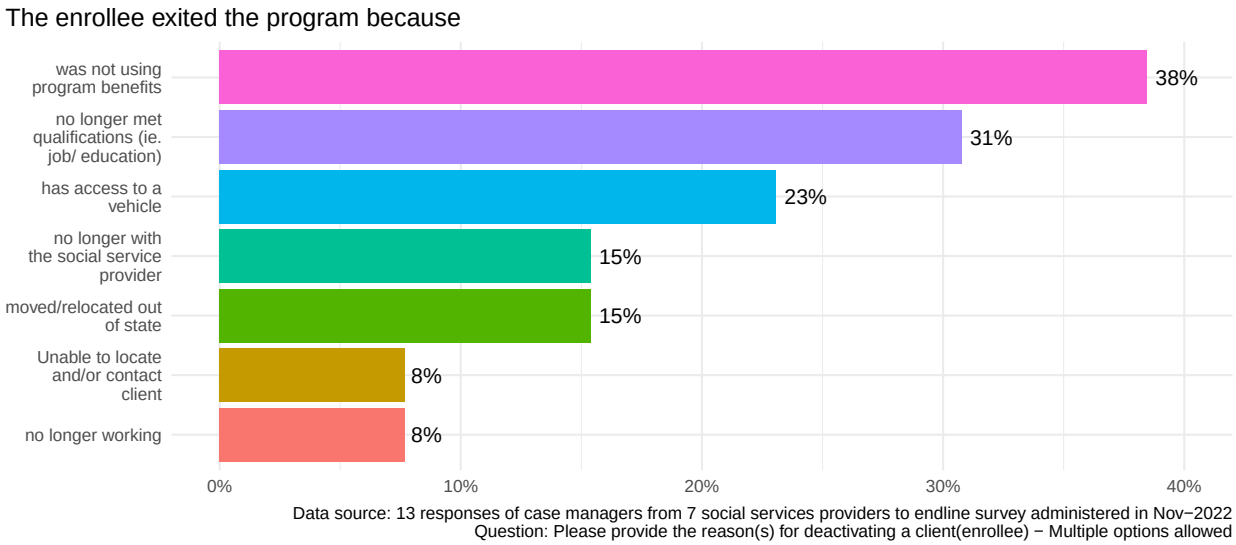

Figure 15: Reasons for exiting the program

10.7 The response rate to the monthly survey

Table 2: Response rate to the monthly survey

Months since baseline	Monthly survey responses	Response rate
0	266	0.89
1	45	0.15
2	53	0.18
3	40	0.13
4	34	0.11
5	26	0.09
6	23	0.08

10.8 Variation in TSI components across time

Figure 16: Average TSI for each TSI component

10.9 Uber users using all rides each month

Figure 17 shows that except in June 2022, each month about 20-40% of Uber users use all the rides.

