CENTER FOR GUARANTEED INCOME RESEARCH
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The American Guaranteed Income Studies: Cambridge, Massachusetts

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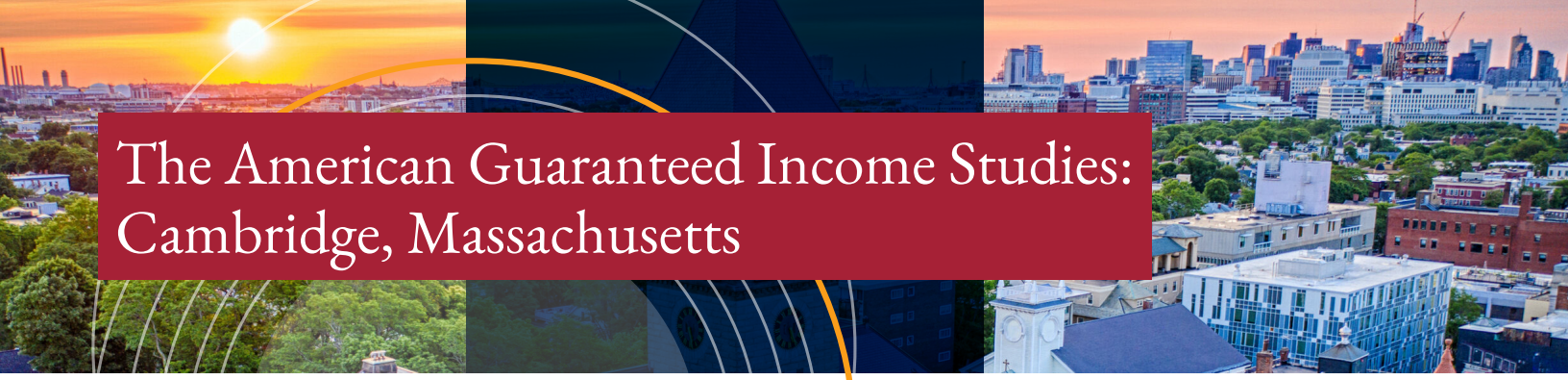

The American Guaranteed Income Studies: Cambridge, Massachusetts

Executive Summary

In September 2021, Mayor Sumbul Siddiqui and the Cambridge Community Foundation launched the Cambridge Recurring Income for Success & Empowerment (RISE) guaranteed income (GI) pilot. Designed to address growing economic disparities and racial inequities, Cambridge RISE provided $500 recurring monthly payments for 18 months to 130 randomly selected single-caretaker households living below 80% of the Area Median Income (AMI). To maximize the impact of the monthly GI, the RISE team secured benefit waivers to protect housing and DTA public benefits for pilot participants.[1] Launched during an unprecedented time of pandemic-related stressors and inflation, Cambridge RISE provided critical relief to single caregivers who were responding to added burdens related to remote work and school and childcare center closures.

The Center for Guaranteed Income Research (CGIR) conducted a mixed-methods Randomized Controlled Trial to evaluate Cambridge RISE and randomly assigned 130 caregivers to the treatment arm and 156 caregivers to the control arm. Both groups had similar demographic characteristics and were comprised of majority female, African American, single-headed households with two children on average. The mean annual household income was $23,255 for the treatment group and $20,246 for the control group. Strikingly, the calculated living wage for a single household with two children in Cambridge is $132,109, suggesting that study participants experienced deep poverty and financial strain in an area with a very high cost of living.

The Cambridge RISE evaluation was guided by the following primary research question: how does GI affect participants' quality of life; work; subjective sense of self; and relationships with self, children, and others? For both treatment and control participants, CGIR administered compensated research activities consisting of four longitudinal surveys from Baseline to Endline and semi-structured interviews at the midpoint of the Cambridge RISE program. A summary of the overall findings followed by more specific findings separated into research question subparts are contained below.

Overall Summary of Findings

In sum, the receipt of GI improved financial health for recipients. Compared to the control group, the treatment group experienced increases in income and income stability, the ability to cover emergency expenses, and save for the future. Additionally, GI recipients were more likely to experience reduced

1 The Massachusetts Department of Transitional Assistance (DTA) provides cash benefits and food assistance to individuals and families with low income.

housing cost burden and food insecurity compared to the control group. However, the impact of GI on recipients' physical and mental health was mixed, suggesting that GI alone may be insufficient to support the well-being of some caregivers, particularly those with dual caregiving responsibilities across generations. GI recipients were also more likely to work outside of the home in addition to their caregiving responsibilities, which in turn may have contributed to observed increases in household chaos and unimpacted levels of perceived stress compared to the control group. Findings revealed that many caregivers utilized the cash payments to care for others rather than themselves, and indeed, children of GI recipients experienced better educational outcomes compared to the children of control group members. However, the impact of GI on recipients' personal agency, goal setting, and future planning was mixed, further supporting the finding that overburdened caregivers' ability to use the GI for themselves may be limited.

KEY FINDINGS - AT A GLANCE

- Improved financial health — On average, recipients of the guaranteed income reported higher incomes and lower income volatility and were better able to cover a $400 emergency expense compared to a control group of similar Cambridge residents who did not receive the direct cash.
- Enhanced housing, utility, and food security — By the end of RISE, the treatment group experienced a lower housing cost burden, more stable utility costs, and higher food security compared to the control group.
- Increased time and space for parenting — Guaranteed income allowed recipients to give more attention and support to their children, who in turn experienced improved educational outcomes compared to similar families without the direct cash.

THE IMPACT OF GI ON QUALITY OF LIFE

Financial health: Across the study time period, individuals in the treatment group consistently reported higher mean incomes, inclusive of the GI, in comparison to their counterparts in the control group. Although the average difference in income was not statistically significant at Baseline, the difference continued to grow and became statistically significant 6 months into the program. Likewise, the treatment group experienced lower income volatility compared to the control group throughout the GI program. And though the percentage of participants across treatment and control who could cover a $400 emergency expense was similar at Baseline, at 6 months into the program, the percentage of treatment participants who could cover this expense rose by nearly 8 percentage points while the control group remained static. Finally, at the conclusion of Cambridge RISE, 21% of treatment participants reported more than $500 in savings compared to only 11% of control participants. In addition, a higher percentage of treatment group participants reported well-being scores in the 'High' category (21%) compared to the control group (15%) at Endline.

Housing, utilities, and food: At Baseline, participants in treatment and control groups experienced similar rates of housing cost burden (51% vs. 54%). However, by the end of the GI program, the percentage of treatment participants with housing cost burden decreased significantly, whereas the percentage increased for control participants (42% vs. 57%). Regarding utility costs, on average the treatment group experienced relative stability while the control group experienced more pronounced fluctuations in utility expenses. Likewise, the control group more frequently reported very low food security throughout the study period compared to the treatment group (28% vs. 12% at Baseline and 29% vs. 13% at Endline).

Mental and physical health and household chaos: Overall, treatment participants reported slightly lower levels of mental distress throughout the study period, though these differences were not clinically significant. Regarding household chaos at Baseline, fewer treatment participants reported high levels of chaos (i.e., disorder, elevated noise, lack of routines, general environmental confusion in a household) compared to control participants (12% vs. 18%). However, at Endline this pattern reversed, and more treatment participants experienced high levels of chaos compared to control participants (18% vs. 12%). Findings related to the impact of GI on physical health were mixed across the study period. Insights from the interview data revealed that many treatment participants were part of the "sandwich generation," meaning that they took care of children and parents and or other relatives at the same time (Alburez-Gutierrez et al., 2021). Prior research suggests that such heavy care burdens may negatively impact both physical and mental health (Baker et al., 2018). The qualitative data indicated pronounced differences between single caregivers who had social support for care work and those who lacked it.

THE IMPACT OF GI ON WORK

Throughout the duration of the study, the treatment group consistently reported higher full-time employment on average compared to the control group. The largest difference between the two groups was seen at 12 months, with 40% of the treatment group reporting full-time employment compared to 28% of the control group. While the percentage of stay-at-home caregivers was similar across control and treatment at Baseline (12% vs. 11%), by Endline, there was a higher proportion of stay-at-home caregivers in the control group compared to treatment (29% vs. 12%). Interview data shed light on the complex gendered familial and societal expectations that caregivers in the sample experienced. Further, the dual burden of unpaid care work and underpaid waged labor limited the power of GI and led to a common experience of forced vulnerability whereby participants were "forced" into dependent or toxic relationships out of necessity and survival rather than through choice. Although the GI created pathways of agency and opportunity for some, these pathways were often cut short by various environmental stressors and systemic constraints, highlighting the need for GI to be delivered in the context of a secure, broader, and equitable safety net that better supports caregivers. The lack of affordable childcare and flexibility for parents in the labor market consistently overlapped with experiences in the paid labor market.

THE IMPACT OF GI ON SUBJECTIVE SENSE OF SELF

Findings related to participant agency, hope, and goal setting were mixed, suggesting that the pressures faced by caregivers—particularly those in the "sandwich generation"—seemed to have crowded out sustained levels of hope or agency. Interview data suggested that some participants stretched their cash payments to support family members and manage health crises, thus limiting its power to create space for personal goal setting. Conversely, other participants with fewer responsibilities and more social support were able to reclaim time and space for their own goals outside of their roles as caregivers. These mixed findings were consistent across both survey and interview data.

THE IMPACT OF GI ON RELATIONSHIPS TO SELF, CHILDREN, AND OTHERS

Findings from the surveys and interviews together suggest that the GI may have created more time and space for parenting, which in turn likely contributed to better educational outcomes for the children of treatment group participants. Several GI recipients shared that they were able to give more attention and further support their children with behavioral difficulties and/or educational needs. Likewise, survey data indicated that children and youth from the treatment group were more frequently placed in Advanced Placement courses, had fewer instances of absenteeism, and achieved higher grades than those from the control group. Of note, the positive findings related to the benefits of GI receipt for children stand in contrast to the mixed findings of GI's impact on time for self, suggesting that more robust supports may be needed for caregivers.

Acknowledgements

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City of Cambridge and Mayoral Staff Members

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MAYORS FOR A GUARANTEED INCOME

Founded by Michael D. Tubbs, MGI is a coalition of mayors advocating for a guaranteed income to lift all of our communities and build a more resilient, just America. Since launching in 2020, MGI has grown its ranks from 11 to over 125 mayors, supported the launch of 50-plus guaranteed income pilots across the country, and delivered more than $250 million in direct, unconditional relief to everyday Americans. MGI has also launched two affiliates, Counties for a Guaranteed Income and United for a Guaranteed Income Action Fund. MGI's work has ensured that guaranteed income spreads from a single moment in Stockton, CA to a national movement—pushing the conversation forward in cities, state capitals, and Congress.

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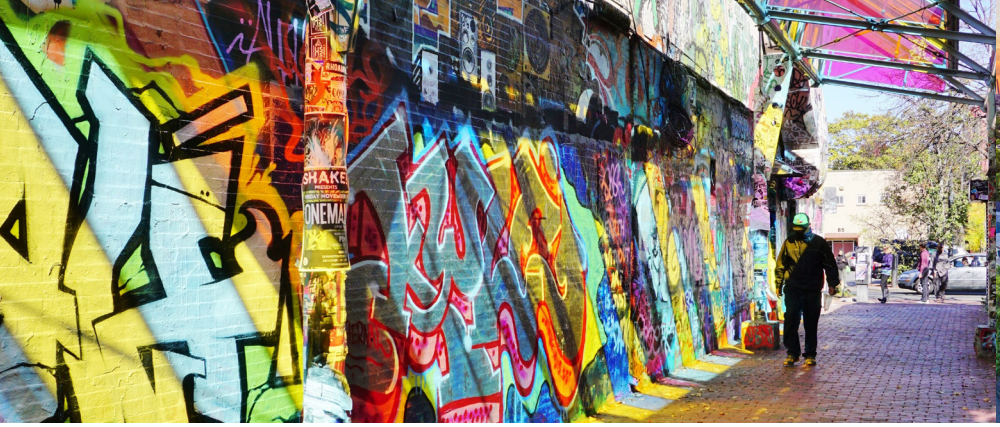
I am grateful for the generosity displayed by our community partners to support this pilot. This work has had a profound impact on many single caretaker families in Cambridge, and has shaped our anti-poverty policy in the city.

– Mayor Sumbul Siddiqui and the Cambridge Community Foundation



Background

Situated along the northern bank of the Charles River, Cambridge stands out for its renowned academic institutions and its status as a hub of innovation. Kendall Square, once a vast salt marsh, now bustles with pharmaceutical labs, the headquarters of tech giants, and entrepreneurial startups. With MIT at its core and hosting companies like Pfizer, Sanofi, Biogen, Novartis, Google, Microsoft, and Amazon, this area is often dubbed the "most innovative square mile on the planet" (Kendall Square Initiative, n.d.). Just two miles away lies Harvard Square, representing a rich intellectual and cultural legacy. The genteel redbrick of the University has hosted centuries of distinguished scholars, thinkers and educators while drawing visitors from all over the world.

Central Square, positioned between Kendall and Harvard Square, is renowned for its eclectic tangle of small shops, bookstores, and record stores. A mix of left-wing radicals, hippies, artists, and intelligentsia have passed through its pubs; its music venues have hosted every genre. Graffiti Alley's constantly-evolving street art anchors the square with just under 100 feet of space where visitors are encouraged to legally paint. In recent years it has also become a key site for food pantries and meal programs.

Adjacent to Central Square is the Port, a longstanding neighborhood in Cambridge with a rich history of immigration from the Caribbean stretching back to the 1840s (Boyer, 2015). The Port is composed of several churches, a shady park, and identical brick public housing complexes. Strong community ties historically characterized the Port, which has withstood multiple threats from changes in immigration laws and a history of racially driven housing developments throughout much of the 20th century (Boyer, 2015). In the 1960s, its residents successfully organized to block the development of the Inner Belt, which would have split the community in two with a massive highway reflective of the disruptive interstate developments that intentionally targeted communities of color around the country, leaving lasting economic scars and segregation (Archer, 2020; Boyer, 2015).

Beyond the Port, Cambridge has always been a diverse place committed to immigrants and its international student community. Waves of immigration over decades from El Salvador, Ethiopia, Haiti, Afghanistan, and Ukraine among others have left their mark on culture and foodways (*Welcoming Community Ordinance*, 2020). In 1985, well before the rest of the country, Cambridge declared itself a sanctuary city, a commitment renewed publicly in 1999 and again in 2016 (Simmons & DePasquale, 2016). Today, many immigrant and refugee families call North Cambridge home, descendants of Portuguese immigrants remain on the East side, and the presence of a large international student population is felt everywhere. This sense of diversity and inclusion entices newcomers and keeps long-standing residents from ever wanting to leave. As RISE participant Isa said, Cambridge is "the only place in the United States that … [I] can live in." Fellow participant Nicole called it "an interesting,

eclectic, weird place to live," and Veronica described its vibrancy:

> *Cambridge is really awesome. Um, you get a mix of everything. You can get the quiet and the noisy. Um, you get the granola crunchy and then, you know, the urban, you get some of everything. Everybody is just represented here.*

Yet, beneath the veneer of innovation, prosperity, and diversity, Cambridge grapples with the stark realities of social and economic disparity. The twin behemoths of Harvard and MIT shape the city, along with other elite universities and the greater Boston area's hospital system. Over more recent decades, an influx of tech and pharmaceutical companies started calling Cambridge home. But the advancements that propelled the city forward widened the rift between the affluent and the marginalized. In the shadows of towering tech campuses and prestigious institutions, long-standing residents struggle to find their footing in a rapidly evolving landscape that threatens to erode the rich history of the city and its sense of place. The astronomical cost of living, driven by the city's success, pushes out long-time residents and presents a challenging paradox: while Cambridge celebrates its status as a hub of technological and intellectual progress, it also confronts the urgent need to address the inequities this progress has created.

Cambridge's labor market reflects an age-old tale of two cities. Many Cambridge residents hold skilled jobs working in administration, operations, or support roles at the universities and hospitals for which Cambridge and neighboring Boston are known, but employment is bifurcated and rarely guarantees wages and benefits that reflect the true cost of living. Many are college-educated but still struggle to make ends meet. While their work is critical to keeping these institutions running, their wages have not kept pace with inflation or the cost of living. Participants in the RISE pilot worked as executive assistants to CEOs; in alumni relations and finance offices; or as lab assistants at universities and pharmaceutical companies. These single parents are immersed in a world of prestige and wealth while serving industry titans, but rather than providing pathways for economic mobility these industries function as glittering barriers preventing their own families from thriving. Others worked in the medical and non-profit fields, occupying middle rungs on the employment ladder—their skilled work made it possible for institutional research, operations, and administration to function. But it played a supporting role behind the scenes, and so it paid less.

In other places, these careers might generate economic mobility, but in Cambridge a stable full-time job is rarely enough to survive, let alone thrive and build pathways to normative milestones like homeownership. Part of this reflects the cost of living, but it also reflects the place-based nature of structural racism that is embedded in policies, laws, institutions, and norms to the degree that they are taken for granted while eroding the health and well-being of people of color (Gee & Ford, 2011). Entrance to the upper echelon of higher education and to STEM spaces is more fraught for people of color and those who lack the means or opportunity to attend university full-time[1] (National Center for Science and

1 Black workers made up 9% of the total STEM workforce in 2021. Hispanic workers made up 15% of the workforce, two-thirds of which were in middle-skill jobs that did not require a Bachelor's degree. As of 2020, Hispanic, Black, and American Indian or Alaska Native STEM workers had lower median earnings than White or Asian STEM workers (National Center for Science and Engineering Statistics, 2023).

Mount Auburn Street in the Harvard Square neighborhood of Cambridge, Massachusetts (Source: Shutterstock).

Engineering Statistics, 2023). International students and higher-income STEM professionals are often White or come from wealthy backgrounds. On the other hand, many of the behind the scenes administrative positions that support higher-paying occupations are staffed by people of color, but themselves offer little room for advancement. This hints at a white-collar version of Roberts' (1997) spiritual vs. menial labor, where it is people of color who perform the strenuous and unpleasant "backroom" work in comparison to their White counterparts.

In Cambridge, there is a symbiotic pipeline from prestigious universities to high-level tech, pharmaceutical, and STEM research roles. Young professionals in these sectors tend to rent or buy in the increasingly expensive neighborhoods, but unlike those who built Cambridge, their roots in the city are fleeting and often follow the industry. Rapid increases in residential construction profit from this crowd; 2021 saw the highest number of building permits granted in a decade, with 661 residential units slated to be built (Census Building Permit Survey, 2021). These types of development make economic sense and lure money and people, but they exclude many long-time residents and those who cannot afford to buy property. As Veronica noted, "[Cambridge] has changed a lot. Some of it in a good way, but some of it is more like, 'Hi, I'm still here!'" According to Stacy:

> *It's pretty expensive in Cambridge. I'm not even gonna fluff it up. It is actually the most expensive place I think in Massachusetts—so the idea of really being able to do for myself and having my own [house] seems very far-fetched because it's just so expensive. … It's sometimes it's discouraging because you know, you walk around as a person and like, you know, you want to have your own place, something that is yours, but you live in a community that is very expensive and that might not be attainable.*

Participants like Stacy and Veronica reflected a common sentiment that housing changes in their home city were not built for people like them and were constructed with little care for the history and values of the city. In 1994, rent control was abolished, leading to significant property value appreciation (Autor et al., 2014). As a result, Cambridge has become one of the most expensive rental markets in the country (Nelson, 2022) and median home values are also high, climbing from $843,100 in 2020 to $1,023,900 in 2022 (U.S. Census Bureau, 2022a).

Isa, who grew up in Cambridge, said:

> *All the people that I know that I grew up with, that I went to high school with that are from here, the majority of them can't live here because it's too expensive and what's happening is the culture of this city has changed. Yes, everything's going to change. [chuckles] Everything will change, but it's changed in ways that I feel that has detracted from the celebration of culture that I've always felt. And I feel like it's also taken away from community and it's taken away from like—this kind of like generational familial feel.*
>
> *What I see now are, like, you know, recent young college grads in their 30s, they're all White. That are coming in… and they can afford the outrageous rents. Um, or it's college students and a lot of international college students whose families can just come in and pay the cash and they pay their rent for them.*

Stacy B., a 30-year-old Cantabridgian, agreed,

> *it's interesting I would say to watch because I've been here since I was a kid. So I'm like watching buildings be torn down. I'm watching them put up more buildings. I'm watching more low-income people leave. I'm watching more—more students [move in].*

Another lifelong resident, Bonnie, bemoaned the ways new construction swallowed seemingly every square inch of the city, altering neighborhoods and disrupting long-held community ties.

