

Evaluation of the Massachusetts Pregnant Parenting Teen Initiative (MPPTI): A snapshot of services and impacts

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ICH is a nonprofit consulting organization that provides participatory evaluation, applied research, assessment, planning, training, and technical assistance. ICH helps healthcare institutions, government agencies, and community-based organizations improve their services and maximize program impact.

EXECUTIVE SUMMARY

The following report provides the results of an evaluation of the Massachusetts Pregnant and Parenting Teen Initiative (MPPTI), performed by the Institute for Community Health (ICH) in Fall 2022–Spring 2023. MPPTI provides case management services to pregnant and parenting young people, ages 14–24, with the goal of increasing life opportunities and enhancing family stability. The aims of the evaluation were to describe the characteristics of MPPTI participants and report on their experiences with MPPTI services, in addition to analyzing the impact of the program on housing stability, and other outcomes including education and employment engagement over time.

Key takeaways from the evaluation are included below:

- **Key MPPTI services** included concrete supports, such as housing assistance, assistance applying for benefits and transportation assistance, health promotion and counseling, educational and employment support, and support with food and other basic needs.
- The percentage of MPPTI participants who were still engaged in the program at one year and who were **stably housed increased from 75% at intake to 85% at 12-month follow-up**.
- The demographic/programmatic characteristic that was persistently associated with housing stability over time was age. **Participants younger than 20 were less likely to be stably housed than participants between the ages of 20–24**, after adjusting for site and other factors that were different between the groups at intake.
- Both stably and unstably housed participants received housing services, suggesting that **participants continue to need support to either maintain or transition to different housing situations**.
- Though many participants benefited from housing support from the MPPTI program, **significant barriers to housing remained** for participants. Barriers included high housing costs, limited affordable housing options, lack of available shelters, and limits on housing options due to immigration status and age.
- **Other outcomes of the MPPTI program included:** meeting educational and professional goals, getting a driver's license, learning English, and meeting parenting goals.
- **Future recommendations for the MPPTI program** include expanded MPPTI funding for additional support with housing and immigration services, increased flexibility in the timing of meetings/sessions, and extending the age limit of the program. We also recommend using more specific indicators to capture housing stability in order to better understand the impact of the program.

INTRODUCTION

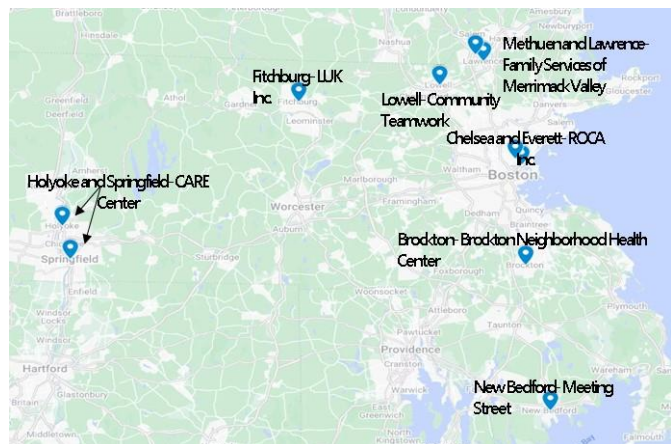
Expectant and parenting young families have unique needs that require support to best promote positive short- and long-term outcomes. As public health interventions aim to improve outcomes for this population, the wellbeing of expectant and parenting young people continues to be an ongoing priority for local and federal programming and service providers.¹ Research shows that providing support services to expectant and parenting young families can make a difference in improving educational, health, and social outcomes for expectant and parenting young people and their families.^{2 3}

In 2010, the Massachusetts Department of Public Health (MDPH) began the Massachusetts Pregnant and Parenting Teen Initiative (MPPTI) to provide support to young families across the state. The following paper provides the results of an evaluation of MPPTI performed by the Institute for Community Health (ICH), which is a nonprofit research and evaluation organization that works closely with MDPH. The evaluation aimed to explore relationships between MPPTI participant housing status, cash and other assistance, program participation, and other program outcomes, such as engagement in education and employment.