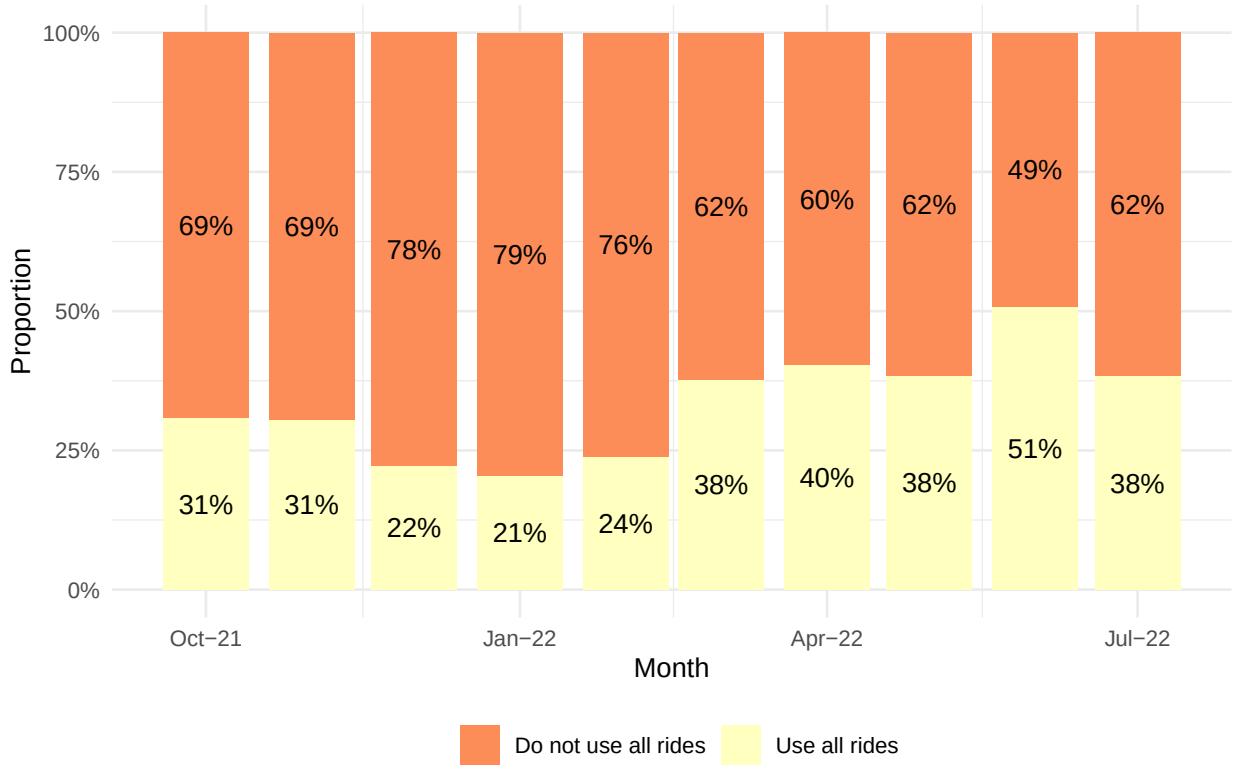

Figure 17: Proportion of Uber users using all rides each month

10.10 Reasons for preferring bus over Uber

Reasons for preferring bus over Uber based on responses to the endline survey are shown in Figure 18

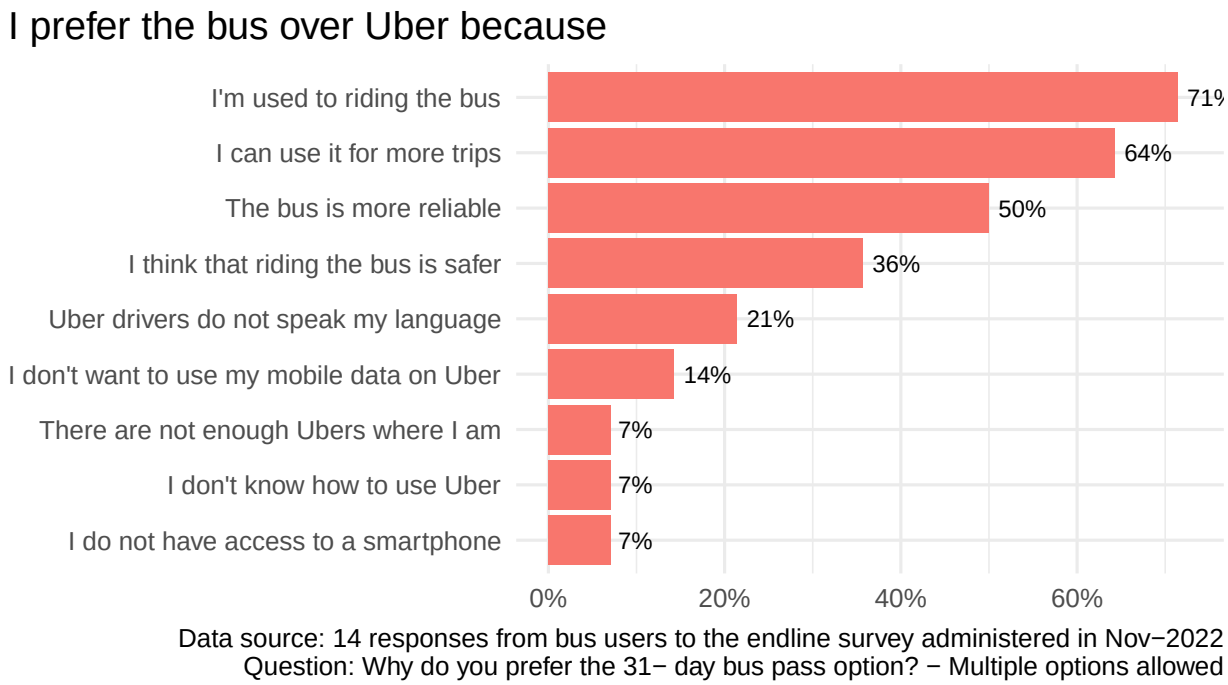

Figure 18: Reasons for preferring bus over Uber

10.11 Regression analysis

To understand the levels of TSI and transportation-related stress after enrolling in the program, we use the following regression model