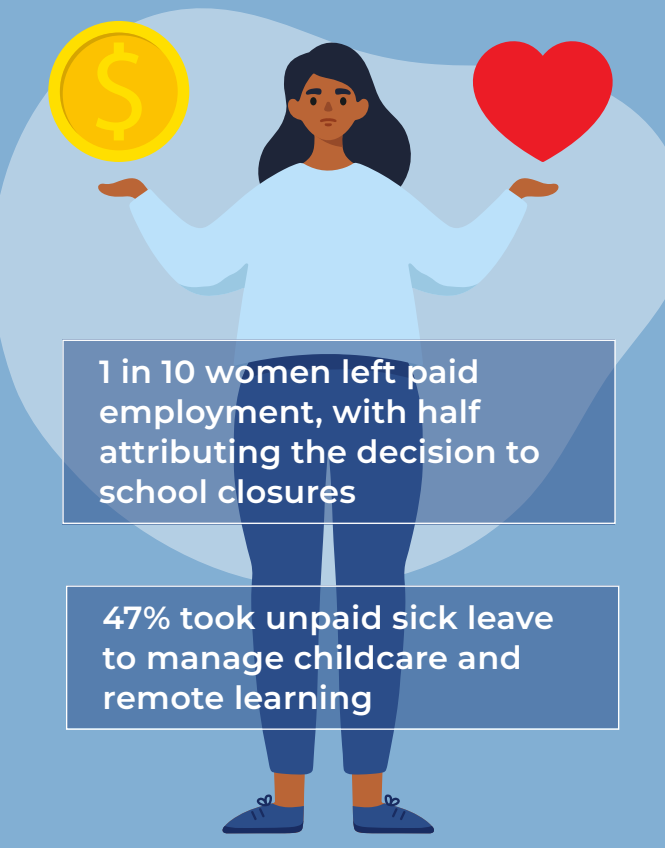
Several RISE participants spoke about being priced out, explaining that residents who could not afford to stay in Cambridge often moved to places like Billerica, Worcester, and Lowell, an hour-long drive away. But, while the rent and cost of living are cheaper, these cities lack the many resources Cambridge offers, and the time trade-off of the long commute makes it difficult to form new social ties to offset those left behind in their neighborhoods of origin. Stark tensions between a desire for belonging and staying rooted in their communities and not being able to afford it ran through the interview data. Samantha, a control participant, expressed the conundrum:

> *I don't want to live in public housing for the rest of my life. I would like to have like a nice house with a little bit of yard so I can have like a little garden, a porch and stuff like, I would always be like oh, I want like a nice screened-in porch so me and my cats can sit out there and like hang out and stuff—like that. I don't see myself being in Cambridge forever, because it's not affordable. If I stayed in Cambridge forever, I'd probably be living in the apartment I'm living in now forever and that's not something I want. Like, I want to have my own place.*

For many RISE participants, eventual homeownership represented a symbolic achievement, underlining a sense of belonging to place and rootedness. Although it seemed out of reach given

DURING THE PANDEMIC

Closures of schools, childcare facilities, eldercare services, and workplaces placed an additional burden on women, exacerbating the imbalance in caregiving responsibilities



1 in 10 women left paid employment, with half attributing the decision to school closures

47% took unpaid sick leave to manage childcare and remote learning

57% of mothers with young children reported mental health impacts compared to 32% of fathers

85% of caregivers caring for both their children and parents reported adverse mental health symptoms, and 50% reported suicidal ideation

extremely high home values, many interview respondents nonetheless expressed aspirations of transitioning from public housing or market rent to homeownership. For other low-income Cantabridgians, making the leap from housing assistance to owning a home seemed like an impossible dream. Nonetheless, participants like Anecia credit the GI with,

> *helping to set new goals like, I mean I think with the money, it just has opened my eyes to really just focus on homebuying or something else for me and my kids. My goal was to just advance and get to like homeownership. I'm not there yet, because it's just so expensive and everything, but... I can visualize it more now.*

In practice, the city recognizes the tensions inherent in the "dual city" and has provided strong supportive measures for its lower-income residents. In 2019, Mayor Sumbul Siddiqui formed a task force on tenant displacement and helped preserve existing affordable housing at the Rindge Towers (City of Cambridge, n.d.). Under her leadership, government officials have consistently deployed innovative approaches to strengthen the safety net and promote equity, inclusion, and belonging for all of Cambridge's residents. It was therefore unsurprising when the Mayor's office partnered with the Cambridge Community Foundation to launch the RISE guaranteed income pilot in a quest to address the growing economic divide in Cambridge and resultant socio-economic and racial disparities. RISE also served as a critical response to the COVID-19 pandemic and its effects as unprecedented inflation took hold across the country and the impacts of COVID on employment, health, and care remained persistent.

The City of Cambridge further targeted the program to single-headed households, acknowledging the myriad financial and gendered pressures that single caregivers

Source: Castro et al., 2023. *The American Guaranteed Income Studies: National Council of Jewish Women, Los Angeles, CA*. University of Pennsylvania Center for Guaranteed Income Research.

face (Pearce, 1990). Given a broader societal tendency to discount the importance of unpaid caregiving, along with latent stigma around single motherhood, the decision to focus on caregivers also powerfully demonstrated institutional recognition of an undervalued population. This resonated against the backdrop of the pandemic, which exacerbated gender and racial disparities in unpaid care work (Power, 2020). Grappling with additional responsibilities imposed by remote work and school and childcare closures, single parents struggled to stay afloat. Those in the "sandwich generation" (Alburez-Gutierrez et al., 2021) had to further juggle care for both children and parents or extended family, taking into account health, safety, and potential virus exposure. Other nationally representative research has demonstrated the cost of the pandemic on "sandwich generation" caregivers, with 85% reporting adverse mental health symptoms and 50% reporting suicidal ideation—a rate eight times that of their non-caregiving peers (Czeisler et al., 2021).

In response, and at Mayor Siddiqui's and other RISE partners' urging, RISE provided 130 single caregivers recurring unconditional cash payments of $500 per month for 18 months from September, 2021 to February, 2023 (Cambridge RISE, 2021). In Mayor Siddiqui's words, "every family deserves to thrive in Cambridge. Every family deserves dignity. Cambridge RISE is an investment in our families and ultimately our city" (Sennott, 2021, p. 1). Following the initial RISE pilot, the city decided to expand guaranteed income further with a second city-wide pilot, Rise Up, which will provide $500 in direct cash to approximately 2,000 low-income families for 18 months. The program, funded by the American Rescue Plan Act, is run in partnership with the Office of Mayor Siddiqui, Cambridge Economic Opportunity Committee, and the Cambridge Community Foundation, and is ongoing at the time of writing (City of Cambridge, 2023a).

Context and Demographics

The demographic and economic characteristics of Cambridge paint a picture of an affluent and educated city, but it is not immune to the challenges of inequality. The population of approximately 118,488 seems significantly influenced by its distinguished academic institutions: 95.6% of its residents aged 25 and older possess at least a high school diploma, and an impressive 80% hold a Bachelor's degree or higher (U.S. Census Bureau, 2022b). Despite this elevated level of education among residents, economic disparities persist. The median household income stands at $112,565, significantly higher than the national average. However, 12.3% of the population lives in poverty, and a sizable 38.9% of those households are led by single mothers, highlighting the disparity in residents' economic conditions. This economic divide is further accentuated by the high cost of living: median home values hover around $997,600 and the median rents at $2,628 (Data USA, 2021).

Cambridge exhibits a diverse population with significant representation from various racial and ethnic groups. 29.5% of residents are foreign-born, far exceeding the national average of 13.7%. The population predominantly consists of Whites (59.3%). Black or African Americans comprise 10.8%, while Asians represent 19.3%, and Hispanic/Latinx account for 8.7% (U.S. Census Bureau, 2022b). Cambridge therefore exemplifies a densely populated and culturally vibrant urban landscape.

Data from the American Community Survey (2021) estimates the workforce in Cambridge at 71,346. This encompasses all employed individuals in the city, including self-employed (1,582), sole proprietors (3,092), and others not eligible for unemployment benefits (U.S. Census Bureau, 2021). However, these statistics specifically reflect the number of people working in Cambridge, rather than the employment status of Cambridge residents themselves. Cambridge labor force statistics further reveal that a quarter of the city's residents are employed in Computer, Engineering, and Sciences. Education, Training, and Library occupations follow at 16.8%, with Management Occupations accounting for 13%. Business and Finance roles make up 9.3% of the employment spectrum, while Services and Office and Administrative Support represent 6.6% and 5.5% respectively (U.S. Census Bureau, 2021).

Table 1. Top 10 Employers in Cambridge, 2022

Employer	Industry	Employment
Harvard University	Higher education	12,553
MIT	Higher education	9,043
Takeda Pharmaceutical/Millennium	Biotechnology	3,634
Cambridge Innovation Center	Start-up incubator	3,499
City of Cambridge	Government	3,480
Novartis Inst. for Biomedical Research	Biotechnology	2,254
Sanofi	Biotechnology	2,200
Broad Institute	Research and development	2,119
Google	Software and internet	2,100
Phillips North America	Electronics and health technology	2,000

Source: Cambridge Community Development Department (CDD)

A recent report by the Cambridge Community Foundation emphasized Cambridge's significance in the global innovation economy, comparing it with 24 other leading cities. Despite its smaller size, Cambridge leads the rankings with 22% of its 118,000 residents employed in innovation sectors, and its median household income of $95,404 is the fourth-highest of the list (Cambridge Community Foundation, 2021). According to the DUA, the average annual wage earned in 2022 for a full-time job was $153,504 (Cambridge Community Development Department [hereafter CDD], 2023c).

However, these numbers belie a starker picture, where there is a significant economic divide between high-income earners and low-wage workers who live well below the poverty line. Income distribution in the city is highly skewed: the lowest 20% earn an average of $17,096 yearly, a mere 2% of the city's total income, while the top 5% of households earn $636,615 on average, representing 22% of the city's total income. This economic disparity is especially pronounced among minority and Black households, which are disproportionately represented in the lower-income brackets (Cambridge Community Foundation, 2021).

SAMPLE DEMOGRAPHICS

The study sample consisted of 130 participants in the treatment group and 156 in the control group. Both groups had similar respondent age profiles, around 40 years, and household characteristics, with each having typically 2 children. The average household size for both groups was 3.

Demographically, the majority in both groups were female (Control: 92%, Treatment: 95%). Ethnically, the groups were primarily Non-Hispanic (Control: 77%, Treatment: 80%). The racial composition was predominantly African American (60% in both groups), followed by White (Control: 21%, Treatment: 20%), and others including Asians and Mixed/Other races.

The vast majority of the respondents in both groups were single (96%), with a small percentage in a relationship (4%). English was the primary language spoken at home for the majority of respondents (Control: 77%, Treatment: 73%), with other languages such as Spanish, Amharic, and Haitian Creole also represented.

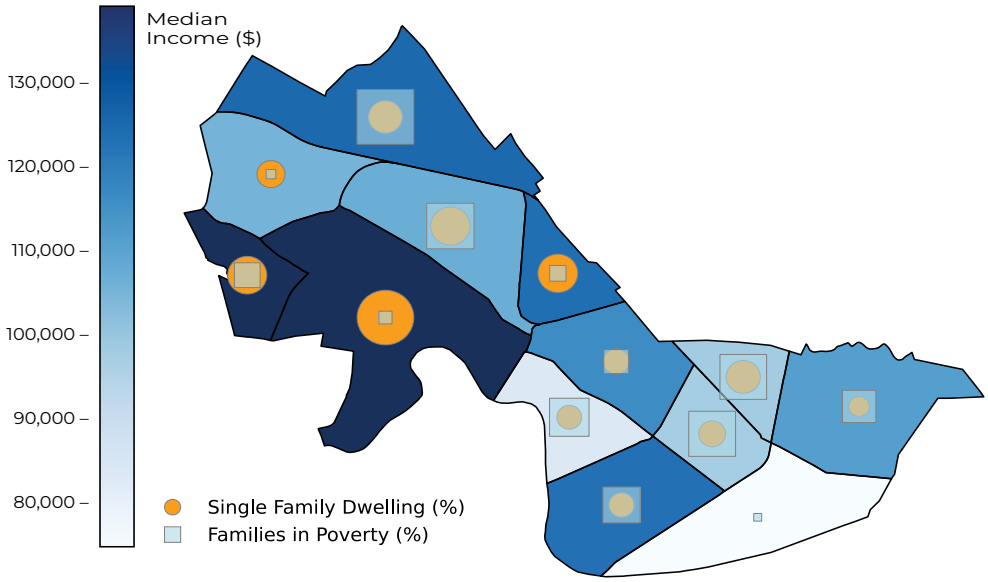
Subtle differences were observed in educational backgrounds: compared to the control group (57% with high school education or less and 35% with an Associate's or Bachelor's degree), the treatment group had a lower percentage of respondents with a high school education or less (49%) and a higher proportion with an Associate's or Bachelor's degree (38%). The median annual household income was $22,878 for the treatment group and $18,060 for the control group, with the mean income being $23,255 and $20,246 respectively. Around 65% of individuals in both groups were recipients of SNAP[2] or other benefits. Comparing the reported annual wages and the living wages in Cambridge, MA, both groups fell significantly short of the calculated living wage for a single household with two children, estimated at $132,109 annually (Glasmeier, 2023). This disparity underscores the challenges faced by families in meeting basic living costs in Cambridge, particularly families with children.

2 The Supplemental Nutrition Assistance Program (SNAP) provides food benefits to low-income families.

Table 2. Demographic Profile of Participants: Treatment vs. Control Groups

Cambridge, MA		Control	Treatment
SAMPLE SIZE		**156**	**130**
AVG. AGE OF RESPONDENT (YEARS)		40	40
GENDER (%)	Male	8	5
	Female	92	95
CHILDREN IN HOUSEHOLDS (%)	Yes	100	100
AVG. NUMBER OF CHILDREN IN HH		2	2
AVG. HH SIZE		3	3
ETHNICITY (%)	Non-Hispanic	77	80
RACE (%)	White	21	20
	African American	60	60
	Asian	4	3
	Other/Mixed	15	17
MARITAL STATUS (%)	Single	96	96
	Married	--	--
	Partnered/in-relationship	4	4
PRIMARY LANGUAGE AT HOME (%)	English	77	73
	Spanish	5	5
	Amharic	8	9
	Haitian Creole	3	4
	Other	7	9
EDUCATION (%)	High school or less	57	49
	Associate's/Bachelor's	35	38
	Other	8	13
ANNUAL HH INCOME ($)	Median	18,060	22,878
	Mean	20,246	23,255

Figure 1. Median Income, Single Family Dwellings, and Families in Poverty in Cambridge Neighborhoods



Source: Map was created using multiple datasets from the CDD

Methodology

All methods reported were reviewed and approved by the Institutional Review Board at the University of Pennsylvania. This research rests on a parallel mixed-methods randomized controlled trial (QUANT + QUAL) to answer the following research questions[3]:

- How does GI affect participants' quality of life?
- What is the relationship between GI and participants' subjective sense of self?
- How does GI affect participants' income, and through what mechanisms?
- What can participants teach us about the administration of safety net programs, including GI and other existing benefits programs?

In a parallel mixed design, all quantitative and qualitative analyses are conducted separately and are not integrated into meta-inferences until within-strand analysis is complete (Tashakkori & Teddlie, 2009). As noted in the Pre-Analysis Plan (Abt Associates, 2023), this research is conceptually informed by the literature on scarcity (Mani et al., 2013), income volatility, and unconditional cash. This framework demonstrates that the experience of scarcity curtails agency and one's ability to imagine

3 A more extensive reporting of the methodology can be located in the Pre-Analysis Plan (Abt Associates, 2023), which pertains to all of the randomized controlled trials funded in whole, or in part, by the Mayors for a Guaranteed Income.

alternative pathways by psychologically and practically trapping one in a survival mode that erodes hope, creates time scarcity, and impacts health and well-being (Sayre, 2023; West & Castro, 2023; West et al., 2023). Since the RISE pilot is specifically focused on single caregivers, this research also draws conceptually from the literature on social reproduction and unpaid care work (Bezanson & Luxton, 2006), and literature on the gendered dimensions of unconditional cash (Zelleke, 2011). Unpaid care work references all of the non-compensated labor, most commonly performed by women, required for households, the economy, and society to function. This includes raising children, caring for aging and ill family members, managing household finances, cooking, cleaning, home management tasks, and the invisible mental burden of constantly monitoring the needs of an entire family (Bezanson & Luxton, 2006).

Quantitative Methodology

Study design and participant selection: The randomized controlled trial (RCT), conducted in Cambridge, evaluated the impact of a guaranteed monthly income of $500 over an 18-month period. From a pool of 488 applicants, 286 participants were selected. The study focused on Cambridge residents aged 18 and older who had incomes below 80% of the Area Median Income (AMI) adjusted for household size. Additionally, all participants were required to be single (unmarried) caregivers of at least one child under the age of 18. Of the randomized participants, 130 were assigned to the treatment group to receive the monthly cash transfer starting in September 2021, while 156 were placed in the control group. Data collection occurred at four intervals: Baseline, prior to randomization or notification of group assignment (June 2021); 6 months (February 2022); 12 months (August 2022); and 18 months (February 2023), at which point the project was truncated.[4] Participants were compensated for completing surveys. The detailed information on response rates is provided in the appendix.

Data analysis: A standardized approach was used for outlier management, employing the winsorization method. The study utilized Multiple Imputation by Chained Equations (MICE) (Azur et al., 2011) for missing data, a method effective in complex datasets with significant data gaps. MICE involved multiple iterations with varying random seeds to ensure diverse and robust imputation. Imputations were conducted on key outcome variables and selected demographics. The process included checks for the distribution, plausibility, and convergence diagnostics to validate the imputed data's accuracy and reliability. This led to the creation of multiple datasets, forming the basis for further analysis. By generating multiple datasets, each with a slightly different imputation for the missing value, it accounts for the uncertainty of the imputation process. Datasets were analyzed separately and then pooled together, producing results that are statistically valid and unbiased. This methodology also ensures that the standard errors of the estimates are correctly computed, thereby reinforcing the accuracy and reliability of subsequent statistical inferences.

Due to successfully establishing Baseline equivalence between the treatment and control groups,

4 Although the Pre-Analysis Plan guiding this study notes a 6-month post-treatment survey, this final point of data collection did not occur due to the programmatic decision to extend GI payments to eligible RISE participants as part of a second phase cash transfer program called Rise Up.

the study's analysis was streamlined. Post-imputation, a comprehensive analysis was conducted to evaluate the GI's impact, using validated measures. This included direct mean difference comparisons between groups at each time point (Baseline, 6-month, 12-month, and 18-month), adjusting for confounding factors.

Qualitative Methodology

At the midpoint of the Cambridge RISE program, 30 participants (20 treatment and 10 control) were recruited to participate in semi-structured interviews lasting 1.5–2 hours. Recruitment efforts yielded a final sample of 22 respondents (15 treatment and seven control). Eight additional interviews were scheduled but canceled at the last moment due to work and childcare responsibilities, underscoring the time complexities faced by single parents. The majority of interviews occurred in person at someone's home or at another community-based location, and all interviews were conducted in English. Ten participants elected to interview on Zoom to minimize COVID exposure. All interviews were recorded on a DVR, professionally transcribed, de-identified, and compensated with a $40 gift card. Recursive, structured memo-writing occurred throughout the entire research process, from data collection to coding and thematic mapping. These memos included "thick descriptions" at each stage of analysis to determine how semantic and latent themes were related within the data (Ponterotto, 2006, p. 358).

The interview protocol was informed by the conceptual literature noted prior and included prompts on health and well-being, time, care work responsibilities, decision-making, ideology, values, family and local history, relationships, and finances. As noted in the Pre-Analysis Plan (Abt Associates, 2023), qualitative analysis at this site involved blending the first five stages of Braun & Clark's (2012) thematic analysis approach on a semantic level and using grounded theory (Charmaz, 2014) for latent analysis with focus and theoretical coding on agency, values, ideology, structural vulnerability, and care work. Thematic analysis relied on process coding to understand strategies and decision-making and values coding to understand how individual experiences with finances, relationships, and parenting connected with larger discourses based on the literature (Saldana, 2021). At this site, the control group interviews were primarily utilized to understand the socio-economic context of Cambridge. A full analysis of their data is being conducted as part of a cross-site analysis of control group members from multiple GI experiment sites.

Findings

1. The Impact of Guaranteed Income on Quality of Life

The distinct setting of Cambridge provided a critical context for the central research question: in what ways does guaranteed income, aimed at improving income and financial well-being, impact the lives of those residing in this dynamic yet disparate environment? The results highlighted a persistent pattern: across every evaluated time period, individuals in the treatment group consistently reported higher mean incomes in comparison to their counterparts in the control group. The median incomes also align with the mean findings. At Baseline, the treatment group reported higher annual household incomes (M=$23,255, MD=$22,878) compared to the control group (M=$20,246, MD=$18,060), though this difference was not statistically significant. Six months following the first disbursement, the treatment group continued to report higher mean incomes relative to the control group, with a significant mean difference of $4,931, and a relative impact of 28.87%. The income volatility was also lower for the treatment group compared to the control group (32% vs. 38%). Twelve months into the pilot, the treatment group maintained a higher average annual income (Mean Difference=$2,694), and lower volatility (33%) relative to the control group (41%). This pattern of higher annual income (relative impact=13.97%) and lower volatility (32% vs. 44%) continued at the 18-month mark, where the study was truncated, suggesting a stabilizing effect of the intervention on treatment participants. Yet this income level remains beneath the upper income threshold of the lowest 20% of the earners in Cambridge, identified at $38,636 (Cambridge Community Foundation, 2021). This threshold underscores the significant gap between the lower and higher income brackets in the city.

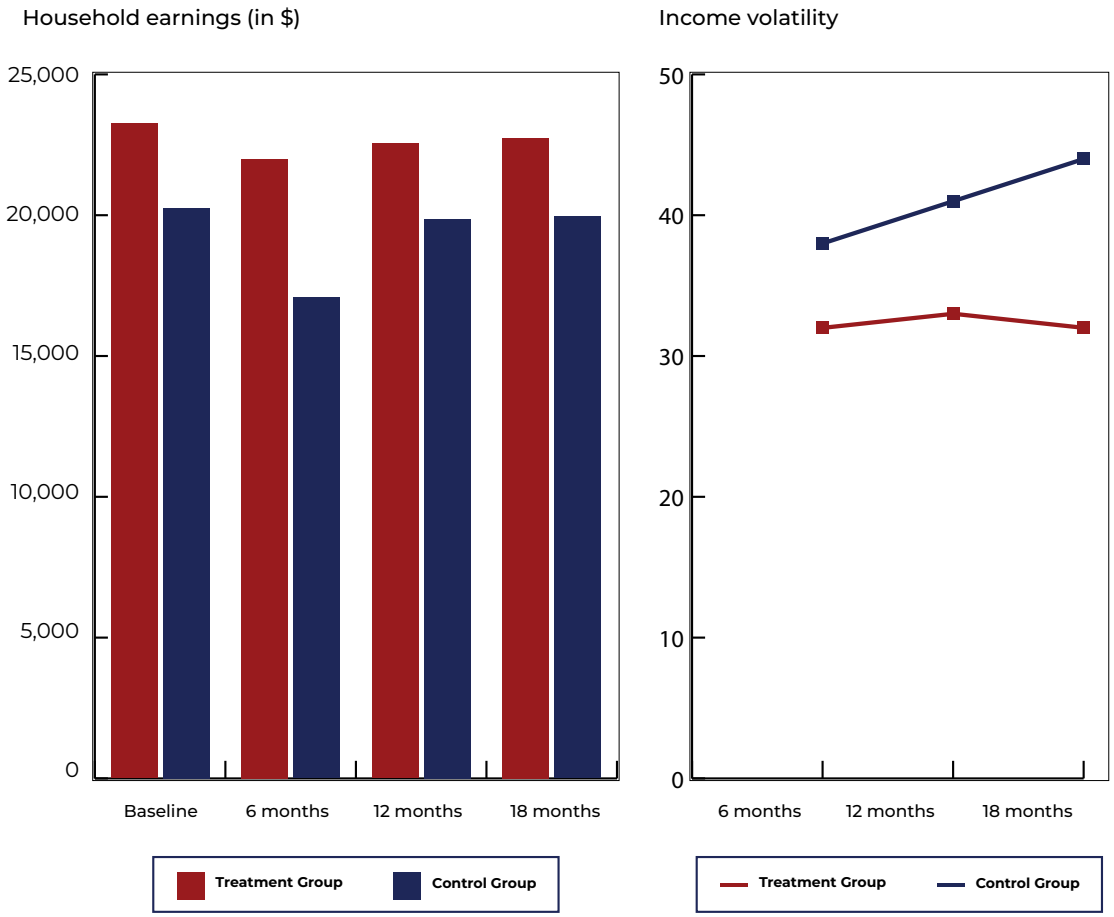
Stark economic disparity set the stage for examining participants' financial resilience. A key measure of financial resilience is the ability to manage unexpected financial burdens, such as an unforeseen $400 expense, a benchmark that has been widely recognized for assessing the financial stability of households (Board of Governors of the Federal Reserve System, 2020). Quantitative data indicated enhanced financial resilience among individuals in the treatment group, particularly in their capacity to handle a $400 emergency expense. At Baseline, the capacity to manage a $400 emergency expense using cash or a credit card paid in full was comparable between the treatment and control groups, with 34% for the treatment and 32% for the control. Over time, the treatment group showed an enhanced capability in managing unforeseen expenses, reaching its highest at the 6-month mark (42%), but this ability declined to 30% by the end of observation. The control group, on the other hand, showed an 11 percentage point decline in this ability during the same time interval. Results from the

Chi-Square approached statistical significance at the 12-month mark (x^2=3.768, p=0.052), suggesting a potential positive influence of the GI on the treatment group's ability to cover an unforeseen $400 emergency expense.