MPPTI PROGRAM OVERVIEW

MPPTI is a two-generation model that provides case management services to pregnant and parenting adolescents aged 14-24 and their children. The goal of the MPPTI program is to increase life opportunities and enhance family stability among young families through the provision of services. Support to participants includes child development and parenting support, healthcare referrals, education and employment support, counseling, and assistance with accessing food, transportation, and other social service benefits. Currently, MPPTI serves communities across Massachusetts. Figure 1 shows MPPTI locations throughout the state.

Figure 1: MPPTI Locations, FY2022.



¹ Martin et al. (2018). Expectant and Parenting Young Families: Youth.gov.

² Asheer, Burklander, Deke, Worthington, & Zief (2017). Raising the Bar: Impacts and Implementation of the New Heights Program for Expectant and Parenting Teens. U.S. Department of Health and Human Services.

³ Covington, Luca, Manlove, & Welte (2017). Final Impacts of AIM 4 Teen Moms. Washington, DC: U.S. Department of Health and Human Services, Office of Adolescent Health.

EVALUATION METHODS AND QUESTIONS

The MPPTI evaluation used a mixed methods approach, including analysis of program data and focus groups with program participants to explore the relationships between benefits and services accessed, program participation, and program outcomes.

The evaluation included both process and outcome measures. The goals of the process evaluation were to describe the characteristics of MPPTI participants, the types of support provided, and participants' experiences with these services. The outcome evaluation aimed to demonstrate the impact of the program on housing stability, other program impacts (employment, education, etc.), and the association between housing stability and these outcomes.

Focus Groups with Program Participants

The qualitative element of the MPPTI evaluation consisted of four focus groups and one interview, administered in Fall 2022, with a total of 26 participants. The goal of the focus groups was to learn more about participant experiences with the MPPTI program, particularly focused around housing, including successes, challenges, and recommendations. Focus group recruitment occurred through outreach by MPPTI site staff, using a convenience sampling approach. Focus groups were audio-recorded, professionally transcribed and translated, and de-identified. A thematic qualitative analysis approach was used to identify common themes and patterns across focus group findings, using qualitative analysis software (Dedoose version 9.0.46).

The focus groups took place at the Chelsea, Holyoke, Lawrence, Lowell, and New Bedford sites. They were held in person (N=3) or virtually (N=2), in Spanish (N=2), English (N=1), or bilingual Spanish/English (N=2). Focus group participants were between the ages of 18-24, and split evenly between the 18-20 and 21-24 age groups. Participants identified as Latinx/Hispanic (96%) or Black (4%), with 88% speaking Spanish as their primary language, and 12% with English as their primary language. All participants identified as female, and most (85%) had one child. At the time of the focus groups, half of participants had been in the MPPTI program for less than one year, and half had been in the program for 1-2 years.⁴

Analysis of Administrative Data

The quantitative element of the MPPTI evaluation included a review and analysis of six years of administrative and outcomes data including intake information, wraparound and services details, and participants' education/employment information. Data came from two systems, the 'old' system, containing data from 2014 to 2017, and the 'new' system, containing data from 2018 to 2020.

Several analytical decisions were made in partnership with MDPH staff during the quantitative analysis process to handle missing or incorrect data, and around the definitions of key outcomes after consulting with MDPH staff. Stable housing was defined as "those who live at home with

⁴ See Appendix B for full demographic table

parents/guardians, live at their own apartment/house, or at a partner's parents' home." Unstable housing was defined as those who "live at a relative's home, a friend's or other unrelated adult's home, a supervised shelter, a foster home or residential placement, a public place, DYS facility or other detention center."

To study outcomes over time, four timepoints were identified: 3, 6, 9, and 12 months since the intake date. Data were assigned to timepoints based on the date of the form; the form nearest to each timepoint was assigned to that timepoint, if it fell within a 30-day window of the timepoint. Participants were required to have intake data to be included in the analysis but do not have to show up for all of the 4 timepoints (a participant can show up from 0-4 times after intake).

Housing trajectories were defined as a shift in housing status from intake status to the status at the current timepoint.

For the evaluation, we first described the demographic and programmatic characteristics of the entire participant population and by housing status at intake and housing trajectory. Chi-square tests and t-tests were performed to explore the characteristics associated with having stable housing. Logistic regression modeling was used to examine the association between education and employment outcomes with housing stability for those participants 18 or older. Multivariate models were used to study housing status over time within participants, adjusting for covariates, which included site, and housing status at intake and following timepoints.