$$Y_{i,m} = \alpha + \sum_{m=0}^{6} \beta_m * month_m + \gamma snow\_months_m + \delta_i + \epsilon \quad (1)$$

where, $Y_{i,m}$ is either the TSI of enrollee i in month m or an indicator that turns 1 if enrollee i reported that its ability to travel has been very stressful. The variable $snow_months$ turns 1 for December - February and captures the variation in the outcome during snow months, δ_i is the enrollee fixed effect that ensures that only those enrollees who responded to at least one monthly survey after the baseline survey are included in the model. ϵ is the error term. The coefficients of interest are the β's and γ and are shown in the table below. The negative coefficients on the month indicators suggest both TSI and transportation-related stress are lower in months 1 through 6 after enrollment relative to the baseline. The coefficient on snow months is negative but insignificant.

Table 3: Effect on TSI and transportation-related stress

	Dependent variable:			
	TSI		High stress	
	(1)	(2)	(3)	(4)
month=1	−0.359	−0.819***	−0.177**	−0.219***
	(0.275)	(0.259)	(0.078)	(0.077)
month=2	−0.877***	−1.046***	−0.258***	−0.297***
	(0.259)	(0.268)	(0.074)	(0.080)
month=3	−0.416	−0.671**	−0.207**	−0.245***
	(0.293)	(0.281)	(0.082)	(0.082)
month=4	−0.404	−0.650**	−0.238***	−0.243***
	(0.311)	(0.285)	(0.088)	(0.084)
month=5	−1.108***	−1.310***	−0.224**	−0.182*
	(0.351)	(0.319)	(0.099)	(0.094)
month=6	−0.971***	−0.824**	−0.315***	−0.279***
	(0.371)	(0.346)	(0.105)	(0.103)
snow months		−0.027		0.044
		(0.236)		(0.070)
Constant	4.492***		0.532***	
	(0.105)		(0.030)	
Observations	485	485	484	484
R^2	0.048	0.135	0.057	0.106
Note:				*p<0.1; **p<0.05; ***p<0.01

10.12 Heterogeneous effects

In Figure 19, we show the effect on TSI and transportation-related stress by gender and race. In the first plot, the change in TSI for women is more negative than for men implying the effect on TSI is larger for women. However, due to large standard errors, there is an overlap of confidence intervals and hence we cannot reject the null hypothesis that the effects by gender are the same. Similarly, we cannot reject the null hypothesis that the effects by race are the same. The effect on transportation-related stress is similar. Here too we cannot reject the null hypothesis that the effects by race and gender are the same.