Table 3. Ability to Cover $400 Emergency Expense: Treatment vs. Control (in %)

	Yes		No	
Time period	**Treatment**	**Control**	**Treatment**	**Control**
Baseline	33.85	32.05	66.15	67.95
6 month	41.54	32.69	58.46	67.31
12 month	37.69	26.28	62.31	73.72
18 month	30.00	21.79	70.00	78.21

Figure 2. Trends in Household Income and Income Volatility



Observable shifts in savings behavior over time were also discernible in both the treatment and control groups. At baseline, 34% of the treatment group reported savings above $500, compared to 26% of the control group. Six months into the pilot, while both groups reported a decline in this savings category, this decline was more pronounced for the control group (a 16 percent point drop) relative to the treatment (12 percent point drop). The difference in savings category and group assignment was statistically significant (x^2=9.19, p=.01). This trend continued 12 months into the pilot, with 30% of the treatment group reporting savings above $500, compared to only 14% in the control group. This difference in savings category and group once again was statistically significant (x^2=10.78, p=.00). At the 18-month mark, both groups reported a decline in savings in this category; again, this difference was more prominent for the control group (15 percent points) relative to the treatment group (13 percent points). These results are consistent with other sites of the American Guaranteed Income Studies, which show that a significant proportion of low-income residents encounter considerable difficulties in accumulating sufficient savings to fulfill their basic needs.

Overall, these trends indicate an increased propensity for stability in savings within the treatment group, who benefited from additional liquidity due to the cash transfers. In contrast, the control group, without the benefit of this cash infusion, continued operating under existing financial constraints. This variation in savings behavior between the two groups highlights the pecuniary benefits of unconditional cash in shaping financial decision-making and improving saving. Pronounced differences in savings behaviors were also present in the narrative data, with treatment group participants describing at length their abilities to finally act on long-held goals to have savings for both short- and long-term planning. Participants like Anecia described a step-wise approach to savings, saying:

> *I have this like rule that my grandmother taught me, like I always pay my rent first. Then I pay my car and then like the childcare. Like those three things that I always pay first, everything else will come next. My cell phone would be like the fourth thing, because I need that to communicate and stuff like that. My insurance, I literally do it by like live or die like what I need to live, you know?*

> *I automatically set it [GI] up to go to a savings account, an account that I couldn't touch or not that, not that I couldn't touch, but like, I wouldn't have like access like my checking account… so I just actually let the money get deposited for a couple of months, and then I bought a car. So now, um, the money still goes into the savings account, but it's like literally there in the case, and like, in the event that like something happens and I need an emergency something to help with the car. But it was basically my stepping-stone to getting the vehicle.*

Notably, members of the control group described similar goals around saving but lacked the liquidity to do so.

The observed differences in savings practices also influenced a wider range of financial behaviors. The data suggested that the enhanced financial stability experienced by individuals in the treatment

group made them, in turn, more likely to extend financial support to others. At Baseline, 23% of the treatment group versus 17% of the control group reported providing financial help to family or friends. Six months into the study, while the proportion of individuals providing financial help decreased in both groups, the decline was more pronounced in the control group (8%) than the treatment group (17%). This trend persisted at the 12-month mark (19% in the treatment vs. 8% in the control group). By the end of the pilot, the treatment group's rate of providing financial help was nearly stable at 18%, while the control group further decreased to 5%. The primary forms of financial support provided were for housing-related expenses, including rent, mortgage payments, or security deposits, and for recurring monthly bills, like phone and utility charges.

Table 4. Trends in Savings: Treatment vs. Control (in %)

	<$200		$200 – $500		>$500	
Time period	Treatment	Control	Treatment	Control	Treatment	Control
Baseline	50.77	58.33	15.38	16.03	33.85	25.64
6 month	49.23	60.90	28.46	29.49	22.31	9.62
12 month	47.69	60.26	22.31	25.64	30.00	14.10
18 month	61.54	67.31	17.69	21.79	20.77	10.88

Table 5. Transition in Savings: Baseline to Endline (in %)

	Improved		Stable		Declined	
Time period	Treatment	Control	Treatment	Control	Treatment	Control
Baseline to 6 month	13.08	14.10	60.00	52.56	26.92	33.33
6 month to 12 month	13.08	7.05	80.77	90.38	6.15	2.56
12 month to 18 month	15.38	11.54	71.54	80.13	13.08	8.33

Table 6. Financial Assistance to Friends or Family in the Past 6 Months (in %)

	Yes		No	
Time period	Treatment	Control	Treatment	Control
Baseline	23	17	77	83
6 month	17	8	83	92
12 month	19	8	81	92
18 month	18	5	82	95

To assess the impact of the GI on participants' financial well-being, the Consumer Financial Protection Bureau's (2015) Financial Well-Being Score[5] was utilized as the key metric. At Baseline, both the treatment and control groups were comparable in terms of their average financial well-being scores of 41, indicative of the Medium Low category. Individuals in this score range typically tend to have minimal savings, are unable to cover an emergency expense, and often face material hardships and credit challenges. Six months into the study, the treatment group showed a higher financial well-being score (M=43.38) relative to the control group (M=41.68), with a mean difference of 1.70 (95% CI [0.63, 2.77], p=.002). However, the discernible relative impact of 4.08%, indicative of improved financial well-being, was not sustained at the 12-month (1.39%) and 18-month time points (-0.01%), where the observed differences in the mean scores for the treatment group were not statistically different relative to the control group.

The treatment group also demonstrated a slightly higher proportion of participants in the Consistent High category (61%) compared to the control group. Moreover, a smaller proportion of the participants "deteriorated" (5%) in the treatment group relative to the control group (12%), suggesting some protective effects of the GI. The reduction in the Very Low category (9 percent points) in the treatment group was more pronounced compared to the control group (6 percent points), suggesting a more substantial positive impact of the GI on those initially in the lowest financial well-being bracket. However, the overall pattern indicates mixed outcomes of the GI on participants' financial well-being, as the intervention did not have a lasting impact. By the end of the intervention, both groups saw a decrease in the High category, as the majority of participants in both groups shifted towards the Medium Low category, reflecting a general trend towards moderate financial well-being levels over time. This shift in economic stability is particularly relevant when examining the housing situation in Cambridge.

Table 7. Financial Well-Being Categories (in %)

Group	Time period	High (> 50)	Medium Low (38-49)	Low (30-37)	Very Low (≤ 29)
Control	Baseline	21.15	48.72	18.59	11.54
Treatment		21.54	44.62	21.54	12.31
Control	Endline	14.74	71.15	8.33	5.77
Treatment		20.77	62.31	13.77	3.07

5 "Financial well-being," as defined by the study, encapsulates a sense of security and stability in one's financial situation, both presently and in the future. It includes four key elements: control over daily and monthly finances, resilience to financial setbacks, ability to move towards future goals, and freedom to make choices that bring joy. Importantly, financial well-being is not merely an end goal, but rather a tipping point towards a fuller experience of mental, physical, and emotional well-being.

Figure 3. Financial Well-Being

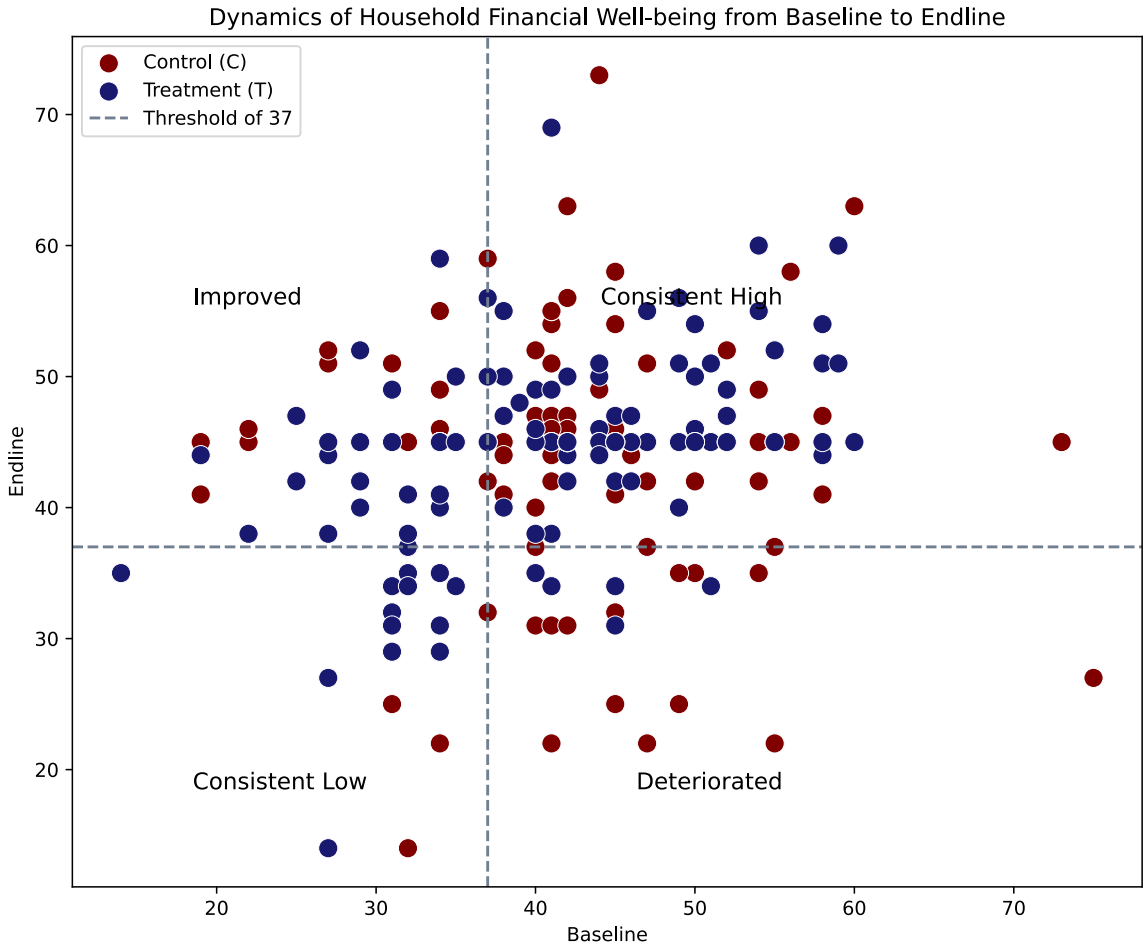


Table 8. Change in Median Residential Rents in Cambridge ($)

Date	Nominal 1BR Median Rent	Nominal 2BR Median Rent	Nominal 3BR Median Rent	CPI Adjusted 1BR Median Rent	CPI Adjusted 2BR Median Rent	CPI Adjusted 3BR Median Rent
2015	2,400	2,750	3,200	2,767	3,170	3,689
2016	2,400	2,800	3,300	2,727	3,181	3,749
2017	2,400	2,890	3,360	2,667	3,212	3,734
2018	2,500	2,900	3,300	2,717	3,151	3,586
2019	2,550	3,100	3,400	2,724	3,312	3,632
2020	1,990	2,500	2,978	2,096	2,634	3,137
2021	2,450	2,800	3,300	2,450	2,800	3,300
2022	2,600	3,300	4,100	2,403	3,050	3,789
2023	2,688	3,350	3,363	2,394	2,984	2,995

City of Cambridge, Open Data Portal

As of July 2023, Cambridge's Community Development Department (CDD) reported a total of 57,894 housing units, encompassing both recent developments and university-owned student housing. A significant 66.4% of these available housing units were renter occupied (U.S. Census Bureau, 2023). Cambridge's affordable housing stock as of October 2023 included 8,591 units, representing 14.84% of the total housing units recorded by the department (CDD, 2023a).

"I went through so many landlords that just discriminated against me because I had the voucher and they thought, oh, she has a voucher, she's not going to be responsible"

The waitlist for affordable housing in Cambridge is measured in years (Corr & Schisgall, 2022). In 2022, 6,208 subsidized housing units and 710 Section 8 subsidized units were available in Cambridge (U.S. Department of Housing and Urban Development, 2022). Yet the city's affordable housing waitlist stood at 12,676 applicants in 2023, with another 18,744 applicants on the list for housing vouchers (Cambridge Housing Authority, 2023).

Similar to national data showing an average 8-year stay on housing voucher lists (Acosta & Gartland, 2021), many interview respondents relayed their experiences of waiting for housing assistance. Isa and her son were on the waitlist for 6 years before they were offered a Section 8 voucher. Even then, finding a place to use the voucher posed its own challenges.

> *There are so many limitations and barriers to it that it's almost impossible to find an apartment in Cambridge with all of those requirements … I went through so many landlords that just discriminated against me because I had the voucher and they thought, oh, she has a voucher, she's not going to be responsible, she's not—she's not gonna be able to pay the rent, it's going to be a problem, we don't want her kind of thing.*

In the meantime, the rental market in Cambridge remains among the most expensive in the country (Nelson, 2022). After an initial dip during the pandemic in 2020, market rent returned to high levels: during the study period, median rent for a three-bedroom apartment, a size large enough to accommodate families, soared to $3,789 per month (2022) while a one-bedroom cost $2,403 per month (2022). Several interview respondents noted that their rent had gone up by several hundred dollars during the pilot, and the GI allowed them to temporarily buffer that extra cost. Others who could not afford the cost of their own apartment were staying with family, sharing houses or couches, and paying what they could, which fits the federal[6] definition of homelessness.

Given this complex context, a majority of study participants in both the treatment and control groups reported severe housing cost burden, spending more than half of their income on housing, though

6 The definition of homelessness in this research synthesizes HUD and McKinney-Vento standards, focusing on individuals, especially children and youths, lacking stable nighttime residences and living in temporary, inadequate conditions, or facing ongoing housing instability, as outlined by both federal guidelines (U.S. Department of Housing and Urban Development, n.d.; National Center for Homeless Education, n.d.).

the treatment group consistently showed a lower cost burden compared to the control group across the study period. At Baseline, both the treatment and control groups faced similar cost burdens. This gap between the groups widened as the Waves progressed. Quantitative data indicates a statistically significant reduction in mean cost burden of the treatment group relative to the control group at 6 months (p=0.01) and at 18 months follow-up (p=0.02), indicating an 18% and 26% relative improvement, respectively, suggesting a positive effect of the GI in alleviating the housing cost pressures. Six months into the pilot study, the incidence of severe housing cost burden, defined as spending over 50% of income on housing, was observed in 53% of the participants in the control group, compared to 29% in the treatment group. At the 12-month mark, the proportion in the control group experiencing a housing cost burden of between a third to three-quarters of their income rose sharply to 75%, compared to 62% within the treatment group. By the 18-month mark, this trend persisted, with 78% of the control group versus 65% of the treatment group spending between a third to three-quarters of their income on housing. Table 9 below shows the ratio of rent to income of participants. On average, both groups spent half their income on housing at Baseline (50.53% for the treatment vs. 53.91% for the control).

Table 9. Housing Costs as a Percentage of Household Income (in %)

Time period	Mean Treatment Group	Mean Control Group
Baseline	50.53	53.91
6 month	43.88	53.77
12 month	46.33	52.44
18 month	41.87	56.88

Data on housing status also suggested dynamic changes in housing arrangements among pilot participants, with a general move away from renting and public housing, especially in the treatment group, and a potential shift towards more stable and independent status over time. Homelessness was reported only in the treatment group: 2% at baseline and at the 6-month mark, though it was not reported 12 months into the pilot. This indicates improved housing stability, potentially facilitated by the combined impact of the GI and other state-level housing assistance offered by the city or instituted during the pandemic.

This increased stability is notable in light of the qualitative data, which strongly emphasized that for many in the research sample, homeownership remained an important goal. A number of interview respondents were putting aside at least a portion of the GI towards their eventual plans to buy a home and achieve the American Dream. Despite the steep financial gains that would be required to purchase in Cambridge, owning a home felt significant; it seemed to function as a tangible reminder of longtime residents' rootedness, their right to belong and lay claim to a city that was well-resourced, supportive, and diverse. Quantitative data suggesting improved stability may underline the potential impact of the GI in facilitating housing independence over time. However, it is also worth noting that eligibility for housing assistance is also predicated on one's income and savings. Participants attempting to move out of assistance towards homeownership, for instance, faced complex decisions around saving for a home if it affected their housing eligibility in the short-term.

Figure 4. Household Living Situation

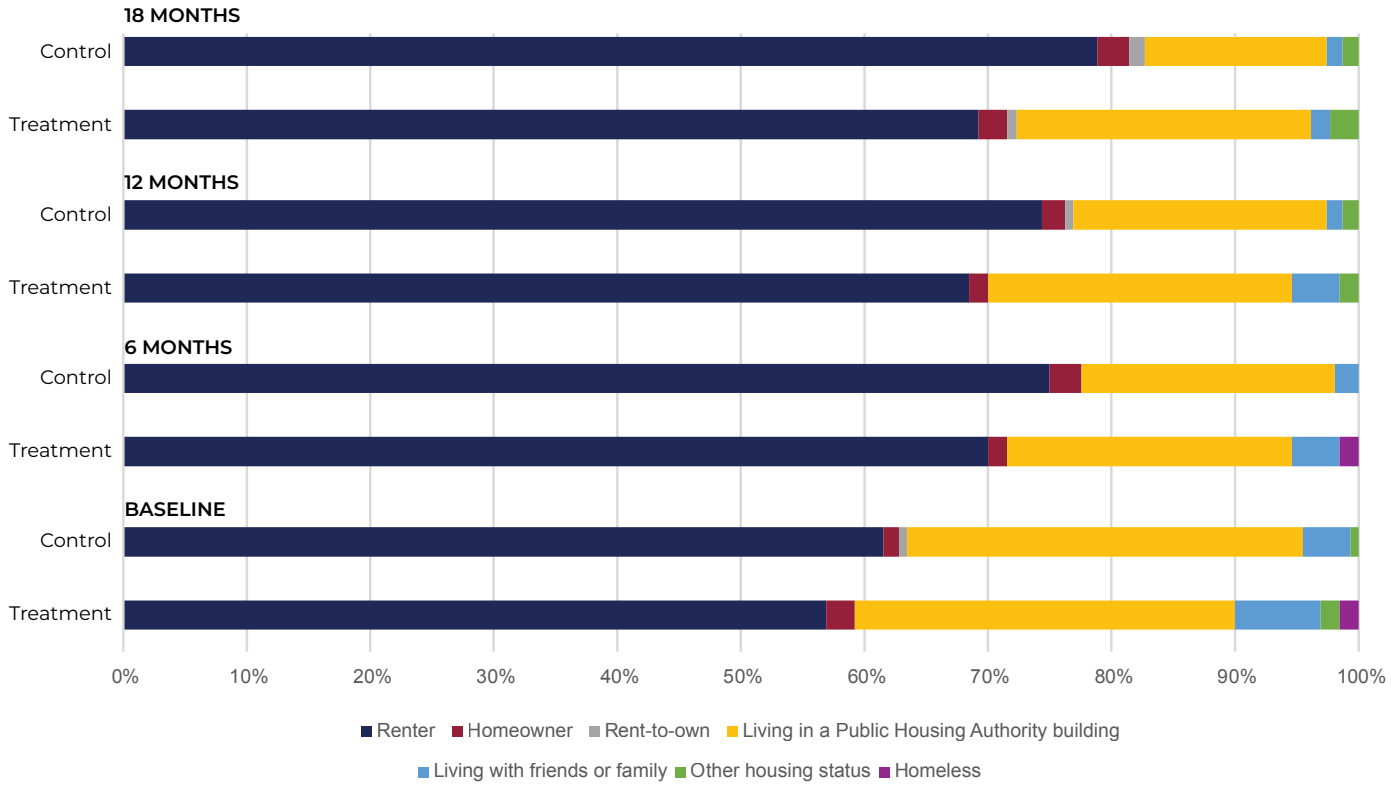


Table 10. Federally Subsidized Rental Units Availability in Cambridge

Cambridge	All HUD Programs	Housing Choice Vouchers (Section 8)	Project Based Section *
Subsidized units available	3,124	2,894	126
Average Family Expenditure per month ($)	495	500	541
Household income per year ($)	22,001	22,106	22,496
Average utilities paid by HH ($)	122	123	77

Source: U.S. Department of Housing and Urban Development, 2022.

Housing utility costs varied among the participants over the course of the study. In the treatment groups, the proportion of participants spending less than $200 on utilities increased from 59% at baseline to 62% at the end of the pilot, indicating a small but positive shift towards lower utility costs. Concurrently, the proportion of those incurring utility costs between $200–$400 remained relatively stable during the same time period. The control group, on the other hand, experienced more pronounced fluctuations in utility expenses. This suggests a potential stabilizing effect of the GI on utility expenses, perhaps due in tandem to changing housing arrangements, despite the inflationary environment.

Another pivotal concern emerging in this context is food insecurity, which poses a significant issue for low-income residents in Cambridge, especially those in households led by single adults or Black or Hispanic adults (Metropolitan Area Planning Council [hereafter MAPC], 2022). These residents encounter not only affordability issues but also difficulties in accessing food. The distribution of food resources like food pantries and grocery stores that accept SNAP often does not align with the areas facing the most severe poverty, complicating food access for these communities. Moreover, neighborhoods with a higher concentration of low-income households often lack adequate options for healthy food items within walking distance. Finally, severely cost-burdened households are more likely to experience food insecurity as they sacrifice necessities to pay for shelter (Cambridge Public Health Department, 2020). The 2019 Cambridge Community Health Assessment survey (Cambridge Public Health Department, 2020) indicated that about 7% of respondents were concerned about making food last and roughly 6% about affording food after running out, mirroring national trends where over 10% of racial or ethnic minorities worried about sustaining their food supply. In Cambridge, 12% of households rely on SNAP, with the number of recipients steadily rising year-over-year (Massachusetts Department of Transitional Assistance, 2023). Nearly 40% of students in Cambridge Public Schools are eligible for free or reduced-priced lunches, further highlighting the widespread challenges faced by families in meeting basic nutritional needs.