PROCESS MEASURES

MPPTI Participants

We used the intake forms to describe the MPPTI participants. Most identified as Hispanic/Latinx (78%), followed by White (10%) and Black or African American (7%). Ninety-three percent identified as female. Half (50%) reported their relationship status as single, 23% were living with their partner, 4% were married and 16% were in a committed relationship, but not living with their partner. Most (58%) spoke English as their primary language, followed by Spanish (33%). Most (64%) were twenty years or older. Most (88%) were on MassHealth, with 10% reporting being uninsured or on programs such as the Health Safety Net or Healthy Start.⁵

As of their intake, 35% had graduated from high school and 39% were currently enrolled in schooling or job training at some level. At intake, most (72%) were not employed. Most (72%) were postpartum at intake, with half reporting having one child and 22% reporting having two or more children.

Most (64%) were stably housed at intake, with 26% living with their parents/guardians, 18% living in their own place with their partner, 10% living in their own place with children and 7% with roommates. At intake, there were significant demographic differences between those stably housed and unstably housed in the distribution of race/ethnicity categories ($p=.0029$), relationship statuses ($p=.0002$),

⁵ Refer to Appendix B for demographic table

employment statuses ($p=.0216$) and insurance coverage ($p<.0001$). Those identified as Hispanic/Latinx who were employed and living with their partner were more likely to be stably housed. Those who were uninsured were less likely to be stably housed.⁶

MPPTI Services

The MPPTI program provided support to participants in several categories of services. Clients received assistance with basic needs, such as, housing, childcare access, healthcare services, and education and employment. They also formed meaningful relationships and received emotional support from MPPTI staff. The following section outlines these types of support, including data from both the quantitative database (2014-2020) and qualitative focus groups (2022).

The program provided support for basic needs including housing, transportation, help with benefits applications, food assistance, and legal services. Using the quantitative data recorded between 2014 - 2020, we found that **88% of participants with services data received concrete support**. Focus group results validated these quantitative findings, as participants described experiences receiving support from the program with applying for benefits, food/grocery assistance, buying items for children (e.g. clothes, diapers), and transportation assistance. Many participants shared their experiences with this type of support, as described by the quotes below:

"Well, it's been a really big help because sometimes, like I said, we don't have a stable job, so it's really hard for a company to hire you without papers. So it's been a really big help for me because at least I can buy food for my baby and buy her clothes, or something she needs. It's been a really big help."

"It was helpful, because during COVID I was working for a nursing home. A lot of the residents that we had there weren't doing so well, so I had kids at home. I didn't want to bring it home, so I wasn't working for a while, so my bills were just piling up. So it was kind of a relief to just have somebody to fall back on."

Another major type of support provided by the MPPTI program was education and employment services, with **98% of participants receiving education and employment counseling**. Focus group participants further reported how MPPTI had supported them in finishing their GED, taking English classes, and taking college classes, which ultimately supported them in their professional goals, as demonstrated by the quote below:

"The GED thing is quite good. Because it is a good opportunity to get the diploma we couldn't get before at the age people go to high school...And also, it helps us save money, because when you want to get your GED and take classes privately, they charge around \$100 per month, something like that. And that's an amount they don't charge us here."

⁶ Refer to table in Appendix B

Additionally, **56% of participants with services data reported receiving housing-related services.** Focus group participants discussed their experiences with these services, including direct MPPTI financial assistance with rent and utilities, as well as support from MPPTI with applying for benefits such as rent assistance. Several participants described their experiences with this support below:

*"The thing that really helped me was the **rent assistance and the food stamps**, because they gave me a lot of coupons. That helped me... if I don't have that, I never know what I'm going to do."*

"So, [case manager] and I were looking for day care for months, applying, and they wouldn't call for any places. And for a while I was short for that reason, because I couldn't work, I couldn't do anything and I was two or three months in rent arrears and she helped me apply for RAFT, which they help people pay for the electricity bill, rent."

Lastly, the program provided support with childcare access and healthcare services to many MPPTI participants. Among those with services data, **68% of participants received services relating to childcare access.** The majority of participants received support with healthcare services, including behavioral health (95%), primary care (86%), sexual and reproductive health (81%), perinatal health (59%) and dental services (26%).⁷ Focus group findings validated the importance of assistance accessing health care services, in particular, mental health support:

"They have also helped us a lot with a class that helps us when we are stressed out or don't know how to manage our emotions. Or when we have problems, there's a designated person here to speak with us."