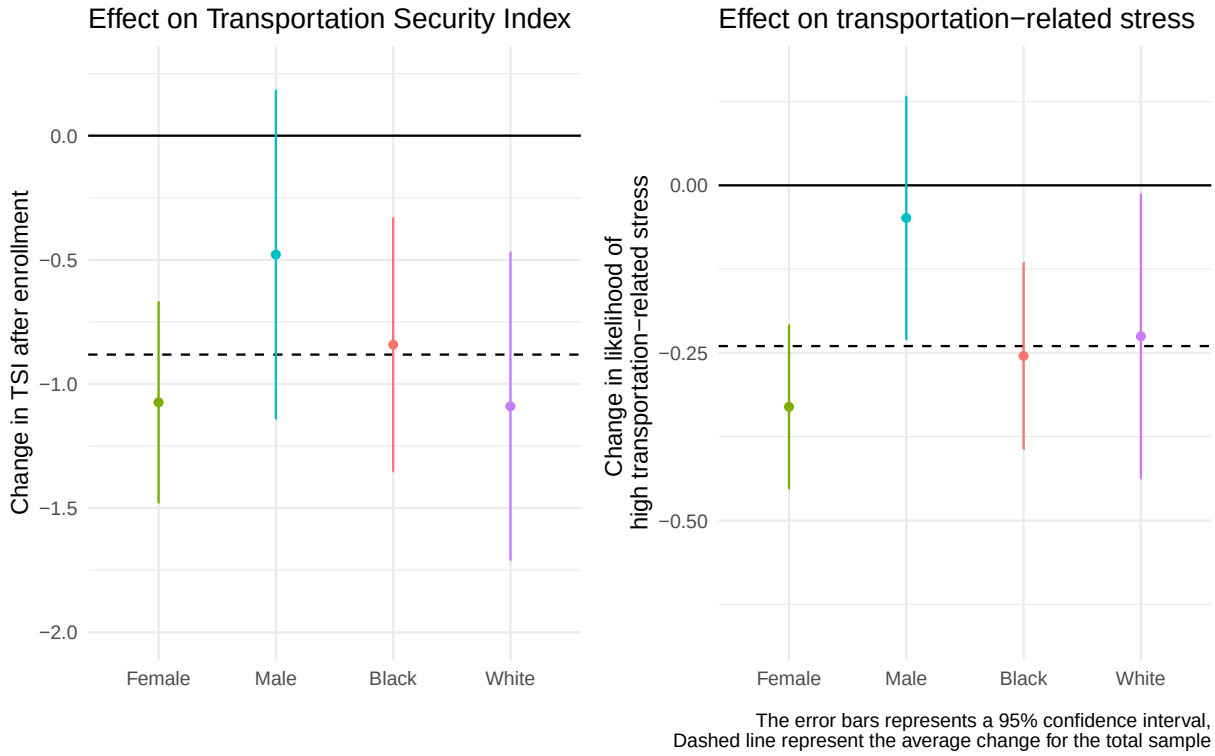

Figure 19: Heterogenous effect on TSI and transportation-related stress

10.13 Details of the organizations participating in the program

Sr. No.	Organization Name	Mission/ objective(s)
1	La Casa de Amistad	To empower the Latino/Hispanic community within Michiana by providing educational, cultural, and advocacy services in a welcoming, bilingual environment.
2	REAL Services	Providing real services for the independence, strength, and dignity of our community.
3	Hope Ministries/ Help with Love	Hope's mission is to engage people in intensive relationships, help them heal, and foster long-term relationships to help them transform and thrive.
4	Center for the Homeless	Break the cycle of homelessness; Bring together disparate groups so that each can discover the worth, dignity, and potential of the other; Pioneer a service model worthy of replication
5	YWCA North Central Indiana	YWCA is dedicated to eliminating racism, empowering women, and promoting peace, justice, freedom, and dignity for all.
6	South Bend Heritage Foundation	Working to make neighborhoods safe, attractive, and thriving.
7	Catholic Charities	Our mission has been rooted in Christ — providing the hope our brothers and sisters need as they strive for self-sufficiency. That means supporting the vulnerable with something as straightforward as a warm coat or a new job skill, or something as complex as rebuilding an entire life. By putting more of every donation into our life-changing programs, we're able to serve all those in need as Christ call us to do. Serving the 14 counties of the Diocese of Fort Wayne-South Bend, this is where hope begins.
8	RiverBend Cancer Services	RiverBend Cancer Services improves the quality of life of cancer survivors and their families in our community through helpful advocacy, hopeful support, and innovative educational programs.
9	St. Margaret House	St. Margaret's House improves the lives of women and children by providing individual attention to their immediate needs, breaking the bonds of isolation, and helping them to take their next best step. We believe that each woman is talented and gifted and deserves to be treated with dignity and respect.
10	Center for Positive Change	We create an opportunity for our clients, their families, and our community to make positive changes. We offer services designed to tackle some of the most challenging issues facing our clients, their families, and our community. Issues like domestic violence, substance abuse, child neglect & child abuse, interpersonal conflict, parenting concerns, grief, and hopelessness.
11	United Health Services	United Health Services promotes the vitality of individual lives through education, direct services, and advocacy. Committed to the health of our community, we deliver high-quality innovative programs, encourage personal responsibility for wellness and seek collaborative solutions to emerging health needs.
12	United Religious Community	To encourage religious cooperation and understanding To seek to effect constructive social change To serve as advocates for those seeking to meet life's basic needs
13	Green Bridge Growers	Green Bridge Growers uses innovative methods to grow sustainable, fresh produce for your table year-round. Our venture is also grounded in a strong social mission - to create jobs that harness the amazing skills of young adults with autism. We grow local, organic vegetables for our community, and those who buy from us help to create jobs and change lives.