The COVID-19 pandemic exacerbated the issue of food insecurity. In nearby Chelsea, the Chelsea Eats program began in 2020 to provide residents with an unconditional cash transfer of $400 per month for 9 months to combat pandemic-related food scarcity. Results of the randomized controlled trial indicated the cash transfers allowed treatment group participants to obtain fresh and higher quality foods that contributed to greater food satisfaction (Liebman et al., 2022). However, when the RISE pilot began in 2021, the combination of increased unemployment and rising food prices from unprecedented inflation left one in eight Cambridge residents food insecure. In 2021, the Cambridge Food Pantry Network was expanded under the American Rescue Plan Act to ameliorate food insecurity; and in 2023, the Cambridge Community Foundation announced an investment of over $1 million into a new Food Access and Security Initiative, in partnership with seven local nonprofits (*Cambridge Community Foundation to invest*, 2023).

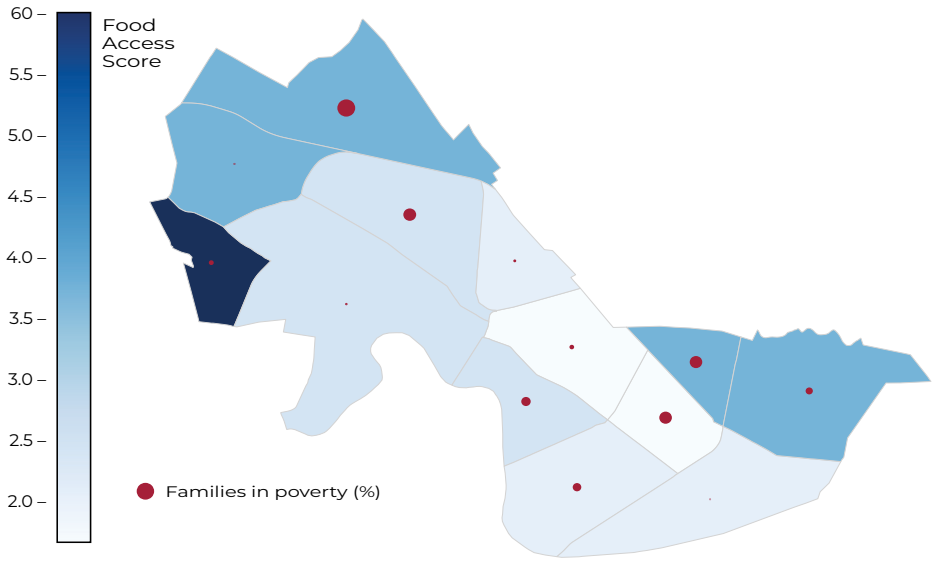
Table 11. Free/Reduced Priced Lunch Eligibility (Cambridge Public Schools)

School Year	Free Lunch (%)	Reduced Price Lunch (%)	Total Assisted (%)	Students Eligible	Students Assisted
2015-2016	42.4	4.2	46.6	6,607	3,078
2016-2017	40.5	4.7	45.2	6,794	3,065
2017-2018	36.6	6.9	43.5	6,914	3,010
2018-2019	35.9	6.7	42.6	7,052	3,006
2019-2020	33.6	7.7	41.3	7,091	2,928
2020-2021	35.1	6.2	41.3	6,678	2,742
2021-2022	35.4	6.2	41.6	6,612	2,729
2022-2023	37.3	3.4	40.7	6,746	2,698

Source: CDD

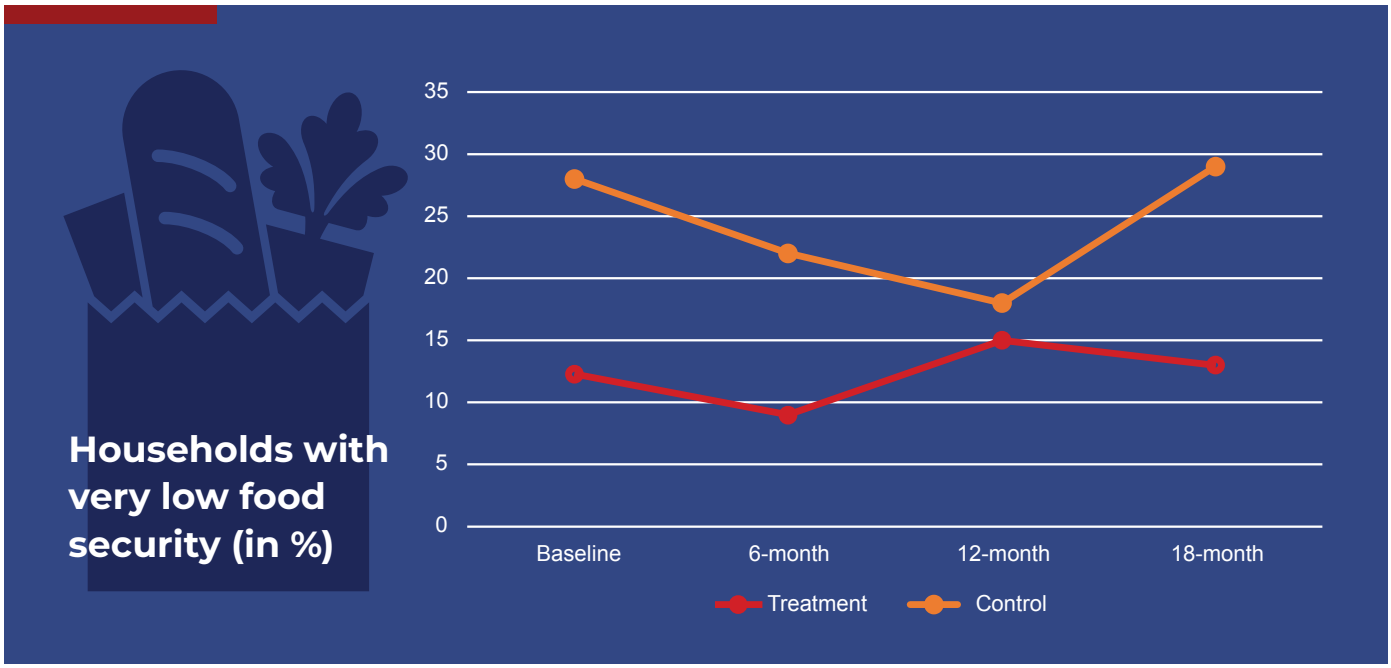
Utilizing The U.S. Department of Agriculture (USDA) 5-item Food Insecurity scale, the study explored the food security status of the participants.[7] Overall, the control group exhibited greater food insecurity and financial concerns across the study period in all indicators. The control group consistently reported higher levels of worry about not having enough food, eating less in a day, having to eat undesirable foods, and their ability to pay utility bills. In addition, the control group household frequently reported higher instances of Very Low food security, defined as food insecurity with hunger—meaning reduced food intake in a day—across all time points compared to the treatment group. Specifically, at Baseline, 28% of the control group experienced Very Low food security against 12% in the treatment group. This pattern continued with 22% vs. 9% at the 6-month mark, 18% vs. 15% at the 12-month mark, and 29% vs. 13% at the 18-month mark. Making trade-offs between paying for food and other household expenses is common among food-insecure households and associated with increased health risks (Knowles et al., 2016). In comparison, concerns about paying utility bills were less prevalent than those regarding food security. Yet, the control group exhibited greater worry in this aspect compared to the treatment group. These differences were evident at each point in time: 66% vs. 55% at Baseline, 46% vs. 44% at the 6-month mark, 50% vs. 40% at the 12-month mark, and 49% vs. 47% at the end of the pilot. These figures, while lower than those for food insecurity, still highlight a greater level of concern in the control group regarding utility bill payments. Overall, the findings emphasize the crucial role of stronger support networks, wages, and government agencies in ameliorating food insecurity. The distress associated with sustained nutritional uncertainty foregrounds the psychological dimensions and the mental health implications that are crucial to understanding the impact of GI.

Figure 5. Average Neighborhood Food Access Score and Percentage Families in Poverty in Cambridge Neighborhoods



Source: Compiled from MAPC (MAPC, 2021)

7 The Household Food Insecurity Scale serves as a pivotal tool to gauge the prevalence of food insecurity across households (Economic Research Service, 2012). Rooted in the understanding that the experience of food insecurity elicits predictable reactions, this scale encapsulates these responses quantitatively.



During the pilot program, Cambridge residents faced the fallout of the COVID-19 pandemic, including unemployment, reduced access to childcare, and the long-term mental and physical effects of pandemic lockdowns. Concurrently, nationwide inflation meant rising prices for food and necessities. Keisha, a control group member who lived with her mother and children, recounted how she lost her job as a school bus driver during the pandemic. She had been looking for a new job for months, and all she could find to supplement was a few hours a week in the food industry. Since she received housing assistance, her family had shelter, but she struggled to make ends meet otherwise, something which brought her deep distress.

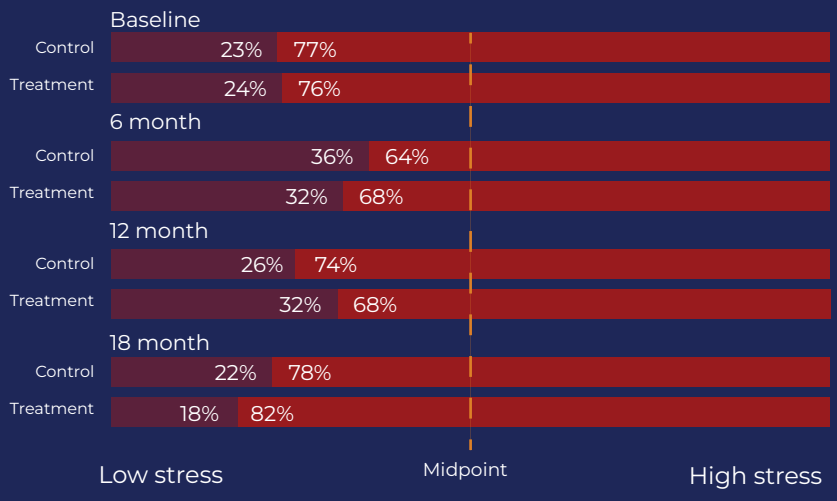
The Kessler Psychological Distress Scale (K-10) questionnaire was used to assess participants' distress levels (Kessler et al., 2003). At Baseline, the mean scores for the treatment (M=20.43) were lower than that for the control group (M=21.27), suggesting slightly less distress. However, it is important to note that both groups' mean scores exceeded the threshold of 20, indicating that participants in both groups were experiencing mild mental distress. Six months into the pilot, the difference in distress levels between the groups was negligible (M control=18.07, M treatment=18.08), indicating less overall mental distress in both groups. At the 12-month mark, the treatment group reported slightly lower distress levels (M=19.09) compared to the control group (M=19.59), but this difference was not statistically significant. This trend continued at the 18-month mark, with the treatment group demonstrating lower mental distress (M=19.54) compared to the control group (M=19.64). Overall, the data suggest that the implementation of the GI was associated with a trend towards decreased mental distress among treatment group participants as compared to the control group, though the comparison between groups could not be considered clinically significant.

In the study, the CHAOS scale was utilized to assess levels of disorder, elevated noise, lack of routines, and general environmental confusion in a household (Matheny et al., 1995). At the outset, the treatment group showed significantly lower scores (M=27.39) compared to the control group (M=28.42). This trend

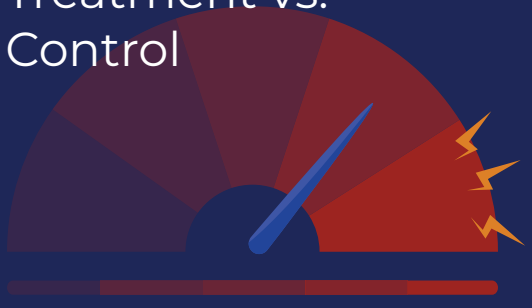
persisted throughout the GI pilot into the 12-month mark. Six months into the study, the estimated impact was -0.79 (95% CI[-1.50, -0.08], p=0.03). The impact was smaller and not statistically significant at the 12-month mark (M treatment=26.85, M control=27.26). However, at 18 months, households in the treatment group demonstrated an increase in chaos (M=28.42) relative to the control group (M=27.42), and this was statistically significant (p=0.01). It is possible that the increase in household disharmony was influenced by external factors, such as altered social support systems not controlled for in the study as the economy recovered from the impacts of the pandemic.

To assess individual stress levels, the short-form 4-item Perceived Stress Scale was used (Cohen et al., 1983). Quantitative analysis reveals that at Baseline, the treatment and control groups exhibited comparable mean scores of 7.42. Specifically, the high stress levels were also identical (76.15% for the treatment vs. 76.92% for the control). The 6-month follow-up showed a slight improvement in both the treatment and control groups, with a modest decrease in both the mean scores (M treatment=6.32, M control =6.28), as well as a corresponding decrease in high stress levels: 8 percent point decrease in treatment vs. 13 percent point decrease in the control group. This trend persisted at the 12-month mark; however, the decrease in stress levels was no more pronounced for the treatment group (M=6.55) relative to the control group (M=6.65). The treatment group also demonstrated significantly lower high stress levels (68%) compared to the control group (74%), yet, this positive trend did not persist into the 18-month observation. At this point, the treatment group demonstrated both comparable mean scores (M treatment=7.06, M control=6.97), but slightly higher stress levels (82% vs. 76%) compared to the control group. This reversal suggests that the effect of the GI observed at the 12-month mark was not sustained at the 18-month mark.

The SF-36 serves as a tool for gauging health-related quality of life (36-Item Short Form Survey, n.d.). In its standard format, respondents are prompted to reflect upon their experiences over the past week. The study evaluated whether GI had an impact on participants' health indicators like physical functioning, general health perceptions, and physical limitations due to health issues. While the SF-36 also measures mental health indicators, those subscales were not collected, as they were tested using the Kessler-10. For the SF-36, scores range from 0 to 100, where a higher score signifies better functioning.



Change in Stress Levels : Treatment vs. Control



Significant differences were observed between the treatment and control groups across various health domains and over the period of the pilot, though findings were mixed. For the average general health score, the treatment group reported higher mean scores (M=67) compared to the control group (M=64) at Baseline. This trend continued 6 months into the pilot with a relative impact of 8.78% (95% CI[3.91,7.05], p<.001). However, by 12 months into the pilot, this trend was reversed, with the control group reporting higher scores (M=68) relative to the treatment group (M=64). This trend persisted at the 18-month mark, with the control group reporting higher mean scores with a significant negative relative impact of -6.23% (95% CI[-6.34,7-1.88], p<.001). The average score of general health in the Medical Outcomes Study, used to develop the SF-36, was 56.99 (SD=21.1), indicating the participants in this study were healthier than the general population (Stewart et al., 1992). Minimal important differences (MID), or the magnitude of change in the scale that relates to a person's perceived health, is not known for the general population. In studies of patients with diabetes, the SF-36 MID may be as low as 1 (Bjorner et al., 2013); yet, studies of patients with other various medical conditions suggest an MID between 2 and 8 (Jayadevappa et al., 2017). For physical limitations too, the treatment group showed lower scores compared to the control group, indicating worse outcomes. Specifically, the estimated impacts were -2.84 (95% CI [-4.67, -1.01], p<.001) and -4.19 (95% CI [-6.41, -1.97], p<.001) for the 6-month and 12-month marks. Population level averages were 52.97 (SD=40.78), indicating that study participants had markedly fewer physical limitations than those of the general population. Finally, for the physical functioning domain, the treatment group had a significantly higher score at baseline (M=70 vs. M=63 for the control group). This positive trend continued 6 months into the pilot. However, significant negative impacts were observed at the 12-month mark (-4.94 points, 95% CI [-8.68, -1.19], p=.01). By the last observation, the treatment group again demonstrated higher, albeit statistically insignificant, mean scores (M=66) relative to the control group (M=65). These scores are close to the average of the general population's characterization of their physical functioning (M=70.61, SD=27.42).

It is worth noting here the variable impacts of care work on physical health. All of the pilot participants were single caregivers with at least one child. In addition to their parenting responsibilities, many recipients were also part of the "sandwich generation," taking care of parents and relatives at the same time (Alburez-Gutierrez et al., 2021). This caregiving included a wide variety of day-to-day tasks from driving parents to errands and medical appointments, to paying their bills, to providing physical care. Elsa, who had a 10-year-old daughter, took care of her disabled brother and elderly parents as well.

> *My mom and dad... They're both 86, so taking my mom in for her doctor's appointments. Taking her to the hair salon, you know, so she feels beautiful, you know. Nails and so forth. Um, my dad, taking him for his haircuts because he doesn't like to drive anymore. Driving my mom grocery shopping. So [SIGHS], you know—it's, it keeps you busy.*

Consistent with other research (Baker et al., 2018; Vazquez, 2017), the intersection of middle adulthood and heavy care burdens can erode physical and mental health and well-being. Women—and in particular caregivers—have many physical demands placed upon them, symbolically absorbing the consequences of capitalism with their bodies. Caught between the competing demands of paid work and family, and hindered by gendered expectations of care, women in the "sandwich generation" experience stress, illness, and early-onset health problems directly linked to the pressures of caregiving.

In turn, these physical limitations create further constraints to the potential impact of GI, as Denise's experience demonstrates (see Case Study 1).

These limits are further compounded by the stress of making ends meet on a low income. Previous research has linked scarcity with poor health outcomes (West & Castro, 2023; West et al., 2023). Denise explained the connections between the two:

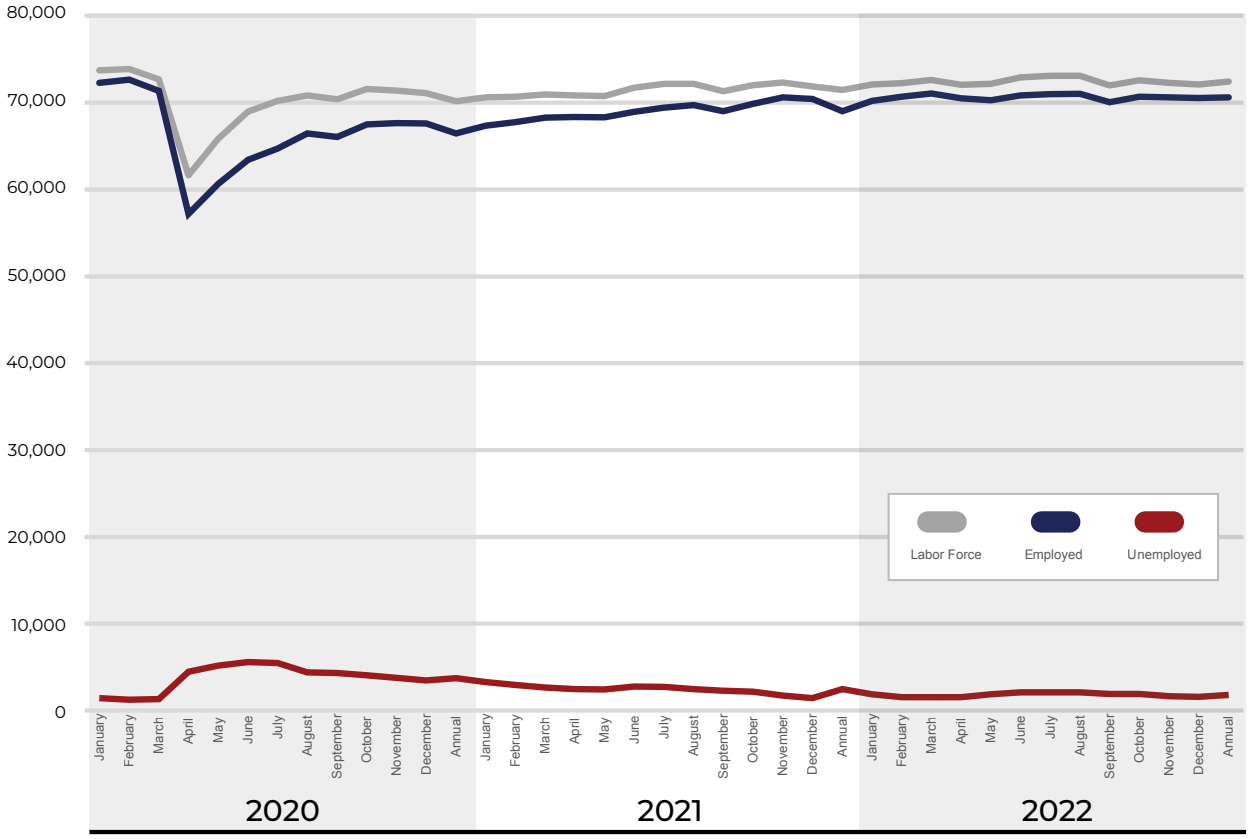
> *One of the things that [researchers] found is that when someone is always in survival mode, that fight or flight, first of all, what that connection does to someone physically... people who are in poverty, who are always worried about paycheck to paycheck, who are worried about safety. If they live in a community that's unsafe or domestic violence situations, um, who are in my case in and out of the hospital ... [there's] a constant state of adrenaline. In a constant state of tension because that's also adrenaline creates inflammation. Stress creates inflammation. Inflammation is the number one cause, sorry, correlation, connection to cancers.*
>
> *You shouldn't be in a constant state of emergency. Like the thing is that we have a bunch of defense mechanisms that are healthy... But when you're always projecting and always calling on that defense mechanism it becomes a malfunction.*

Although the GI seemed to have a positive impact on psychological distress, alleviating some measure of stress, it was operating in a context where overwhelming mental and physical stress was endemic to everyday life; yet, perhaps as a result of their resilience, participants' ratings of their health were higher on average than those of the general population.

2. The Impact of Guaranteed Income on Paid and Unpaid Labor

To understand the impact of GI on overall income mechanisms, we explored the relationships between paid and unpaid work, job quality, and educational attainment and aspirations. Following the onset of the pandemic-induced lockdown, in April 2020 Cambridge witnessed a surge in unemployment, with rates reaching 7.2% compared to the state average of 16.5%. Unemployment rates in Cambridge reached an all-time high of 8.1% in June 2020. Data from the Office of Labor and Workforce Development highlights the uneven impact on the labor force during the peak of the pandemic. Occupations related to food preparation and service saw the highest volume of unemployment insurance claims. Additionally, unemployment claims filed by women were 13 times greater than those by men. By September 2021, as the pandemic recovery progressed, unemployment rates across all racial groups generally decreased. The exception was the Hispanic community, which experienced an unemployment rate nearly twice the reported state average.