Many participants also specifically discussed the positive relationship they had with MPPTI staff members, which came up organically in the focus group discussions. Participants particularly noted staff responsiveness to participant needs, the emotional support staff provided to participants, and the welcoming environment of MPPTI spaces:

"It's more like coming here is like going to my sister's house. It's just a comfort."

"At other places, we ask for help and they rarely help us. On the other hand, here, they kind of prioritize us. And they help us with what they can. Honestly, they have helped a lot indeed."

⁷ For the 26% who received dental health, we only counted those who received dental care out of those with new Services Forms (from 2018-2020) because dental health services were only recorded in the new forms.

OUTCOME MEASURES

Housing Stability over Time

At intake, 486 participants were categorized as stably housed, and 226 participants were categorized as unstably housed.

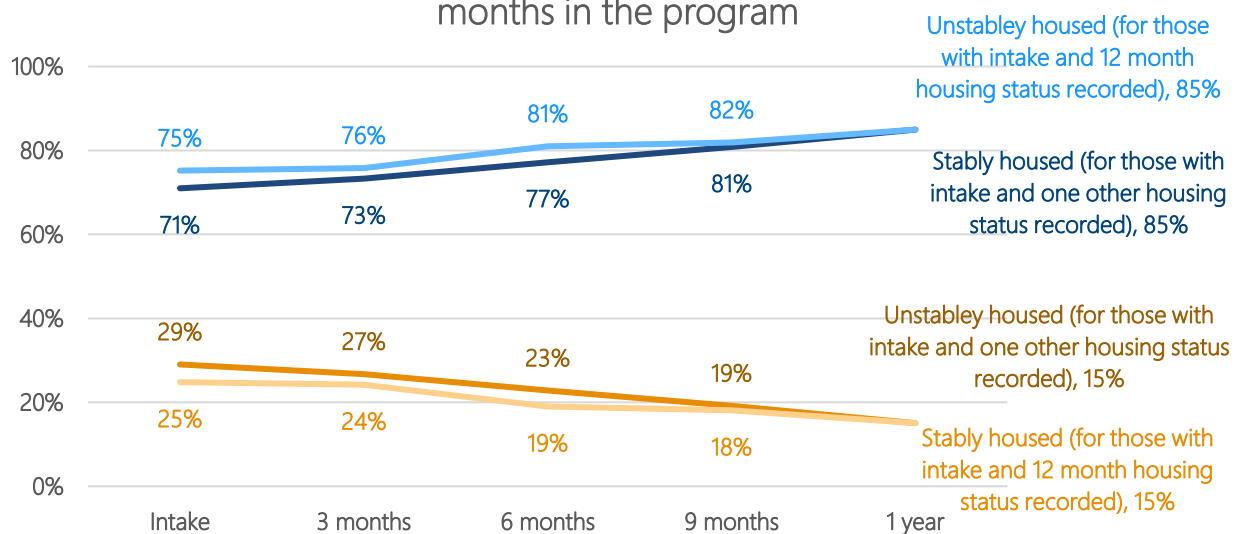
Stable housing (n=486)
• At home with parents/guardians (n=205)
• At own apartment/house (alone with or without children) (n=84)
• At own apartment/house (with partner) (n=122)
• At own apartment/house (with roommates) (n=46)
• At partner's parents' home (n=29)

Unstable housing (n=226)
• At a relative's home (n=68)
• At a friend's or other unrelated adult's home (n=33)
• Supervised shelter (n=96)
• Foster home or residential placement (n=9)
• In a hotel/motel, car, park, campground, or other public places (n=5)
• DYS facility or other detention center (n=13)
• Homeless (n=2)

Figure 2 shows housing stability over time.

The dark blue and dark yellow lines include all of the housing statuses recorded for participants with a housing status recorded at intake and a housing status recorded at any time point within 12-months of enrolling in the program. Among this group of 510 participants, there was a **statistically significant overall increase in the percentage of participants who were stably housed** (from 71% at intake to 85% at 12 months; adjusted p-value = 0.0003). The light blue and yellow lines include only those with housing recorded at both intake and the 12-month timepoint. Among this group of 250 participants, **the percent stably housed increased from 75% at intake to 85% at the 12-month timepoint** (adjusted p-value = 0.0323).