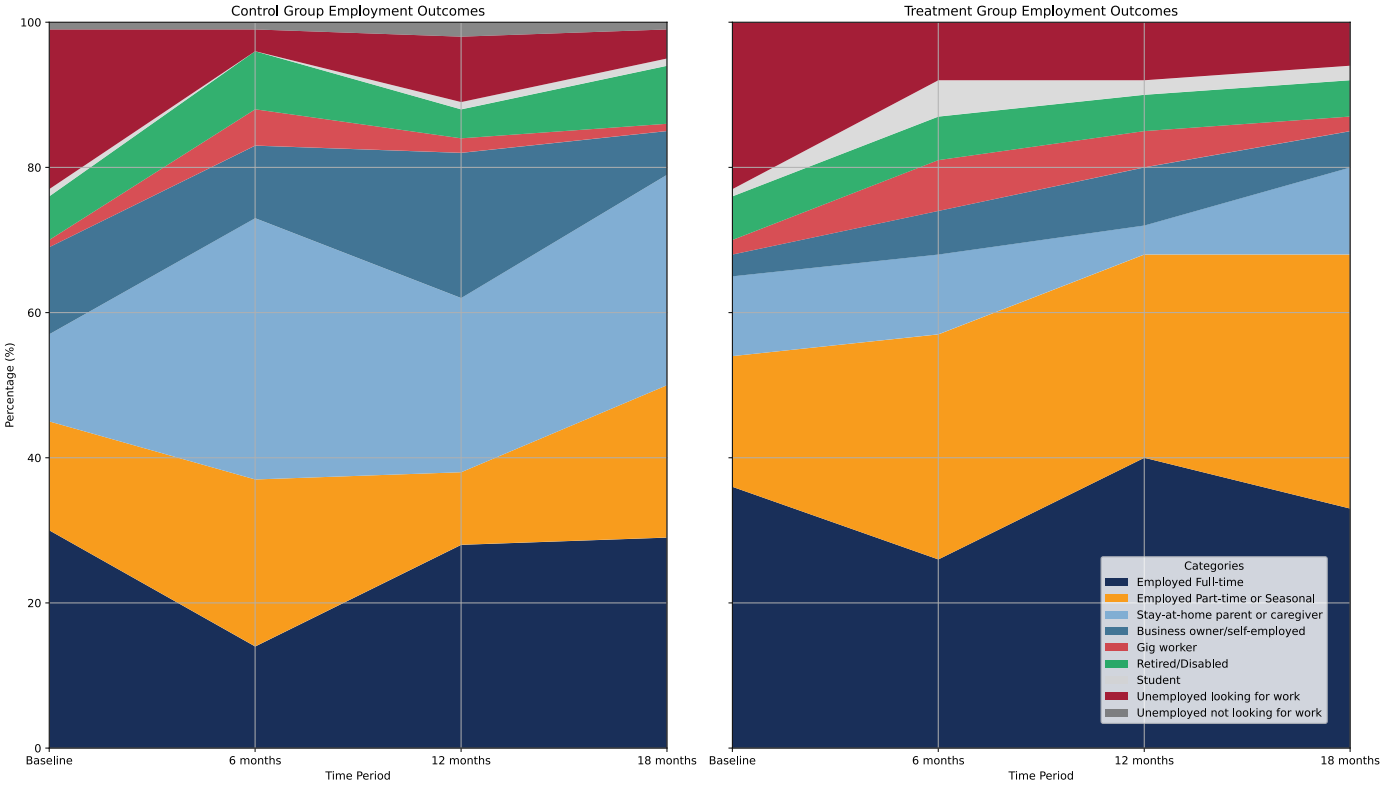
Figure 6. Cambridge Area and Massachusetts Employment Trends (2020-2022)



TRENDS IN EMPLOYMENT

At Baseline, the rate of full-time employment in the treatment group was 36% as compared to 30% in the control group. This pattern of higher full-time employment prevalence in the treatment group persisted over the duration of the study. The most significant difference was observed at 12 months, with 40% of treatment employed full-time in contrast to 28% in the control group, a difference that was statistically significant (x^2=35.64, $p<0.01$). Additionally, the treatment group also consistently showed higher rates of part-time and seasonal employment relative to the control group: 18% vs. 15% at Baseline and widening to 35% vs. 21% at 18 months. More than 50% of participants in both groups indicated employment in either the private sector or with non-profit organizations, and around a tenth were government employees, underlying qualitative findings where many participants worked in moderate-income administrative or support positions for medical and university institutions or private-sector tech and pharmaceutical companies. The percentage of stay-at-home caregivers, while comparable for the two groups at Baseline, increased significantly for the control group at the 6-month mark (36%) relative to the treatment group (11%). The proportion of business owners/self-employed individuals was also higher in the control group relative to the treatment group throughout the duration of the study. As for those unemployed and actively seeking work, both groups saw a decline from Baseline to the end of the pilot.

Figure 7. Trends in Employment: Treatment vs. Control



The disparities in employment trends between the treatment and control groups, with variations in full-time, part-time, and self-employment rates, reflect aspects of job polarization. This divergent employment trend, where there is a growing divide between high-skill and low-skill employment, resonates with the theories of economists like Daren Acemoglou and David Autor (Acemoglu & Autor, 2011). Jobs in Cambridge are highly specialized, and the majority of available positions often require advanced technical or academic qualifications, creating a significant barrier for those whose skills and educational backgrounds do not align with these demands. This disparity results in a paradoxical situation where despite a robust job market, low-income earners find themselves effectively excluded from these opportunities, facing a ceiling they cannot push through. The skills mismatch not only limits their access to available job opportunities in these areas but also contributes to widening the economic divide (Berkes & Gaetani, 2023). It widens a racial divide in workforce development too, as Black and Hispanic workers face unemployment rates significantly higher than the national average (Dunn, 2022).

Finally, the mixed employment findings are a reminder that many, and women in particular, were either compelled to leave the workforce or to seek new employment opportunities due to disruptions caused by the pandemic (Power, 2020). Qualitative data from the RISE pilot underscored how many single caregivers were forced to stay home as daycares closed and remote schooling became the norm. Without the support of family networks, and without childcare, some mothers had to either reduce their work hours or completely withdraw from the workforce. Others had to juggle remote

work with caring for children and relatives in lockdown. These dynamics were particularly difficult for women also taking care of aging family members whose access to their own services, such as adult daycare and healthcare, were shuttered during the pandemic.

Quantitative findings reveal a diverse range of personal and circumstantial factors influencing participants' employment situations across the timeline of the study. For instance, caregiving responsibilities emerged as an important factor, impacting around 35% of participants in both groups. These responsibilities often encompassed not only providing childcare and managing remote learning, but extended to eldercare, attention, and support for aging family members. Members of the "sandwich generation" had to balance overlapping care demands alongside employment, often under circumstances where external support systems were limited or unavailable. This theme was consistently present in both qualitative and quantitative data, underscoring the impact of familial obligations on work availability and choice.

Life events such as pregnancy were also identified as a significant personal barrier to full-time employment. Additionally, immigration issues, such as work document problems, alongside general job market challenges accentuated the complexity of employment-related decisions for the participants.

BALANCING CARE WORK AND FORCED VULNERABILITY

Caregiving is not only foundational to societies and families, but an intrinsic part of being human (Bezanson & Luxton, 2006). The invisible labor of unpaid care tends to be undervalued and often taken for granted, as previous quantitative findings suggested. Like Jasmine put it, "caring is a full-time job with none of the recognition." Giving so much of oneself, without the ability to rest or restore, takes a toll on mental wellbeing. As Samantha described, "I feel like I overextend myself sometimes or trying to be there and do so much and then like, I feel kind of like drained and not myself, because I'm giving, giving, giving, giving, giving."

The responsibilities placed on caregivers are unyielding, and many caregivers must navigate gendered familial and societal expectations around care work along with the demands of paid work in the labor market. Research on the "motherhood penalty" shows that having children inflicts the largest penalty on low-wage women (Budig & Hodges, 2010). Single parenthood further impacts women's re-entry into the market, their availability to work, and their opportunities for upward mobility. Nicole, for instance, who moved to Cambridge for her Masters and doctorate, said that "single parenting definitely constrained my [career] choices all the way through." In this sample, the balancing act between unpaid care work and poorly compensated waged labor placed limits on the power of GI through forced vulnerability. Unlike chosen interdependence or chosen vulnerability within a relationship, forced vulnerability is "circumstantially coerced trust or dependence in people, social ties, or systems out of necessity and lack of choice" (West et al., 2021, p. 19). Although the GI began creating space for escaping this dynamic, the demands of unpaid care work in the context of the pandemic, inflation, and the cost of living and childcare in Cambridge cut short this hopeful pathway towards agency. Zeze, for instance, worked Saturdays in addition to her full-time job and parenting, saying:

> *I'm a real hustler. We eat dinner at least three times a week together. So I mean Sunday*

> *morning we have to eat breakfast together. We are all the time together here me and my kids. We are very bonded together. My job sometimes, I come home late like seven. But even if I come home late like seven, we'll have to talk... I'll be tired, but no matter what they will come, and—to come to me, and then they will say something. We will interact.*

However, she also alluded to her exhaustion and stress which the GI ameliorated to a point, but, "I just walk home tired. That's all I do. I work too hard."

Given the preponderance of caregivers in the sample, the various environmental stressors contributing to forced vulnerability, and the resultant impacts on mental health, this context may account for uneven effects in the study's Adult Mattering Scale. Mattering is rooted in the idea that people inherently want to feel valued as human beings, recognized and important outside of their relationship to capitalism (Castro et al., 2021). Outcomes indicated that the treatment's effect was not uniform across different aspects of the Adult Mattering Scale or over time. Data suggested a statistically significant lower score for the treatment group in the Importance sub-scale at 12 months into the pilot. For other sub-scales and time periods, the magnitude of change was relatively small (reflected in the estimated impact).

Multiple systemic constraints conspired to limit opportunities and contribute to frustration for parents. To make ends meet, they were forced to navigate the social services system, remain in thrall to toxic relationships, or stay in jobs that were underpaid. Many did not receive child support and carried the weight of their household alone during the pandemic. Maki, who spent long hours mixing solutions in a lab, had immigrated from Eastern Africa and lacked nearby family and affordable childcare. The GI was not enough to offset the costs created by low wages and lack of affordable care. Isa pinned her financial struggles on being a single mom with no support and, like Maki, the number of hours she spent caregiving and working left her with little time to build new social ties. This reflects similar findings in Stockton, CA, where financial scarcity produced time scarcity that undermined relationship building (West & Castro, 2023).

Although pilot participants described exceptionally close bonds with their children, several described other unsupportive or tenuous relationships that they nonetheless had to depend on for survival. Emma paid rent to her mother, who disapproved of her children and threatened eviction should they

FORCED VULNERABILITY

Forced vulnerability is circumstantially coerced trust or dependence on people, social ties, or systems out of necessity and lack of choice.

For example, being forced to remain in an unsafe living environment or relationship to avoid homelessness.

miss rent. She described having to come to terms with living with the constant weight of disapproval and rejection as "I have to accept what I have to accept." Emma, like many, noted that the lack of support from her family, coupled with the care burden of single parenthood, limited her options for mobility.

> *Like, even when I'm trying to go back to school to better myself, even trying to make more money so I can take care of my kids without anything, I can't even do that. Like my mom was just like, "oh," like, "you have to find somebody to watch these kids cause I'm not watching these kids..." One thing about me, I'm always gonna achieve, I'm always gonna, like, think higher... But... I'm just gonna need help doing that, getting there, like, you know?*

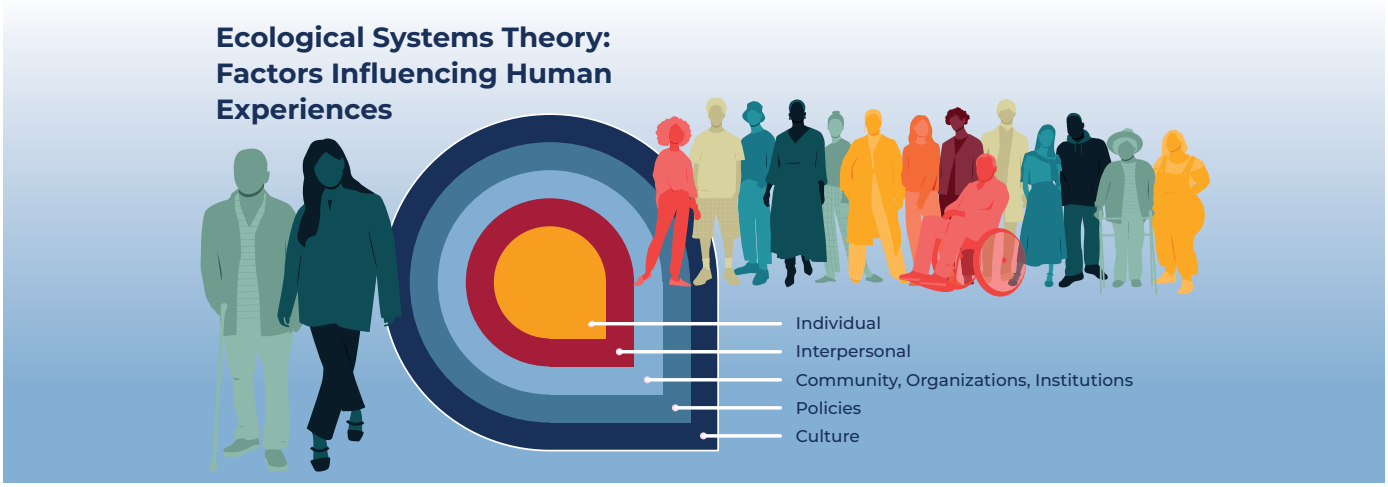
Many pilot participants spoke of long-held goals—returning to school, homeownership, better job prospects—that they had not been able to pursue due to overlapping care constraints and financial vulnerability. The ability to make alternate decisions or explore different pathways was limited by circumstance—in Emma's case, by both the lack of childcare options and the withholding of emotional and financial support.

On the employment side, participants pinpointed the lack of workplace support for parents alongside low wages as contributing to forced vulnerability in the labor market that spilled over into their home lives. For example, TG wanted to earn more income, but could not afford a babysitter for extra shifts; however, her job allowed her flexible hours, which she considered a fair tradeoff. For participants like TG, any flexibility with work was gratefully received, at the expense of a fair wage and sometimes, fair work expectations. Accommodations from employers came with a cost—loyalty as an obligation. Many participants therefore felt stuck in jobs without upward trajectories, prevented from making long-term plans by their short-term obligations. Others were unable to work because their children needed extra support or they could not afford childcare. In this case, stability for their children came at a cost to their own self-determination and goals.

Image: Sculpture in front of student center at the Massachusetts Institute of Technology (source: Shutterstock).

3. The Impact of Guaranteed Income on Subjective Sense of Self

To determine how GI may impact participants' sense of self, we explored participants' sense of hope, agency, future planning, and goal setting. Outside the individual context, we also explored how GI may impact community connection and trust, as well as perceptions of relationships with other people. Denise's experiences shed light on how the intersections of work, health, and family demands provided opportunities and obstacles for her own wellbeing.



GI Case Study 1:

How Unpaid Care Work Can Limit the Power of Cash

Denise, a Black social worker and clinician, has two adult children—a daughter in her late 20s and a son entering college. Her passion for social work stemmed from her family's lived experience with addiction and mental health. As she noted, "a lot of my drive comes from the trauma of poverty. So it's... a lot of people have that. We just don't know how to verbalize it all the time." Her first job in a hospital led her to pursue a medical assistant certification, then her Bachelor's degree in psychology, and finally a Master's degree. Although Denise had always been highly motivated, she felt disheartened in her role as a counselor, describing it as focused on compliance rather than individual care.

Denise has spent much of her life as the strongest member of a financially fragile network. She was the primary caretaker for her grandmother and uncle until they passed away. After her grandmother's hospitalization and eventual passing from COVID, she was blindsided by her own serious medical issues from a previously undiagnosed chronic illness, exacerbated by stress. She was forced to resign from her job when symptoms rendered her unable to work and she had exhausted all her Family and Medical Leave

taking care of her relatives.

She learned about the GI pilot through a neighbor, with whom she had conversations about building generational wealth. Denise had always aspired towards homeownership and leveraging property for a rental income; surrounded for years by friends and colleagues who owned property, she had observed, learned, and dreamed about a place of her own.

> ***I did aspire for many, many years to acquire a home and eventually a three-decker where I could have rental income paying the mortgage. I worked with psychologists and social workers. I worked with people who had things, so I learned from just looking around… I always watched people and had coworkers, and so I learned about being a homeowner and I just don't own a home, but I know all about it. I know the ins and I know you want to know a carpenter, you wanna know a plumber, you want to know, you know, keep them in your Rolodex. My supervisors used to teach me that. But I mean I've been to the Cape, I've been to [Martha's Vineyard], I've been taken to people's homes and you know, have wined and dined with medical directors.***

Denise was also preparing for a new chapter of her life as an empty nester, but her health prevented her from using the GI in the ways that she initially planned, resulting in knock-on effects for her mental health.

> ***I feel like [the GI] would have changed my level of depression, because I do suffer from mental depression, major depression. I feel like it would have changed, let me not say change, impacted that in specific ways, meaning I would have felt hopeful. I would have been building a savings—[buying a] house that I talked about or also traveling… "Like your son is leaving, you can do those things too." And so you know, the idea of building a savings had me feeling like I can do something else out here. Um but again, my health dampened that and now my job.***

After years of caring for others, Denise was finally ready to take time for herself. She wanted to use the GI to pursue financial well-being and independence; she had aspirations to travel and to buy a home as a source of rental income. Yet, in taking care of her children and family, her own physical and mental health had suffered and curtailed the potential hopeful impact of the GI.

AGENCY, HOPE, AND GOAL SETTING

Experiences like Denise's may explain the fluctuation in the levels of hope among participants in both treatment and control groups. Notably, for the control group, there was a slight decline in the proportion of participants reporting High Hope (a 6 percent point drop) from Baseline to Endline. Conversely, the treatment group exhibited only minor fluctuations in the High Hope category. For the Agency sub-scale, there was no consistent trend in the estimated impact across the study period: 6 months into the pilot, there was a notable positive impact (relative impact=3.12%, p=0.00), indicating an improvement. However, this trend did not continue in the subsequent Waves, where the impact diminished. The Pathways sub-scale demonstrated a significant negative impact at the 12-month mark (relative impact= -2.74%, p=0.02), though it attenuated by 18 months. The myriad pressures faced by single "sandwich generation" caregivers seemed to have crowded out sustained levels of hope or agency—at least among those who did not have other means of emotional or financial support.

The extent of these constraints determined the relative impact of the GI on personal goals during the pilot. However, for some, the GI proved to be a motivating force. "I'm not planning to stay where I'm at right now," TG said. Elsa noted that the GI supported her ambition to be self-sufficient, "that inner drive." Anecia also felt that the GI contributed towards forward thinking. A lifelong Cambridge resident and mother of five, she was living in a three-bedroom apartment too small for her family but subsidized by housing assistance. Because she could save the GI without scrutiny from the housing system, she was able to purchase a new car, giving her more agency over her money and time as she transported her children to daycare, school, and extracurriculars. The GI also motivated her to save for a home, despite the prohibitive cost of housing.

> *[To] set new goals, like I mean I think with the money it just has opened my eyes to really just get like focused on home buying or something else for me and my kids. And it just caused me to look at my budget more and just be more aware of my spending altogether. But the goal for me is not to be in this, to live like this, not that it's bad or whatever the case may be, but it's like you're stuck. You know? Um, so my goal was to just you know advance and get to like homeownership. I'm not there yet, because it's just so expensive and everything, but I'm—I have a better, I can visualize it more now, I can say.*

Being able to invest in self and to achieve previously dormant goals was a powerful source of confidence and self-worth. Like Denise, Simone suggested that GI had the potential to strengthen one's sense of self:

> *I think it goes back to what I said earlier about the false narrative that people who have government assistance are lazy and, you know, they don't want better for themselves. I think the guaranteed income will put people, can put people in a position to have more, to be motivated. Not motivated, that's the wrong word, but to see themselves in a better light so that they are more motivated to want more for [themselves]... to achieve more. It's equity—giving people what they need.*

The Life Attitude scale captured by quantitative data included "self-transcendence," defined as the capacity to rise above situational constraints and other limiting factors in order to contribute to humanity and make a difference (Wong et al., 2002). Although the treatment group started with lower Baseline scores, they reported higher, albeit non-significant, scores at 6 and 12 months. However, this trend was not sustained. The higher scores may reflect the temporary capacity to pursue existing life goals and new possibilities afforded by the GI. In terms of the rest of the scale, the Acceptance sub-scale revealed no significant differences at any time, despite similar score trends to the Affirmation domain. For Courage, an initial significant negative treatment effect was noted (mean difference=-0.28), which shifted to a significant positive impact at 6 months (Estimated Impact=0.43, 95% CI [0.24, 0.62], p<.01). However, this trend did not persist at the 12- and 18-month evaluations, with the control group reporting higher mean scores. The Faith domain showed no significant treatment effects at any point.

Bonnie's experience captures various family responsibilities and personal goals that she considered in returning to school.

GI CASE STUDY 2:

Goal-Setting and Interdependence

Bonnie, a Black single mother to a 14-year-old-daughter, was born and raised in Cambridge, and her large, tight-knit extended family also lives in the area. Bonnie's family are close and share caregiving responsibilities, a dynamic that created space for Bonnie's GI payment to go much further than that of other participants lacking support. Her family coordinated a network of care for her grandparents during the pandemic, and they continued to need daily care. "There's always something going on," Bonnie said, and she often stepped in to help alongside her extended family. With her teenage daughter becoming increasingly independent, Bonnie's responsibilities shifted, and she no longer had the financial burden of after-school care.

Bonnie is a project coordinator in hospital administration; she was recently promoted, although she did not think she was paid fairly and advocated for a higher wage in her last performance review. She hoped to move up into project management and was using the GI to go back to school, something that her caregiving responsibilities had previously made unattainable:

> ***So, I put it off for a while and it just came down to, you know, at the time, needed income to provide from my family. So, you know, I took a leave of absence [from school] with the thoughts that I would return someday. I didn't really put a time when I would return. But as more and more time went on, it just seemed like it just wasn't a realistic thing anymore or it wasn't needed. And my finances, you know, we're in a better situation than they were at the***

beginning of my leave of absence from school. But I still felt that the money could be used for other things, you know, like, saving for my daughter's college education.

But you know, it kind of all worked out, because being a part of this program, I've used the money to pay for my school tuition. So, it's been very helpful. It was kind of like I was in a spot where you know my daughter was getting older, and I realized that I wasn't really setting a good example of what a successful, accomplished, Black woman looks like and somebody who, or a person who says that they're going to do something and actually completes it, you know. So, by not finishing school, that was kind of just lingering there and now that she is getting older and she's [going] to high school and eventually off to college, I realized that it was my time to go back to school.

The GI allowed her to act on her long-standing goal of returning to higher education. Before, she had had to be pragmatic, placing her individual goals second to providing for her family. This is a cost of caregiving faced by many, who must set their own desires to the side in order to attend to the needs of others. With the cash, Bonnie was able to return to school and to set an example for her daughter, something that was important to her. Finally, she envisioned being able to leverage the money in a way that would improve her long-term financial well-being. When asked about her plans post-pilot, she said vehemently, "I'll have my degree and a better job."

As previously noted, many participants in the pilot already held skilled careers and degrees. They simply could not break through the glass ceiling that existed around opportunities in a city with a talent pool of Ivy League scholars, wealthy international students, and cutting-edge tech and pharmaceutical workers less burdened by intersecting systems and care constraints. For these participants, the GI seemed to provide a boost of confidence. They were able to reclaim time and space for their own careers and personal trajectories, pursuing possibilities outside their roles as caregivers and providers.

IMPACTS ON RELATIONSHIPS TO SELF, CHILDREN, AND OTHERS

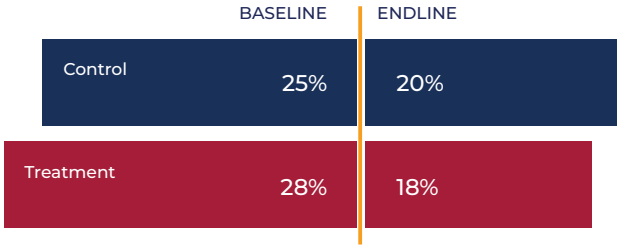
Some participants also detailed how the GI helped them better balance paid work, unpaid work, and time with family. The GI seemed to temporarily free recipients from the constraints of economic and time scarcity, allowing them to make the deliberate choices around parenting that are key for healthy child development. Typically in situations of financial precarity, decision-making is shaped by survival and trade-offs. However, the GI allowed recipients to exercise agency around their parenting decisions outside the limits of financial scarcity and forced vulnerability.

For instance, one participant held up to eight contract positions at a time as a virtual assistant for university professors and CEOs. She pieced together multiple jobs so that she could be there for her children's schooling and academic and extracurricular events. But her contracts also required her to continually adapt to other people's schedules, sacrificing consistency in how she made decisions around her time. Receiving the GI allowed her to decrease the number of contracts she had in order to spend more time with her family. For Stacy B., too, the GI gave her the ability to spend more time with her daughter rather than taking on extra nannying work. She was able to do more in the way of treats, like going for a walk to get ice cream with her daughter. Veronica also used the GI to prioritize time with her daughter, including making arts and crafts and going out to Sunday dinner together. She said:

> *If I was not in my situation [with the GI], any way of trying to get extra money, I would be most likely working, which would then take my time away from my daughter, um and myself. … This [GI] it's not just benefiting me, it's benefiting my daughter. So I'm able to show her things and we're able to do things together that we would have done, but maybe not so soon or maybe not as elaborate and that puts her in a different place growing up. She gets to see these things. I get to show her things and that betters her.*

Having more time and money created newfound space which many participants used to spend time with their children. These kinds of parenting choices represent the ability to prioritize meaning-making and activities that bring joy. This sends clear signals to parents and children that they deserve to participate in normative rites of childhood and family.

Figure 8. Childcare Utilization Pattern: Comparative Analysis at Baseline and 18-Month Follow-up



Quantitative data suggest that the increased time and agency provided by GI may have similarly impacted children of other treatment group participants. Households in the treatment group reported fewer school disciplinary actions (in-school and out-of-school suspensions, expulsions) for their children compared to the control group during the study period. This is supported by qualitative data; several recipients who had children with behavioral difficulties were able to stay home or spend more time supporting them. Children in the treatment group households generally achieved higher academic grades (mostly As and Bs) than those in the control group. The treatment group also saw more children placed in the Advanced Placement classes and fewer instances of absenteeism and truancy compared to the control group. Finally, parents in the treatment group aspired to higher educational achievements for their children than those in the control group. Taken together, these

findings suggest that the influence of the GI manifested in increased ease, time, and space for parenting; in turn, this contributed to better outcomes for children's educational development.

Table 12. Family Engagement Activities with Children among Treatment and Control Groups

	Baseline		6 month		12 month		18 month	
In % (Yes responses)	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment
Narrative engagement: storytelling activities	61	56	74	67	66	59	72	64
Engagement in creative activities: arts and crafts participation	56	52	80	74	79	64	69	64
Family involvement in cognitive games: board games and puzzle activities with children	65	59	72	59	71	64	82	71
Hands-on learning activities: family engagement in building, making, and repairing projects with children	69	59	88	78	81	70	81	71
Family physical activity engagement: sports and exercise with children	79	72	81	76	88	85	88	78
Family engagement in life skills development: conversations on time management with children	79	72	81	76	88	85	82	78
Cultural engagement within families: discussing family history and ethnic heritage with children	79	72	81	76	88	85	82	78

Figure 9. Child Academic Achievement Trend: 'A' Grade Distribution Across Control and Treatment Groups (in %)

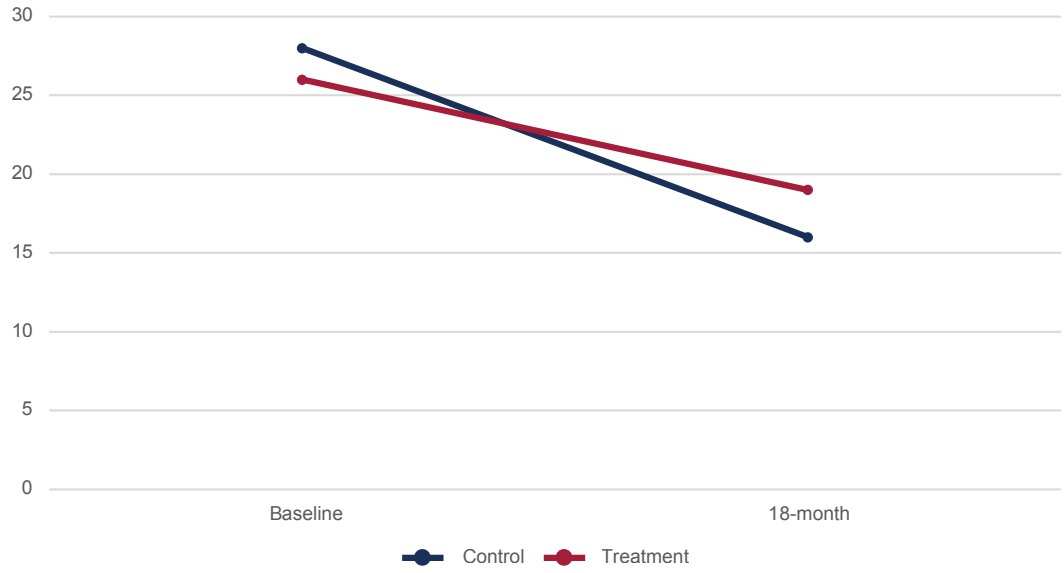


Table 13. Parental Aspirations and Expectations for Children's Education (in %)

	Baseline		18 month	
	Control	Treatment	Control	Treatment
Aspirations for secondary and vocational education	11	13	11	8
Aspirations for higher educational achievement	89	87	89	92

Part of this, too, may have been the external context of the pandemic. Many pilot participants worked remotely during COVID. Sheltering in place and remote work and school meant that families spent all of their time together. While this presented a number of unique stressors—TG described it as the most challenging time of her life—it also allowed parents to be in closer proximity to their children. Nicole, a treatment group member who holds a PhD in education, reflected:

> *I think the little shock period when everyone had their kids home during the pandemic, um, at least online made people seem to appreciate teachers and the work that they do [chuckles]. You know, when everyone had to try to juggle their own children for a spell.*
>
> *I think it opened up people's eyes to their own kids, like the struggles their own kids*

> *have in learning. Um, I mean, that's part of what I've been seeing, I guess in, in the research that I've done. Um, it's like, oh, my kid actually [chuckles], this is what it takes to sit down and try to learn something or to, you know, to kind of support them in that way.*

Finally, mentions of time for self were rare among pilot participants—unsurprising, given the experience of single caregiving. Time for self is a scarce commodity under capitalism in the best of circumstances and equally rare during pandemic lockdowns. Stresses accumulate and calcify in the body and mind. However, for a few interview respondents, the GI offered permission to stop, rest, and care for themselves. For instance, Betsy put some of the GI towards therapy. Exhausted by the stigma of single motherhood, the structural limitations of racism, and the experience of scarcity, she was able to take time for mental health.

> *With RISE, I put myself in like an online mental health counseling, you know um, because being in poverty and the way people treat you, it can make, it can take a toll on your mental health too, being Black, being a single mom.*

For Veronica, taking time to reclaim her body, to maintain and nourish a relationship to it, felt revelatory:

> *I am able to get a massage every now and then, because that's, why not. Um, I can take care of myself, um, because prior to getting [the GI], I've never been, "I'm going to get my hair and my nails done." But who doesn't want to do something for themselves? So my thing is I'm going to go for a massage. I can do my own nails, I can do my own hair. [But] I've actually been able to do something for me. That is a beautiful thing.*
>
> *And that's something that I try to tell people now because it's like, I'm learning it now and I wish I knew it before, because if I had known it before, things may have been a little different. But at least me knowing it now, I can tell other people like nails are great, pedicures are awesome. It's the massage that helps relax and release and it's something that's different. So I am extremely happy that the [GI] has been able to allow me to do that. You get to be aware of your own body... It really is, because so much happens in the world, you forget your body... Taking care of yourself is the most amazing thing to do ever.*

This is the kind of self-care that resonates deeply, rather than the commercialized self-care promoted under capitalism. For GI recipients, self-care meant reclaiming their humanity by returning to an unfettered sense of self, the steady understanding that eludes when panic, scarcity, and shame take over.

Jasmine pointed out that single parents often find themselves in crisis. She wished she could worry about supporting her child, instead of about food and rent. Having time to self-reflect, heal, and learn is typically not feasible for single parents who lack time and money. However, Jasmine suggested that having a GI could contribute towards that vision—"income frees you to do that work."

> *The biggest thing that I can give to my child is to do that healing and that learning and to model self-regulation. … And so we often are like, especially when we're in crisis situations with our kids, where they're like really having a hard time, is like we want to have housing provided, food provided, like all of our financial needs met so we could just focus on the healing with our kids. Like we would get them into therapy, we would do playgroups, we would have ourselves in therapy, we would do all these things that are not even feasible right now.*
>
> *We talked about going out to some farmland and just like running free with our kids, and like we've been able to make it happen in small bites. Like we took them [out of state] last summer, and they went in this big house, and like that was really nice, but it's like, yes, income frees you to do that work. And it's like if we could just do that for a year, I feel like we'd all be more successful, productive, healed, less trauma. Um, and be at work. So yeah, I think [GI] can make a big difference and [GI] should be available.*

Jasmine believed that GI offered the potential to let recipients reflect, freeing them from the constraints of care without support and work without fair pay. For those for whom time is a luxury, GI created the space for self-determination, self-worth, and authentic self-care.

REKNITTING TRUST IN A FRACTURED SAFETY NET

The City of Cambridge is unique in that it has acknowledged the myriad structural barriers facing citizens and has taken innovative approaches to promote housing access, universal childcare, and educational opportunity in response. Although the city spans many socio-economic groups, there was a widely held sense for pilot participants that local government was approachable, with an open-door policy for constituents. "You can find any help you want, you contact like anybody, they're always happy to help," said Keisha.

In 2019, the Cambridge Housing Authority became the first city in the nation to voluntarily adopt Small Area Fair Market Rent standards, enabling families with federal Housing Choice Vouchers to rent in several neighborhoods that were previously unaffordable to them. Though well-intentioned, the Cambridge CDD dashboard revealed a significant gap between the number of rental listings eligible for the HCV program in all five Cambridge zip codes and the demand (CDD, 2023b). In response to this lacuna in housing supply policies, the City of Cambridge implemented the 100%-Affordable Housing Overlay (AHO) in October 2020. This zoning reform was designed to expedite the process of expanding affordable housing options in parts of the city where they were most needed, especially along transit hubs and corridors (CDD, n.d.).

The city also instituted an Inclusionary Zoning ordinance requiring that market-rate developments reserve 20% of the floor area for affordable units, including three-bedroom units, to expand access to families; monthly rent for these units should cost no more than 30% of household income per month (CDD, 2023d). This means that a portion of all new-build condominiums must be set aside for low- and moderate-income tenants. The city has also offered help with renting and buying for people at

50% AMI or below, including a forgivable loan for down payment and closing costs (*City of Cambridge Down Payment Assistance*, n.d.).

Cambridge has also recognized the cost of college. Seeking to address disparities in educational opportunity, the Cambridge Promise Pilot Program was founded to support up to 30 students enrolled at Bunker Hill Community College (BHCC) under the city's College Success Initiative (CSI). Students received a "last dollar plus scholarship," including free tuition and fees for the 2023–2024 academic year, school-related expenses, and an additional $250 stipend each semester. MIT and Harvard University each contributed $25,000 towards the first year of the pilot (City of Cambridge, 2023b).

Finally, in the 2024 academic year, the City of Cambridge in partnership with Cambridge Public Schools will be introducing the Cambridge Preschool Program (CPP), previously known as Universal Preschool (UPK), which will provide free school-day, school-year preschool to every 4 year old and some 3 year olds living in Cambridge. This replaces previous lottery and scholarship application programs. The program aims to center equity in access, deliver high-quality programming, and prioritize early educator compensation and support—itself a step forward, as early childhood educators are often underpaid and undervalued despite their critical work (Department of Human Service Programs, 2023).

During the pandemic, Cambridge's ability to quickly identify and support its residents' needs was evident. The city recognized that it would take multiple modes of assistance to ensure its most vulnerable residents did not fall through the cracks. One of Cambridge's earliest actions in response to the emerging crisis was the Mayor's Disaster Relief Fund, which provided $5 million in emergency assistance to over 1,500 individuals, families, and small businesses in Cambridge experiencing extreme financial hardship. Additionally, the Cambridge Community Foundation infused roughly $2 million in COVID-19 relief. The city's COVID-19 Housing Stabilization Program provided short-term rent subsidies to those with extreme housing cost burden (City of Cambridge, 2020). And to ensure Cambridge's ecosystem of nonprofit organizations could provide direct services, the city provided over $1 million in grants through the Community Benefits Stabilization Fund.

Recognizing the critical need to combat hunger during the pandemic, the city's Council on Aging partnered with Food for Free between March and June 2020, delivering over 1,000 meals to seniors and immunocompromised individuals. Additionally, the Cambridge Public Health Department partnered with the Cambridge Economic Opportunity Committee and Food for Free to develop a rapid food delivery system for COVID-positive residents facing food insecurity. The city also responded by allowing restaurants to sell groceries to support safe access to food (City of Cambridge, 2022).

Stacy A. was one of many residents who availed of the city's commitment to providing resources:

> *I love Cambridge. And even if I didn't understand much about my city [before], the pandemic kind of really put it in perspective. They had a few programs for residents to really help them for the first 6 months and you know, they also have a lot of activities, there's a lot of stuff that they do for their, for their residents.*

The city also instituted a push to ensure that every resident who qualified was signed up for the

Federal Communication Commission's Affordable Connectivity Program, which helps low-income households afford discounted broadband (see Case Study 3). The program also offered up to $100 off on laptops or tablets for eligible households (Federal Communications Commission, 2023). Quantitative findings from the RISE pilot suggest that over 90% of all households in the research sample had access to broadband/internet during the pilot. However, about one-third experienced internet service interruptions, highlighting some financial difficulties in affording service fees.

Long before the pandemic, Cambridge was renowned for its local resources: food pantries and farmers' markets, summer activities and internships, and job assistance. Public parks, free events, and programming throughout also contribute to a sense of civic belonging. Echoing many interview respondents, Maki, an immigrant and mother of a toddler, expressed her love of living in Cambridge. "Cambridge is like—it's so beautiful as everybody knows. It's [an] awesome place to live, especially with the kids. Oh my gosh you got a lot, a lot of support—a lot. That's all. I love everything in Cambridge."

Bonnie, a lifelong resident and treatment group member, named several city-sponsored programs she was involved in, including a financial counseling program. She met regularly with a financial counselor in order to support her goals of finishing her degree, saving for her daughter's college education, and buying a home. Several interview respondents also described the open and accessible nature of the Mayor's Office, citing communications they had had with the mayor that kept them afloat in difficult times.

Housing assistance is also robust in Cambridge, despite the aforementioned waiting list. A major reason that lower-income residents could afford to stay in the city was the availability of Section 8 housing vouchers. Recipients said they would not have been able to afford market rent without them. Compared to other urban sites in the broader American Guaranteed Income Studies, where participants struggled with high market rents and long waiting lists, the number of interview respondents receiving some form of housing support was sizable in Cambridge. A majority of the sample reported receiving rental assistance either through Section 8 and similar programs or gaining affordable housing through the special Inclusionary Housing Rental Program offered by the Cambridge Housing Authority (CDD, n.d.).

Finally, an unusually large network of nonprofits exists in Cambridge to connect people to services. Government and community organizations work together in a supportive ecosystem. At both a local government and community level, this has created an environment of inclusivity, sending a message that all residents in Cambridge matter. People know that politicians are thinking about them. Connections are made at the individual level—and the government follows through.

This may reflect quantitative findings from the Life Attitude scale, where the treatment group initially reported lower mean scores for Affirmation of Meaning and Value (M=13.65) compared to the control group (M=14.04) at Baseline. However, a significant positive effect emerged at the 6-month mark (Estimated Impact=0.47, 95% CI [0.27, 0.66], p<.01). This trend persisted at 12 months, with the treatment group showing higher scores, though the difference was not statistically significant. In contrast, the Acceptance sub-scale revealed no significant differences at any time, despite similar score trends to the Affirmation domain. Although not significant, the increase in a sense of Affirmation of Meaning and Value may align with residents' feeling seen and recognized by their institutions. In particular,

the unconditional nature of the cash underlined a sense of trust between individual and government. According to Veronica, the GI represented a sense of "just being cared for, not just being a statistic or, you know, just 'that that's that group over there.'" Being able to use the money without restrictions fostered a sense of dignity, underlining the respect that local government has for its constituents and the personal nature of politics in Cambridge.

GI CASE STUDY 3:

Bridging the Divide

Jasmine, 29, lives in Cambridge with her elementary-aged son and is committed to building community and giving back to her city. A few years ago, she participated in research around the root causes of racism in schools and found a supportive environment of peer parents of color. The experience led her to attend city proceedings and regularly seek out connections. Cambridge, she said, is a place that fosters social connection: "People really want to be in community here."

This extends to community-government ties. Local government makes itself abundantly available to citizens in a way rarely seen in a city of this size. During the pandemic, Jasmine heard that the city was offering free internet to support remote work and schooling. Unsure if she qualified, she decided not to apply. However, she ran into an elected official at a community event, who said, "we need to get you on this [free internet]." Jasmine contacted them and they made sure she was covered. When her rent was unaffordably raised during COVID, she again contacted a local government office that helped reduce it. In her words, "That's a level of privilege and access right? That I can even like feel like I have the language to reach out to people in positions of power is a privilege." She felt recognized and valued by her government representatives.

It was because of these networks that Jasmine found out about RISE at a city council meeting and through a community center's mailing list. The GI was life-changing for Jasmine.

> ***When RISE started, I was in a pretty abusive relationship... Um, and I remember not telling my partner at the time that I was receiving the money because finances were a big mess between us and I thought that it would cause more problems for us, cause more arguments, cause more violence, those pieces...***
>
> ***It was only a few months after RISE started that I left that relationship, um, and then ended up moving here. And so I think like that was one piece and I—now that I think about it, like I wonder if the ability to receive the RISE money supported my ability to get out of that relationship, because then I***

had more financial security. You know, when you're splitting a $1,900 a month rent, coming to a place where it's $3,000 on your own, that's huge. And so—I mean financial stability, emotional stability, like community and resources all factored into being able to get out of that, and so I think that RISE probably was one of those contributing factors. I never made that connection [til] right now.

However, not everyone had the time, capacity, or knowledge of how to engage with available support, and local efforts, even in a well-resourced place like Cambridge, cannot entirely offset low wages and the shame and blame associated with the traditional safety net. Veronica pointed out that one had to know where to find government and nonprofit programs in order to avail of them:

> *There are a lot of resources here. Um, the only thing is you have to know where to find them sometimes and be connected with the people that know something about it… If you're a little too isolated, you won't know that there's these services around here. So that's the only thing. I don't think services are made known enough. Um, but when you know about them, there are a ton. There are a lot of advocates. There are a nice amount of pantries right within Central Square. Um, resources for like after-school programs and stuff like that.*

A few interview respondents felt left out of the loop. Several perceived a sense of nepotism among the city and NPOs—that one's access to resources depended on one's connections: "[based on] who you know, you're more likely to get some things over others," noted one participant.

The array of resources on offer in Cambridge can also pose challenges to recipients who must balance each program's individual eligibility requirements, weigh them against each other, and ensure that local, state, and federal benefits and programs complement rather than counteract. The result is that people are often dancing between and among systems, pulled in different directions and juggling different programs. Structural vulnerability is particularly common for single caregivers, who bear sole responsibility for making ends meet and therefore a disproportionate cognitive burden. The seamlessness of the RISE program still overlapped with a byzantine layer of administrative requirements and means-testing across other programs, limiting bandwidth.

Pilot participants shared the challenges they experienced while navigating different systems. For instance, Stacy A. had saved a little money from a couple different city and community programs and her last check from her job, and because of those savings, she was cut off from receiving SSI benefits for her son at recertification.

> *When I did my recertification, they stated that basically due to the funds that I had in my account, they closed his Social Security case, which I never had a blow so hard because it wasn't even about me. It's about my son. And it's like, everything in this*

> *world, I think it's like every program is designed to keep you just here, can't go ahead and you're not allowed to go backwards.*

Julie, a single mother and control group member, was a full-time caregiver for her son. Although she doubled-up in a two-family house with her parents, they had a strained relationship and did not provide childcare. Her son's daycare would only take him for a half day, owing to his behavioral needs that she had yet to find services for. Julie was unable to find work as a result, since she had no one else to watch him after daycare. Instead, she patched together a living with benefits and gig work—letting people on Craigslist cut her hair, selling her son's old clothes and toys on Facebook Marketplace. She applied for fuel assistance and was asked for five months' worth of bank account statements; after noting the Venmo payments from her gig work, she was deemed ineligible. "Man, you just can't get ahead," Julie said, sounding exhausted. "You just can't get ahead, where you get a flat tire as soon as you do get ahead."