Figure 2. Shift in participant housing status over the first 12 months in the program



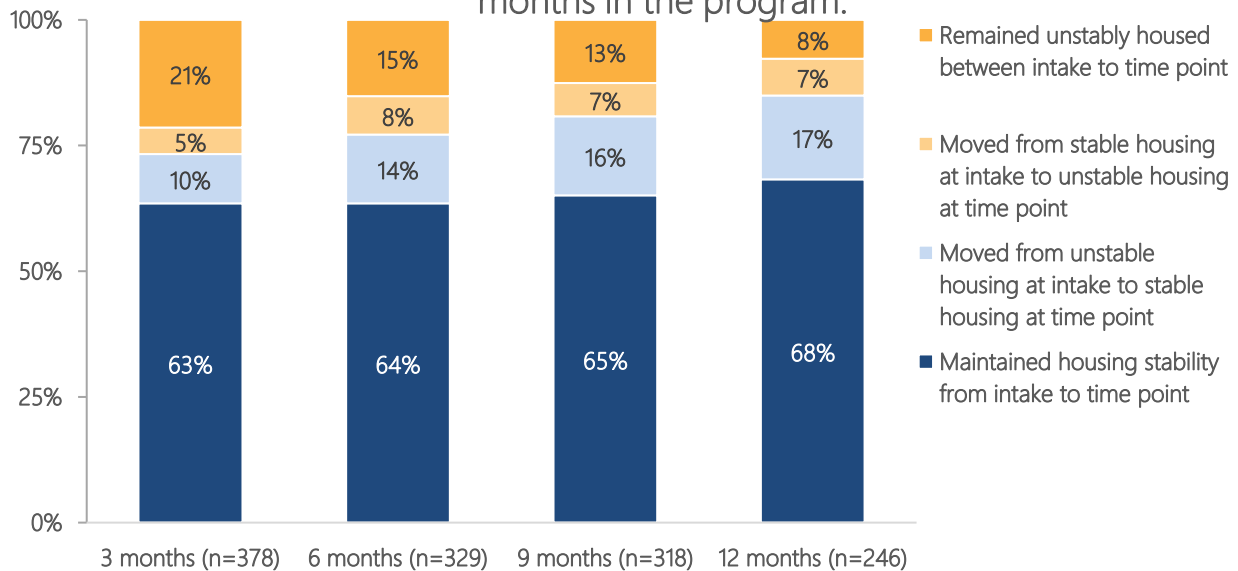
Focus group participants also described their experiences with receiving housing support from the MPPTI program. Participants described the impact of receiving direct financial support from MPPTI, as well as support with applying to rent or utilities assistance programs, as described by the participants below:

"[MPPTI program staff] helped me apply for RAFT, which they help people pay for the electricity bill, rent. Were it not for her, I wouldn't be living here either. As I told you, I was in a hole. Were it not for the program, I don't know where I would be right now. And it was thanks to her that she helped me apply for that kind of aid, assistance."

"They help us a great deal with the rent. Because a month's rent... It helps a lot indeed. So that while we kind of -- this program is for us to establish ourselves, so that once we benefit from the opportunities, we can then establish ourselves."

In addition to housing status, trends in housing trajectories were analyzed, as shown in Figure 3. Each bar represents the shift in housing status between intake and the timepoint. **With more time in the program, MPPTI participants increased their capacity to maintain housing stability.** The dark blue portion shows that at 3 months, 63% of the participants maintained their housing stability compared to intake status; this proportion increased to 68% when comparing 12 months and intake status. Similarly, for those who moved from unstable housing to stable housing, 10% of the participants moved from unstable housing at intake to stable housing at 3 months, and at 12 months, 17% of the participants moved from unstable housing at intake to stable housing.

Figure 3. Participant housing trajectories through the first 12 months in the program.



A closer look at shifts in housing status showed that about 57% participants had at least one change in housing status in their first year of participation in the MPPTI program. This finding is consistent with the housing services data, which showed that unstably housed participants were only slightly more likely to receive housing support than stably housed participants (63% and 52%, respectively). Focus group participants also experienced multiple changes in housing situations throughout their time in the program, demonstrating a need for continuous housing support. For example, one participant shared:

"So, currently, I live with my parents. We just moved to an apartment ...I've only been living in this new apartment for two days, but I am more comfortable. I do have my own room and stuff. But that's not my end goal, to just live in a room forever. I need to have my own space, my own apartment. I have a child, so it's different."