Public housing was another system that required a fine balance. Rent was determined according to earnings, so higher earnings meant increased housing cost. Under this model, the ability to save money towards homeownership felt impossible, as it forced people to pit their short-term need for shelter against their long-term goal of stability. Samantha said:

> *The thing that stinks with housing for me is like one, I find like they want to know a little bit too much about your personal business as far as your expenses. Um, if you've got a 401k, like all types of things they want to know. And then it's like, every two years you go up for like your review, and they got to see how much you're making and all that. So like every two years your rent is going up—so it's kind of hard to try to figure out a plan to try to maybe one day even actually get out and get your own house.*

Simone, a control participant, noted the catch-22 of getting a promotion at work for her affordable housing unit:

> *I did get an apartment in one of the newer newly constructed buildings here… So I struggled but I got it. However, it's 30% of my income, which, you know, I think that's pretty much the calculation for most housing. So the more I make right, I said I want this promotion, the more I make, the more my rent will go. So it's a catch-22 at the end of the day.*

These narratives illustrate the perennial issues of the "benefits cliff," also termed a cliff effect, where any income increase beyond pre-set benefits eligibility criteria can cause a household's financial stability to worsen (Dinan et al., 2007, p. 1). People on the benefits cliff tended to be less able to take risks or make choices that led to mobility, achievement, or fulfillment. For instance, they might have to forgo raises or new employment opportunities because the wage increase would not warrant the loss in benefits, or they might feel unable to act on aspirations like homeownership. People were constrained by weighing the relative impact of these decisions on their ability to access and afford basic needs. In a housing market as constrained as Cambridge, the benefits cliff functioned less like a cliff and more

like a trap for people trying to save their way to a more stable housing situation.

Emma, a lab technician and mother of two, made too much for housing assistance, despite being unable to afford rent in Cambridge or the surrounding areas. She was staying with her two children on her parents' couch, though they had a difficult relationship in cramped quarters, and she did not feel welcome there. She had thought about quitting her job to become eligible for emergency housing but was afraid of what might happen without an income to support her children. Her story points to the other side of the benefits cliff—being ineligible for assistance yet unable to bridge the gap.

> *It's very tough trying to get a placement around here or anywhere if you have a job. So, I couldn't take that sacrifice to not have any money just to get a home, because I need to—like, knowing that I don't have money to support my kids, it's too traumatizing for me. So, um, I just had to, like, suck it up on my mom's couch, and try to save as much money, and try to see where I can, you know, live. But it's hard, because Cambridge is very, very expensive, and it's either, you know, live out here, or move to a whole different state, which is gonna even be 10 times worse.*

Participants also noted the time cost inherent in navigating systems, suggesting those with more time may be better able to find the resources they need. J talked about juggling paid work, nontraditional gig work, and benefits:

> *I think access means time… If you're working all day, like, imagine you're taking a train to work, I used to take the train to work like we would leave at 6:00 a.m. to get my child to day care and walk up to the train, get to work, go to work all day, do the same thing all the way back and like, when am I gonna do all those things [for benefits] and things are not open on the weekends or after five. Oh my god, it's horrible.*
>
> *You have to sit on the phone like minimum three hours just to talk to somebody and then it's just like the documentation is exhausting. Like you have to always know where your birth certificates are, your social security cards, your pay stubs, and especially working in nontraditional jobs.*

As other research has demonstrated, scarcity keeps individuals psychologically trapped in the present, limiting space to hope or think about the future (Mullainathan & Shafir, 2013; West et al., 2023). For single caregivers, the cognitive load of strategizing, adapting, and making ends meet in the short-term hindered their ability to think long-term. Time was a luxury that most could not afford. Conversely, with the GI, recipients were able to exercise agency over their time in ways that traditional modes of assistance precluded.

According to Elsa:

> *[The GI] has given me more control over my time… Being able to still have the freedom and the sense of mind, okay, I gotta go out and get this done today and not having there be a hurdle. "Okay, wait, I don't have enough gas, I don't have enough money." …*

> *Instead of waiting four days before the money can actually come in… God knows what else is going to happen in between that might even eat away at [the money]. Or you can't take care of it right then and there, and then you're writing it down—"Okay, when it comes in, I got to do this, I got to do this. I got to do, you know what." So, you're always living your life like five days behind or in reverse almost, you know?*
>
> *You know, it doesn't make you feel successful. Your life is always on hold. You know, "When the crop comes in, mama, we'll go get everybody a new pair of shoes!" [laughter] And your foot is full of blisters. You get what I mean? Where the hell is the crop?*

Finally, challenges with the system arose around educational access and limitations. A number of interviewees expressed disappointment in Cambridge's public school system and were exploring alternative options for education. For instance, Veronica's daughter displayed aptitude above grade level and needed to be challenged. The lack of action from her public-school teachers spurred Veronica to seek remote public schooling, homeschooling, or schools in other areas for her daughter instead. Jasmine, too, stated that compared to the city and its social services, the school system did not effectively support alternative family structures, families with a lack of economic resources, or students with complex needs.

> *My son has a special education plan, mostly for behavioral things like not having distractions and not having timed tests and things like that, more than like a learning disability. And I think there hasn't been a good translation of how, like, the tools and like the systems that they are implementing at school and how to bring them home and how to sort of like tie everything together. And then I think there's just like really unequal disciplinary processes, specifically for like boys on special education plans and boys of color, and so that's definitely an inequity that I have seen really loud and clear.*

Parents of children with behavioral challenges or differences—particularly parents of color—shared experiences with the education system that made them feel unsupported. These caregivers faced specific and continual pressures: parenting children with complicated needs and advocating for their needs within the system, often while making ends meet as a single caregiver. Parents of color also dealt with additional structural constraints and stigma.

GI CASE STUDY 4:

Parenting Without Guaranteed Income

Samantha, a control participant, was born and raised in Cambridge. She spent a short stint out of state but returned to Cambridge 16 years ago. Samantha has three children—one in their 20s and twins in high school. She is a veteran lab assistant at an elite local university and a trusted leader, though it was not reflected in her title or wage. She had to take on a second job to supplement her income.

Her twins kept her busy. One played lacrosse, a sport that is commonly the preserve of more affluent schools, and they often had to travel to the suburbs for games. She bought a car, which was necessary for getting to practices and games outside the city; before, they relied on an unwieldy mix of Uber and public transit. But the car note and insurance introduced new financial pressures, thus her decision to take on a second job.

Both twins had received some extra help with emotional management. Samantha recounted that despite excelling at lacrosse, her child had experienced harassment from figures in the public school system. They reacted negatively to it and were not allowed to play. Her other child struggled with developmental needs and had an individualized education plan (IEP). Samantha spoke about how difficult it had been to find support for these challenges within the public school system as a family of color. She ended up moving her child into an alternative private school that would work with them in a more holistic way.

Samantha spoke at length about her struggles interacting with the school system:

> ***I don't know if it's a race thing. I don't know if it's a class thing, but for me since like 2nd grade… [I] feel like I've always been dealing with and having struggles with certain things… including interactions with authority figures and a lack of support for children of color. … I do really feel that there is some type of, I don't know if it's I want to say racism like or the prison to pre-school to prison pipeline, where like they're trying to set up these little brown kids to fail and not give them a chance. I even had a teacher [once] pretty much tell me that … he doesn't think my child's gonna you know be successful at [school], and I should try to put him somewhere else and all this other stuff. So, why would you tell me that knowing that out of all the schools that are available, Cambridge probably has the best resources that could help?***

As a single caregiver, Samantha herself was under a great deal of strain: responsible for advocating for her children's best interests and supporting their behavioral needs along with making ends meet. She also felt conscious that she needed to prepare her children

for a world that is stacked against young people of color, citing instances where other (White) parents had vetted her kids or prevented friendships with them.

> ***When I say, I think my kids get tired of me saying it, like Mom, we know why you're always talking about, like I talked about [racism] so much, because it's really important and you need to understand like the challenges and the difficulties that you're up against, that you don't even know you're up against, you know what I mean? It's conversations that we have, we have often.***

Samantha and her family had to negotiate the dual burdens of race and class, which despite the city's best intentions, remain durable structural forces.

Limitations

While this study offers valuable insights into the impacts of guaranteed income on individuals' health and overall well-being, it is essential to consider several limitations that might influence the interpretation and generalizability of the findings.

First, the study involved 286 respondents selected from a pool of 488 applicants. This sample was limited to Cambridge residents who were single (unmarried) caregivers with incomes below 80% of the AMI adjusted for household size. The specific demographic focus of the pilot limits generalizability of the findings to other populations or regions, especially those with different socio-economic backgrounds. The requirement for participants to be single caregivers of at least one child under 18 years old adds a specific dimension to the study. While this provides valuable insights into this demographic, it might not capture the experiences or outcomes of other groups, such as childless individuals, married caregivers, or those with older children.

Second, MICE was deployed for imputing missing values. While the MICE method is recognized for its robustness in handling missing data, it is important to acknowledge that no imputation technique, including MICE, is entirely free from some degree of uncertainty. Despite rigorous checks and validations, the imputed data may not perfectly represent the true underlying patterns. This inherent limitation of imputation should be considered when interpreting the results.

Finally, the study was conducted during the COVID-19 pandemic, a period marked by significant challenges for Cambridge and the surrounding areas. Beyond the direct health impacts, the pandemic had profound implications on individuals' mental well-being. The pervasive sense of uncertainty, the sorrow of losing loved ones, social distancing, and other health-related concerns likely influenced the mental health and stress levels of participants. Particularly with social safety net policies like unemployment benefits being phased out, individuals may have faced heightened anxiety and depression as the economy started to recover from the COVID-19 pandemic. This context may have influenced the results and outcomes of this study. Additionally, the pandemic had widespread

economic impacts and cascading effects on cost of living, employment, and income in the region. These economic challenges could have influenced participants' perceptions as they navigated financial stressors exacerbated by the pandemic that are not controlled for in the study design. Therefore, the unique socio-economic conditions of the pandemic era could have significant bearing on the study's findings, affecting their applicability and relevance to other times and settings.

Discussion

In Cambridge, where tech firms, pharmaceutical companies, and elite academic institutions have brought affluence to many, participants in this study live in stark contrast—reporting household incomes only 80% of the AMI for the area. It is clear that receipt of the GI effectively ameliorated some financial struggles, caused increases in overall income stability, and promoted the ability to cover unforeseen financial emergencies and save for the future. Concomitantly, housing cost burdens were reduced and families were better able to consistently afford the types of foods their families preferred.

The theory of change of GI posits that receipt of GI may help recipients move from a scarcity mindset, which can complicate future planning and economic mobility, by alleviating its antecedent, income insufficiency. The first tenant of the theory of change, alleviation of material hardship, is supported by this study. The alleviation of material hardship should then manifest in later reductions in stress, psychological distress, and poor health, providing a path toward improved agency, future planning, and goal setting. Stress levels and psychological distress were not significantly impacted by receipt of the GI over the 18-month observation. GI reduced stressful home environments until the one-year mark, after which the control group had lower stress in the home. While physical health indicators were near population average for both groups, receipt of the GI had mixed effects on general health and physical functioning and physical limitations.

The mixed results that both support and refute the second tenant of the theory of change are likely explained by other indicators. At the one-year mark, recipients of the GI were working more and were less likely to be stay-at-home parents, meaning they were more apt than the control group to be juggling competing demands of raising young children, taking care of elders, and engaging in paid work. These experiences may have led to a more chaotic home environment, associated fatigue, and vacillating physical health outcomes. National-level research does indicate declines in mental health among parents and worsening behavioral well-being among their children during the pandemic, with more pronounced impacts for single parents and those without affordable child care (Patrick et al., 2020). Unpredictable child care during the earliest years in particular is associated with poor long-term health and mental health outcomes for mothers (Duh-Leong et al., 2023).

The intended outcome of GI receipt, should the prior two conditions be satisfied, is an improvement in agency, hope, goal setting, future planning, and self-actualization that can lead to economic upward mobility. Recipients of RISE largely maintained their feelings of hope throughout the program, whereas control group members were less likely to do so. Six months into the pilot, the treatment group reported a greater sense of agency, but by the end of the study, there were no significant differences from the control group. Even as some RISE recipients returned to school, set new personal

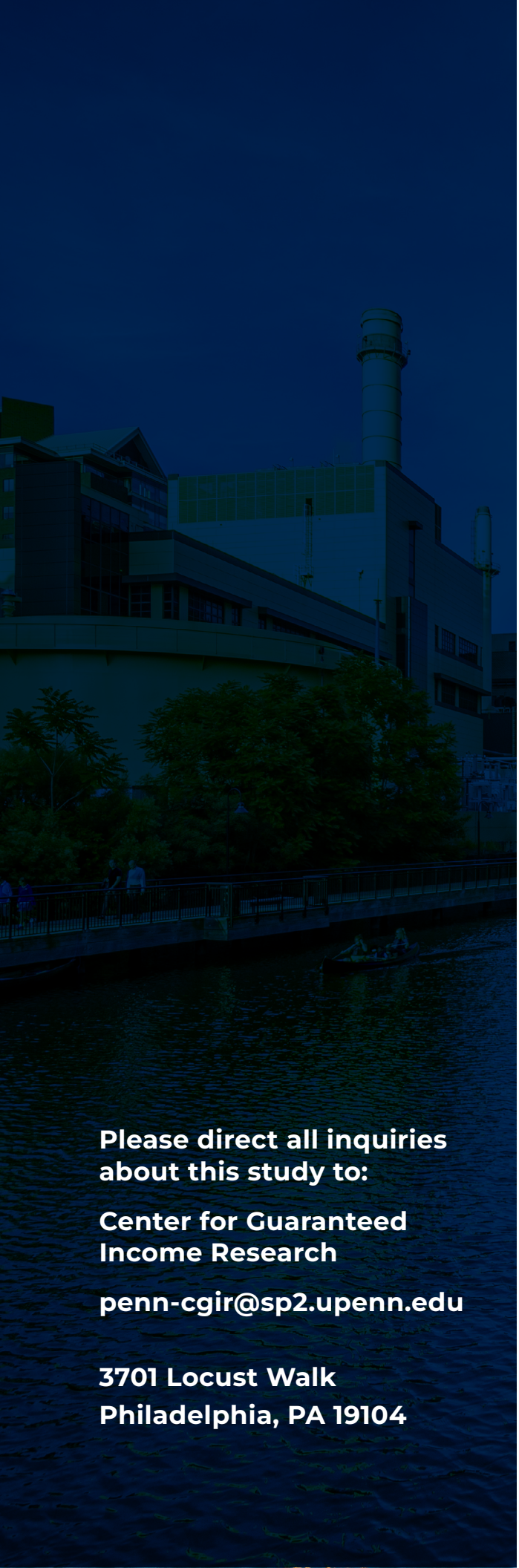
goals, and considered pathways to economic mobility, control group members indicated higher rates of courage that could help transcend difficult circumstances.

Taken together, the findings of the RISE study indicate that GI is an effective strategy for promoting financial security. Yet, the structural constraints that recipients faced, including the need to work multiple jobs, inability to afford childcare, health complications, and responsibilities to elders, meant that some downstream effects were ambiguous. Delivered alongside GI programs, the City of Cambridge has introduced strategies that could shore up these constraints. The Cambridge Preschool Program, set to provide preschool to all 4 year olds and some 3 year olds beginning in 2024, will help parents offset childcare costs. Inclusionary zoning as well as subsidies for cost-burdened households provided through the City of Cambridge Down Payment Assistance program may contribute to housing affordability, and new educational opportunities like the College Success Initiative may help young people pursue higher education, leading to greater upward economic mobility.

Even with innovative social support programs, the persistent divide between low- to moderate- and high-income jobs in Cambridge suggests a need for targeted education and training programs that can bridge these skills divides and earn fair wages. This would ensure that the economic benefits of urban innovation hubs are accessible to a more diverse segment of the population (Autor et al., 2023). The need for both approaches is evident in a review of skills translation across labor markets provided by the Occupational Mobility Explorer (Federal Reserve Bank of Philadelphia, n.d.). Childcare workers in the Boston-Cambridge-Nashua, MA-MH area occupy over 10,000 positions with median annual earnings of $21,076. Thus, a childcare worker, the occupation of several RISE recipients, could feasibly transfer her skills to become a teacher's assistant with an annual salary of $32,750 or bus driver with an estimated annual salary of $36,491. Even with a nearly $15,000 raise, this worker would still only earn approximately 32% of the AMI for Cambridge. This underscores the critical gap between prospective earnings and what is necessary for families to thrive in Cambridge.

As Veronica reflected on guaranteed income:

> *[A GI] would solve the people who aren't able to get food. Um, like I have a friend who works at MIT and her kitchen is bare and she has children. So you, you think she's making a ton of money, but her rent is ridiculous. Like it would solve those types of problems, and that's people on any level that's not just you know people within housing or the super low income, of course, it would help to raise them up some. Um, a step up for everybody is a beautiful thing that needs that step up. Some people already have plenty of steps up already, but a step up for those that really need it, that would be a really beautiful thing.*



Center for Guaranteed Income Research

The Center for Guaranteed Income Research (CGIR) was established in 2020 at the University of Pennsylvania School of Social Policy & Practice with the aim of developing a shared body of knowledge on unconditional cash transfers.

At CGIR, distinguished academics and professionals in this field lead pilot guaranteed income programs and oversee the planning and implementation of research initiatives. CGIR is led by two Founding Directors: Dr. Amy Castro, Associate Professor of Social Policy & Practice at the University of Pennsylvania, and Dr. Stacia West, who holds a faculty fellowship at the University of Pennsylvania in addition to her primary role as an Associate Professor at the College of Social Work at the University of Tennessee-Knoxville.

CGIR conducts applied cash transfer studies and pilot designs that contribute to the empirical scholarship on cash, economic mobility, poverty, and narrative change. Our investigations build upon existing literature on cash transfers and incorporate evaluation practices and lessons learned from our previous research on guaranteed income and the gender and racial wealth gap.

All of our research is grounded in Durr's (1993) fundamental question: "What influences policy sentiment?" With this in mind, we are committed to conducting public science that challenges prevailing narratives surrounding poverty, deservedness, and economic mobility, utilizing diverse approaches such as multi-site ethnography, politically-driven sampling, and data visualization.

Our dashboards, created in partnership with Stanford Basic Income Lab, feature filters at the pilot level, allowing individuals to access and compare information while obtaining detailed insight into our investigations.

Please direct all inquiries about this study to:

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References

36-Item Short Form Survey. (n.d.). RAND Corporation. https://www.rand.org/health-care/surveys_tools/mos/36-item-short-form.html

Abt Associates. (2023). *Data analysis plan: Mayors for a Guaranteed Income pilot evaluations*. University of Pennsylvania, Center for Guaranteed Income Research. https://static1.squarespace.com/static/5fdc101bc3cfda2dcf0a2244/t/6576fcabc1a71b16fb4d8d6f/1702296780440/MGI_data_analysis_plan.pdf

Acemoglu, D., & Autor, D. (2011). Skills, tasks and technologies: Implications for employment and earnings. In O. Ashenfelter and D. Card (Eds.), *Handbook of Labor Economics* (Vol. 4B, pp. 1043–1171). Elsevier.

Acosta, S., & Gartland, E. (2021). *Families wait years for housing vouchers due to inadequate funding: Expanding program would reduce hardship, improve equity.* Center on Budget and Policy Priorities. https://www.cbpp.org/research/housing/families-wait-years-for-housing-vouchers-due-to-inadequate-funding

Alburez-Gutierrez, D., Mason, C., & Zagheni, E. (2021). The "sandwich generation" revisited: Global demographic drivers of care time demands. *Population and Development Review, 47*(4), 997–1023. https://doi.org/10.1111/padr.12436

Archer, D. N. (2020). *'White men's roads through Black men's homes': Advancing racial equity through highway reconstruction*. (Report No. 20-49). NYU School of Law. https://papers.ssrn.com/abstract=3539889

Autor, D., Mindell, D. A., & Reynolds, E. B. (2023). *The work of the future*. The MIT Press. https://mitpress.mit.edu/9780262547307/the-work-of-the-future/

Autor, D. H., Palmer, C. J., & Pathak, P. A. (2014). Housing market spillovers: Evidence from the end of rent control in Cambridge, Massachusetts. *Journal of Political Economy, 122*(3), 661–717. https://doi.org/10.1086/675536

Azur, M. J., Stuart, E. A., Frangakis, C., & Leaf, P. J. (2011). Multiple imputation by chained equations: What is it and how does it work? *International Journal of Methods in Psychiatric Research, 20*(1), 40–49. https://doi.org/10.1002/mpr.329

Baker, A. C., Martin-West, S., & Famakinwa, F. (2018). *On Shaky Ground*. Asset Funders Network. https://assetfunders.org/wp-content/uploads/AFN-Shaky-Ground-Brief-2018.pdf

Berkes, E., & Gaetani, R. (2023). Income segregation and the rise of the knowledge economy. *American Economic Journal: Applied Economics, 15*(2), 69–102. https://doi.org/10.1257/app.20210074

Bezanson, K., & Luxton, M. (2006). *The neo-liberal state and social reproduction*. McGill-Queen's University Press. http://www.jstor.org/stable/j.ctt80rzb.12

Bjorner, J. B., Wolden, M. L., Gundgaard, J., & Miller, K. A. (2013). Benchmarks for interpretation of score differences on the SF-36 health survey for patients with diabetes. *Value in Health, 16*(6), 993–1000. https://doi.org/10.1016/j.jval.2013.06.022

Board of Governors of the Federal Reserve System. (2020). *Report on the economic well-being of U.S. households in 2019, featuring supplemental data from April 2020.* https://www.federalreserve.gov/publications/files/2019-report-economic-well-being-us-households-202005.pdf

Boyer, S. (2015). *We are the port: Stories of place, perseverance, and pride in the Port/Area 4, Cambridge, Massachusetts, 1845–2005.* City of Cambridge, MA.

Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57–71). American Psychological Association. https://doi.org/10.1037/13620-004

Budig, M. J., & Hodges, M. J. (2010). Differences in disadvantage: Variation in the motherhood penalty across White women's earnings distribution. *American Sociological Review, 75*(5), 705–728. https://doi.org/10.1177/0003122410381593

Cambridge Community Development Department. (n.d.). *Rental applicant pool*. https://www.cambridgema.gov/CDD/housing/forapplicants/rentalapplicantpool

Cambridge Community Development Department (2023a). *Affordable Housing Stock Data —2023 Update*. Cambridge CDD@344. https://www.cambridgema.gov/CDD/News/2023/10/affordablehousingstockdata%E2%80%932023update

Cambridge Community Development Department. (2023b). *Count of Listings by Neighborhood* [Data set]. https://app.powerbigov.us/w?r=eyJrIjoiNTMzZjc3ZWItMDc5Yy00ZDdkLTlmOTItMDMxZDBjNTE5ZDNhIiwidCI6ImMwNmE4YmU3LTg0NzktNGQ3My1iMzUxLTkzYmM5YmE4Mjk1YyJ9

Cambridge Community Development Department. (2023c, December 14). *Demographics and statistics FAQ*. https://www.cambridgema.gov/CDD/factsandmaps/demographicfaq

Cambridge Community Development Department. (2023d, December 14). *Inclusionary Housing*. https://www.cambridgema.gov/CDD/housing/inclusionaryhousing

Cambridge Community Foundation. (2021). Cambridge by Quintiles. *In Equity and innovation report*. https://cambridgecf.org/ei-report/chapter-3/

Cambridge Community Foundation to invest over $1.1 million in new food access and security initiative. (2023, November 14). MassNonprofit News. https://www.massnonprofit.org/news/cambridge-community-foundation-to-invest-over-1-1-million-in-new-food-access-and-security/article_1186585c-8331-11ee-ba63-2f214bd7ac33.html

Cambridge Housing Authority. (2023). *Moving to work: Annual plan 2023*. https://cambridge-housing.org/download/21/annual-plans/11207/mtw-annual-plan-fy23.pdf

Cambridge Public Health Department. (2020). *City of Cambridge Community Health Assessment*. https://www.cambridgepublichealth.org/wp-content/uploads/2022/08/Cambridge-Community-Health-Assessment-2020.pdf

Cambridge Rise. (2021). https://www.cambridgerise.org/.

Castro, A., Ma, C., Davis, C. G., & Cusack, M. (2021). Hope, mattering, and pathways towards economic agency among financially marginalized adults. *Social Work & Society, 19*(2), Article 2. https://ejournals.bib.uni-wuppertal.de/index.php/sws/article/view/744

Castro Baker, A., West, S., & Wood, A. (2019). Asset Depletion, Chronic Financial Stress, and Mortgage Trouble Among Older Female Homeowners. *The Gerontologist, 59*(2), 230–241. https://doi.org/10.1093/geront/gnx137

Census Building Permit Survey. (2021). *Building permits by type and year (municipal)* [Data set]. DataCommon. https://datacommon.mapc.org/browser/datasets/384

Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). SAGE Publications.

City of Cambridge. (n.d.). *Sumbul Siddiqui*. https://www.cambridgema.gov/en/Departments/citycouncil/members/sumbulsiddiqui

City of Cambridge. (2020, August 28). *City & community support provide critical financial lifeline*. https://www.cambridgema.gov/en/covid19/News/2020/08/financiallifeline

City of Cambridge. (2022, September 12). *Pandemic inspires new approaches to food insecurity in Cambridge*. https://www.cambridgema.gov/digital/Stories/thecambridgelifefall2022/pandemicinspiresnewapproachestofoodinsecurityincambridge

City of Cambridge. (2023a, May 2) *Cambridge launches new $22 million initiative to combat income inequality and family poverty*. https://www.cambridgema.gov/en/news/2023/05/cambridgelaunchesriseupcambridge

City of Cambridge. (2023b, December 14). *Cambridge Promise Pilot*. https://www.cambridgema.gov/en/Departments/humanserviceprograms/collegesuccess/cambridgepromise

City of Cambridge down payment assistance. (n.d.). FHA.com. https://www.fha.com/grants/cambridge-down-payment-assistance

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). *Perceived Stress Scale [Database record]*. APA PsycTests. https://doi.org/10.1037/t02889-000

Consumer Financial Protection Bureau. (2015). *Measuring financial well-being: A guide to using the CFPB Financial Well-Being Scale*. https://www.consumerfinance.gov/data-research/research-reports/financial-well-being-scale/

Corr, K. V., & Schisgall, E. J. (2022, May 26). *Cambridge's affordable housing waitlist is over 20,000 names long. How did the city get here?* The Harvard Crimson. https://www.thecrimson.com/article/2022/5/26/cambridge-housing-crisis/

Czeisler, M. É., Rohan, E. A., Melillo, S., Matjasko, J. L., DePadilla, L., Patel, C. G., Weaver, M. D., Drane, A., Winnay, S. S., Capodilupo, E. R., Robbins, R., Wiley, J. F., Facer-Childs, E. R., Barger, L. K., Czeisler, C. A., Howard, M. E., & Rajaratnam, S. M. W. (2021). Mental health among parents of children aged less than 18 years and unpaid caregivers of adults during the COVID-19 pandemic—United States, December 2020 and February–March 2021. MMWR. *Morbidity and Mortality Weekly Report, 70*(24), 879–887. https://doi.org/10.15585/mmwr.mm7024a3

Data USA. (2021). *Cambridge City PUMA, MA* [Data set]. https://datausa.io/profile/geo/cambridge-city-puma-ma#economy

Department of Human Service Programs. (2023, May 23). *City of Cambridge releases new details about free universal preschool (UPK) initiative*. https://www.cambridgema.gov/en/DHSP/newsandevents/News/2023/05/universalpreschoolupdate

Dinan, K. A., Chau, M., & Cauthen, N. K. (2007). *Two steps forward and three steps back: The "cliff effect"—Colorado's curious penalty for increased earnings*. National Center for Children in Poverty, Columbia University, Mailman School of Public Health. https://www.wfco.org/document.doc?id=56

Duh-Leong, C., Canfield, C. F., Fuller, A. E., Gross, R. S., & Reichman, N. E. (2023). Early childcare precarity and subsequent maternal health. *Women's Health Issues*. https://doi.org/10.1016/j.whi.2023.10.002

Dunn, M. (2022, February). *Demographic changes in employment during the COVID-19 pandemic*. U.S. Bureau of Labor Statistics. https://www.bls.gov/spotlight/2022/demographic-changes-in-employment-during-the-pandemic/home.htm

Durr, R. H. (1993). What Moves Policy Sentiment? *The American Political Science Review, 87*(1), 158–170. https://doi.org/10.2307/2938963

Economic Research Service, USDA. (2012). *U.S. Household Food Security Survey Module*. (2012). USDA. https://www.ers.usda.gov/media/8271/hh2012.pdf

Federal Communications Commission (2023, October 2) *Affordable Connectivity Program*. https://www.fcc.gov/acp

Federal Reserve Bank of Philadelphia. (n.d.). *Occupational mobility explorer*. https://www.philadelphiafed.org/surveys-and-data/community-development-data/occupational-mobility-explorer

Gee, G. C., & Ford, C. L. (2011). Structural racism and health inequities: Old issues, new directions. *Du Bois Review: Social Science Research on Race, 8*(1), 115–132. https://doi.org/10.1017/S1742058X11000130

Glasmeier, A. K. (2023). *Living wage calculation for Boston-Cambridge-Newton, MA*. Living Wage Calculator, Massachusetts Institute of Technology. https://livingwage.mit.edu/metros/14460

Jayadevappa, R., Cook, R., & Chhatre, S. (2017). Minimal important difference to infer changes in health-related quality of life—A systematic review. *Journal of Clinical Epidemiology, 89*, 188–198. https://doi.org/10.1016/j.jclinepi.2017.06.009

Kendall Square Initiative. (n.d.). Kendall Square Initiative. Retrieved January 3, 2024, from https://

kendallsquare.mit.edu/kendall-square-initiative

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S.-L. T., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry, 60*(2), 184–189. https://doi.org/10.1001/archpsyc.60.2.184

Knowles, M., Rabinowich, J., Ettinger de Cuba, S., Cutts, D. B., & Chilton, M. (2016). "Do you wanna breathe or eat?": Parent perspectives on child health consequences of food insecurity, trade-offs, and toxic stress. *Maternal and Child Health Journal, 20*(1), 25–32. https://doi.org/10.1007/s10995-015-1797-8

Liebman, J., Carlson, K., Novick, E., & Portocarrero, P. (2022). *The Chelsea Eats Program: Experimental impacts. Rappaport Institute for Greater Boston*. https://www.hks.harvard.edu/sites/default/files/Taubman/RIGB/Chelsea%20Eats%20Experimental%20Impacts%20120622.pdf

Mani, A., Mullainathan, S., Shafir, E., & Zhao, J. (2013). Poverty impedes cognitive function. *Science, 341*(6149), 976–980. https://doi.org/10.1126/science.1238041

Massachusetts Department of Transitional Assistance. (2023, August 8). *SNAP, TAFDC and EAEDC participation by Cambridge Zip Code 2017–2023* [Data set]. Cambridge Open Data Portal. https://data.cambridgema.gov/Planning/SNAP-TAFDC-and-EAEDC-Participation-by-Cambridge-Zi/r6b9-cun5/about_data

Matheny, A. P., Wachs, T. D., Ludwig, J. L., & Phillips, K. (1995). Bringing order out of chaos: Psychometric characteristics of the confusion, hubbub, and order scale. J*ournal of Applied Developmental Psychology, 16*(3), 429–444. https://doi.org/10.1016/0193-3973(95)90028-4

Metropolitan Area Planning Council. (2021). A*n analysis of the Cambridge food environment: Food retail survey & food shopping survey*. Cambridge Public Health Department. https://www.cambridgepublichealth.org/wp-content/uploads/2022/09/Services_FFPC_HFAI-Report_2020.pdf

Metropolitan Area Planning Council. (2022). *Cambridge food action plan*. Cambridge Food and Fitness Policy Council. https://www.cambridgepublichealth.org/wp-content/uploads/2022/09/Services_FFPC_Cambridge-Food-Action-Plan_2022.pdf

Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why having too little means so much* (p. 289). Times Books/Henry Holt and Co.

National Center for Homeless Education. (n.d.). *The McKinney-Vento definition of homeless*. https://nche.ed.gov/mckinney-vento-definition/

National Center for Science and Engineering Statistics. (2023). *Diversity and STEM: Women, minorities, and persons with disabilities 2023* (Special Report NSF 23-315). National Science Foundation. https://ncses.nsf.gov/wmpd

Nelson, A. U. (2022, September 19). Cities with the highest rent in the U.S.: August 2022. *Rent*. Research. https://www.rent.com/research/highest-rent-in-the-us/

Patrick, S. W., Henkhaus, L. E., Zickafoose, J. S., Lovell, K., Halvorson, A., Loch, S., Letterie, M., & Davis, M. M. (2020). Well-being of Parents and Children During the COVID-19 Pandemic: A National Survey. *Pediatrics, 146*(4), e2020016824. https://doi.org/10.1542/peds.2020-016824

Pearce, D. (1990). The feminization of poverty. *Journal for Peace and Justice Studies, 2*(1), 1–20. https://doi.org/10.5840/peacejustice19902113

Ponterotto, J. G. (2006). Brief Note on the Origins, Evolution, and Meaning of the Brief Note on the Origins, Evolution, and Meaning of the Qualitative Research Concept Thick Description Qualitative Research Concept Thick Description. *The Qualitative Report, 11*(3), 538–549. https://doi.org/10.46743/2160-3715/2006.1666

Power, K. (2020). The COVID-19 pandemic has increased the care burden of women and families. *Sustainability: Science, Practice and Policy, 16*(1), 67–73. https://doi.org/10.1080/15487733.2020.1776561

Roberts, D. E. (1997). Spiritual and menial housework. *Yale Journal of Law and Feminism, 9*, 51–80.

Saldaña, J. (2021). *The Coding Manual for Qualitative Researchers* (4th ed.). SAGE Publications. https://books.google.com/books?id=RwcVEAAAQBAJ

Sayre, G. M. (2023). The costs of insecurity: Pay volatility and health outcomes. *Journal of Applied Psychology, 108*(7), 1223–1243. https://doi.org/10.1037/apl0001062

Sennott, A. (2021, April 16). *Over 100 single-caregiver families in Cambridge to get $500/month, mayor announces*. Wicked Local. https://www.wickedlocal.com/story/cambridge-chronicle-tab/2021/04/16/mayor-over-100-single-parent-families-cambridge-get-500-month/7251346002/

Simmons, E. D., & DePasquale, L. A. (2016, November 17). *Joint statement of Cambridge Mayor E. Denise Simmons and City Manager Louis A. DePasquale regarding Cambridge as a sanctuary city*. City of Cambridge. https://www.cambridgema.gov/news/2016/11/jointstatementoncambridgeasasanctuarycity

Stewart, A. L., Sherbourne, C. D., Hays, R. D., Wells, K. B., Nelson, E. C., Kamberg, C. J., Rogers, W. H., Berry, S. H., & Ware, J. E. (1992). Summary and discussion of MOS measures. In A. Stewart & J. E. Ware (Eds.), *Measuring functioning and well-being: The medical outcome study approach* (pp. 345–371). Duke University Press.

Tashakkori, A., & Teddlie, C. (2009). *Integrating qualitative and quantitative approaches to research*. In L. Bickman & D. J. Rog (Eds.),*The SAGE Handbook of Applied Social Research Methods* (pp. 283–317). SAGE Publications. https://doi.org/10.4135/9781483348858

U.S. Census Bureau. (2021). *American community survey, ACS 5-year estimates data profiles, table DP03 | Selected economic characteristics* [Data set]. https://data.census.gov/table/ACSDP5Y2021.DP03?g=160XX00US2511000

U.S. Census Bureau. (2022a). *American community survey, ACS 1-year estimates detailed tables, table B25077 | Median value (dollars)* [Data set]. https://data.census.gov/table/ACSDT1Y2022.B25077

U.S. Census Bureau. (2022b). *American community survey, ACS 1-year estimates detailed tables, table S2408 class of worker by sex for the civilian employed population 16 years and over* [Data set]. https://data.census.gov/table/ACSST1Y2022.S2408?q=Cambridge%20city,%20Massachusetts

U.S. Census Bureau. (2023). *Cambridge city, Massachusetts* [Data set]. https://data.census.gov/profile/Cambridge_city,_Massachusetts?g=160XX00US2511000#housing

U.S. Department of Housing and Urban Development. (n.d.). *Criteria and recordkeeping requirements for the definition of homeless*. HUD Exchange. https://files.hudexchange.info/resources/documents/HomelessDefinition_RecordkeepingRequirementsandCriteria.pdf

U.S. Department of Housing and Urban Development. (2022). *Picture of subsidized households* [Data set]. HUD User. https://www.huduser.gov/portal/datasets/assthsg.html

Welcoming Community Ordinance, Code of Ordinances #2020-3 (2020). https://library.municode.com/ma/cambridge/ordinances/code_of_ordinances?nodeId=1006580

West, S., & Castro, A. (2023). Impact of guaranteed income on health, finances, and agency: Findings from the Stockton Randomized Controlled Trial. *Journal of Urban Health, 100*(2), 227–244. https://doi.org/10.1007/s11524-023-00723-0

West, S., Castro Baker, A., Samra, S., & Coltera, E. (2021). The Stockton Economic Empowerment Demonstration, Preliminary Analysis: SEED's First Year. https://static1.squarespace.com/static/6039d612b17d055cac14070f/t/603ef1194c474b329f33c329/1614737690661/SEED_Preliminary+Analysis-SEEDs+First+Year_Final+Report_Individual+Pages+-2.pdf

West, S., Castro, A., & Doraiswamy, P. M. (2023). Recurring cash transfers to enhance the mental wellbeing of Americans. *Nature Mental Health, 1*(3), 148–150. https://doi.org/10.1038/s44220-023-00025-z

Wong, P. T. P., Leung, M., Steinfort, T., & Vroon, E. J. (2002). Life Attitudes Scale. http://www.drpaulwong.com/documents/wong-scales/life-attitudes-scale.pdf

Zelleke, A. (2011). Feminist political theory and the argument for an unconditional basic income. *Policy & Politics, 39*(1), 27–42. https://doi.org/10.1332/030557311X546299

Appendix A

Comparative Analysis of Select Outcome Measures: Control vs. Treatment Groups

Outcome	Control Group	Treatment Group	Estimated Impact	95% Lower CI	95% Upper CI	Standard Error	Relative Impact (in %)
Financial Well-being							
Baseline	41.49	41.18	-0.31	-1.94	1.32	0.83	
6-month	41.68	43.38	[1.7]**	0.63	2.77	0.54	4.08
12-month	44.04	44.65	0.61	-0.72	1.94	0.67	1.39
18-month	44.21	44.20	-0.01	-1.31	1.30	0.66	-0.01
Perceived Stress Levels							
Baseline	7.42	7.42	-0.01	-0.35	0.34	0.17	
6-month	6.28	6.32	0.05	-0.24	0.33	0.15	0.76
12-month	6.65	6.55	-0.10	-0.41	0.21	0.16	-1.50
18-month	6.97	7.06	0.09	-0.20	0.37	0.14	1.25
Kessler Psychological Distress							
Baseline	21.27	20.43	-0.84	-1.82	0.14	0.49	
6-month	18.07	18.08	0.01	-0.73	0.74	0.37	0.04
12-month	19.59	19.09	-0.50	-1.36	0.37	0.44	-2.54
18-month	19.64	19.54	-0.10	-0.92	0.72	0.42	-0.52
CHAOS							
Baseline	28.42	27.39	[-1.03]**	-1.77	-0.29	0.37	
6-month	27.15	26.35	[-0.79]**	-1.50	-0.08	0.36	2.92
12-month	27.26	26.85	-0.41	-1.16	0.34	0.38	1.50
18-month	27.42	28.42	[0.99]**	0.24	1.76	0.39	-3.64

Outcome	Control Group	Treatment Group	Estimated Impact	95% Lower CI	95% Upper CI	Standard Error	Relative Impact (in %)
Affirmation of meaning and value							
Baseline	14.04	13.65	[-0.38]***	-0.62	-0.15	0.12	
6-month	13.67	14.14	[0.47}***	0.27	0.66	0.10	3.44
12-month	13.55	13.65	0.09	-0.11	0.30	0.11	0.70
18-month	13.99	13.91	-0.09	-0.31	0.13	0.11	-0.61
Acceptance							
Baseline	13.09	13.08	-0.01	-0.30	0.28	0.15	
6-month	13.15	13.35	0.21	-0.09	0.50	0.15	1.57
12-month	13.28	13.40	0.12	-0.15	0.39	0.14	0.94
18-month	13.84	13.69	-0.15	-0.45	0.16	0.16	-1.07
Courage							
Baseline	12.22	11.95	[-0.29]**	-0.52	-0.04	0.12	
6-month	11.85	12.28	[0.431]***	0.24	0.62	0.10	3.63
12-month	12.44	12.02	[-0.43]***	-0.62	-0.23	0.10	-3.46
18-month	12.33	12.01	[-0.32]***	-0.54	-0.10	0.11	-2.60
Faith							
Baseline	35.24	34.63	-0.61	-1.32	0.11	0.36	
6-month	34.47	34.80	0.33	-0.29	0.96	0.32	0.96
12-month	35.08	34.65	-0.42	-1.11	0.26	0.35	-1.21
18-month	35.34	34.94	-0.40	-1.06	0.26	0.34	-1.14
Self-trancedence							
Baseline	25.16	24.38	[-0.78]***	-1.17	-0.40	0.19	
6-month	24.21	24.35	0.15	-0.25	0.55	0.20	0.61
12-month	23.97	24.18	0.21	-0.47	0.57	0.18	0.88
18-month	24.66	24.27	-0.39	-0.80	0.02	0.21	-1.59

Outcome	Control Group	Treatment Group	Estimated Impact	95% Lower CI	95% Upper CI	Standard Error	Relative Impact (in %)
Average General Health							
Baseline	63.91	67.00	[3.09]**	0.49	5.69	1.32	
6-month	62.40	67.88	[5.48]***	3.91	7.05	0.80	8.78
12-month	67.98	64.00	[-3.98]***	-6.21	-1.75	1.13	-5.86
18-month	65.99	61.88	[-4.11]***	-6.34	-1.88	1.13	-6.23
SF-36 Health Limits							
Baseline	74.34	76.48	2.14	-0.90	5.18	1.54	
6-month	82.80	79.96	[-2.8]***	-4.67	-1.01	0.93	-3.43
12-month	81.84	77.65	[-4.19]***	-6.41	-1.97	1.13	-5.12
18-month	76.23	74.98	-1.25	-3.90	1.39	1.34	-1.64
SF-36 Physical							
Baseline	63.18	70.43	[7.25}***	2.75	11.76	2.29	
6-month	73.40	75.72	2.32	-0.72	5.37	1.55	3.17
12-month	72.44	67.50	[-4.94]**	-8.68	-1.19	1.90	-6.81
18-month	64.98	65.67	0.69	-3.39	4.78	2.08	1.06
Adult Hope - Agency							
Baseline	22.19	21.91	-0.28	-0.92	0.36	0.33	
6-month	22.10	22.78	[0.69]***	0.21	1.17	0.24	3.12
12-month	22.59	22.15	-0.44	-1.02	0.15	0.30	-1.93
18-month	22.03	22.19	0.17	-0.39	0.73	0.28	0.76
Adult Hope - Pathway							
Baseline	22.88	22.82	-0.06	-0.86	0.55	0.31	
6-month	24.38	24.25	-0.14	-0.60	0.32	0.23	-0.57
12-month	23.78	23.13	[-0.65]**	-1.21	-0.09	0.29	-2.74
18-month	23.17	23.59	0.42	-0.12	0.96	0.28	1.81

Outcome	Control Group	Treatment Group	Estimated Impact	95% Lower CI	95% Upper CI	Standard Error	Relative Impact (in %)
Adult Hope - Total							
Baseline	45.07	44.73	-0.34	-1.46	0.78	0.57	
6-month	46.48	47.03	0.55	-0.31	1.41	0.44	1.18
12-month	46.37	45.28	-1.09	-2.17	0.00	0.55	-2.34
18-month	45.20	45.78	0.59	-0.43	1.60	0.52	1.30
Adult Mattering - Awareness							
Baseline	30.46	31.58	[1.12]**	0.16	2.09	0.49	
6-month	32.64	32.19	-0.45	-1.22	0.32	0.39	-1.37
12-month	31.09	30.54	-0.55	-1.42	0.32	0.44	-1.77
18-month	31.46	31.18	-0.28	-1.15	0.60	0.45	-0.88
Adult Mattering - Importance							
Baseline	37.02	37.62	0.60	-0.47	1.68	0.55	
6-month	37.94	37.86	-0.07	-0.92	0.77	0.43	-0.20
12-month	38.49	36.87	[-1.62]***	-2.62	-0.62	0.51	-4.20
18-month	37.78	37.66	-0.11	-1.12	0.89	0.51	-0.30
Adult Mattering - Reliance							
Baseline	23.13	23.48	0.36	-0.43	1.14	0.40	
6-month	23.83	23.45	-0.38	-0.99	0.23	0.31	-1.59
12-month	23.19	23.10	-0.09	-0.79	0.62	0.36	-0.37
18-month	23.62	22.86	-0.75	-1.5	0.00	0.38	-3.19

Footnotes:

Baseline Mean: Adjusted average score prior to any intervention

6/12/18 month Mean: Adjusted average score at the respective time mark

Difference: The Mean difference between the treatment and control groups

Standard Error: Indicates the precision of the impact estimates

95% CI Lower/Upper: Bounds of the 95% confidence interval for the impact estimate

Relative Impact: Percentage change in the Treatment group compared to the Control

* Indicates statistical significance: * p<0.05, ** p<0.01, *** p<0.001

Appendix B

Table. Attrition Across Waves

	Sample sizes			
Time period	**Treatment**	**Control**	**Overall Attrition (%)**	**Differential Attrition (%)**
Baseline	130	156		
6 months	78	65	50.00	-18.33
12 months	96	98	32.17	-11.03
18 months	101	99	30.07	-14.23