Barriers to Housing Stability

A mixed model was run to understand which demographic and programmatic factors continued to be associated with housing stability at 3, 6, 9, and 12 months, adjusting for participants appearing multiple times in the data, MPPTI site, timepoint, and housing status at intake. Age group was the one factor that was associated with housing stability over time, **as those who were 20 years or older were more likely to be stably housed than those who were less than 20 years old (adjusted p-value=.0320).**

This finding aligned with the qualitative data, as focus group participants also discussed barriers to housing due to age limitations. For example, some landlords are unwilling to rent to younger people, especially those without a rental history. There is also a lack of available affordable housing and shelters for those under the age of 18. For example, one participant stated that:

"I feel like they need more resources for young homeless people and moms, and especially kids coming from DCF...I was in DCF and once I turned 18, they put me in the teen mom program and I feel like they didn't help me. I was in programs and they threw me into a shelter. They don't really help."

Focus group participants also discussed additional barriers to housing for those in the MPPTI program, of all ages. Many participants experienced barriers around high housing costs, and limited housing availability. For example, participants shared:

"Because if we make a certain income and they base around that, and then, say, we lose our income, some people don't change the rent, you know what I mean? So it would be harder for us to pay it off."

"Even with the resources -- they have HomeBASE, which is like they will help you, they'll pay the security and the first and last rent. They pay half your rent. That's a really helpful program, but even then, there's no apartments to even use this resource. Even if you have a job and you can get an apartment, you still can't."

Some participants also experienced barriers around lack of available shelters, and extremely long wait times for affordable housing options, as shared below:

"Even if you call these shelters and you tell them that you need help, you have to exaggerate it. You have to tell them you're basically on the street because if you tell them you've got a place to stay that night, even if it's a garage, even if it's a little piece of a dog bed right there, they will go off to the next person because there's just so many people who need help."

"When you apply for Section 8, it's a really long wait. So I feel like everyone applies for Section 8, but it's a five to ten year wait to even get help with that."

In addition, limits on housing options due to immigration status posed a barrier for a few MPPTI participants. For example, one participant shared,

"Well, personally, I wouldn't know what to tell you because since we don't have papers, it's really hard for them [MPPTI staff] to help us, right?"

Lastly, a few participants shared that housing status can be complicated by family challenges, such as stated by the following participant:

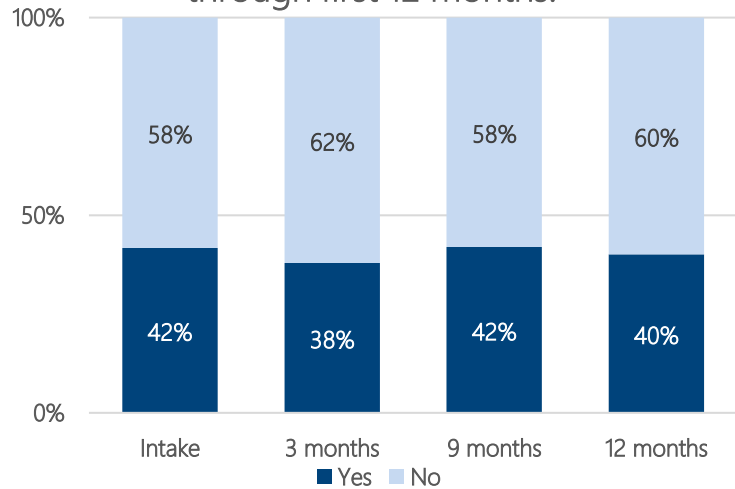
"Well, it's a little hard because sometimes we have...a little bit of an argument with the people we live. For example, with my grandfather. I always have to help him pay for the house that we rent, right? So, it's a little hard because it's not the same as if you're working and you contribute to the household, so here you have to study, you have to depend on the older person, right?"

Outcomes of the MPPTI program: Participant Life Goals

For the purpose of the evaluation, two major variables were analyzed to assess participant attainment of life goals: educational achievement and employment engagement over time.

Figure 4 shows the *educational engagement*⁸ of MPPTI participants at intake, 3 months, and 12 months. There was no change in the proportion of participants who were engaged in educational programs over time. However, most educational achievements occurred in participants' first year of the program. For example, 20 participants passed the GED or HiSET exam (69% of all passes recorded); 37 participants graduated from high school (54% of all graduations recorded); and 64 participants were accepted into college or a higher institute of learning (66% of all recorded acceptances). A logistic regression model was used to examine the correlation between

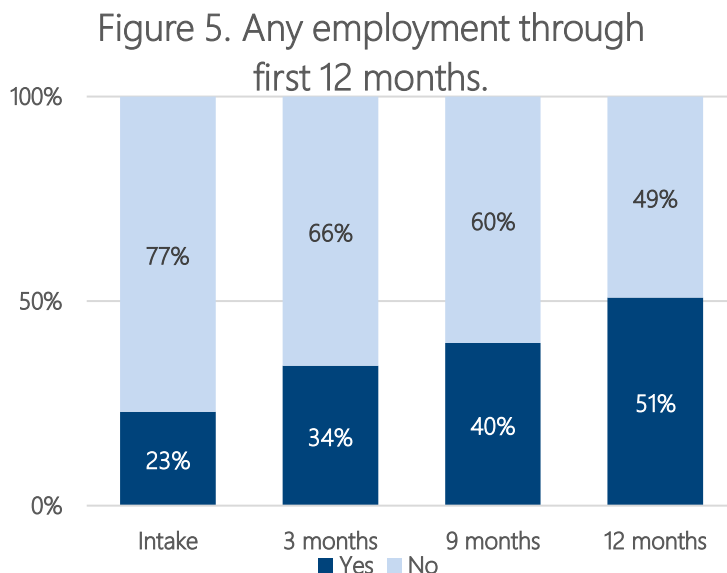
Figure 4. Education engagement through first 12 months.



⁸ Educational engagement is defined as being currently enrolled in an educational institution.

educational engagement and housing status, adjusting for the differences between MPPTI sites. However, the result showed no statistically significant relationship between the two.

Part-time or full-time employment over time is shown in Figure 5. **Employment increased from 23% at intake to 51% at 12 months.** A logistic regression model was run to explore the association between employment engagement and housing status at each time point, adjusting for site differences, and stratified by age. **Among those who are 18 years old or older, those who have stable housing are significantly more likely to engage in full- or part-time employment at 3 (p-value=0.0206), 9 (p-value=0.0006), and 12 months (p-value=0.0271).⁹**



Many focus group participants discussed how the MPPTI program supported them in achieving their life goals, which included educational and career goals, as well as other goals. Participants shared the impact of obtaining educational achievements such as a GED, higher education, or learning English through the MPPTI program, and how this affected their employment trajectories:

"Well, one of the goals is being able to get our diploma. Because it's a very -- we really need it in this country to be able to get a better job and a better income in our home."

"I think GED classes are good if you have a goal, because GED and English alone help us find a better job outside... I think that learning English here and getting a GED helps us a great deal to find a better job."

Another major participant goal was obtaining a driver's license. Several participants noted the impact of receiving support from MPPTI with their license:

"What I can say is my experience with [MPPTI] is very good indeed ... thanks to the program I could get ahead, mostly when it comes to the most important thing, which is having my license, that I thought I would never have."

Participants also discussed additional goals related to parenting and goals around improving their mental wellbeing:

⁹ Note: We also ran the model using a combined education and employment engagement outcome. However, the findings were not statistically significant at any of the time points, after adjusting for site differences.

"...help with getting my kids into childcare, because I was very... I was too attached, and I was a stay-at-home mom for the beginning of my first daughters, so I didn't know how to, like, go about it"

*"They have also helped us a lot with Cognitive Behavioral Therapy¹⁰, which is a class that helps us when we **are stressed out or don't know how to manage our emotions**. Or when we have problems, there's a designated person here to speak with us."*

RECOMMENDATIONS

Recommendations for improving the MPPTI program in the future include expanded programming, funding, and flexibility, as well as improvements to program data systems. One key recommendation from participants was expanding MPPTI funding for additional support, particularly in areas such as housing, increased support with immigration legal services, and expanded job training and education. For example, one participant shared that it would be helpful to receive additional support in accessing immigration support:

*"I think for **people who don't have our papers yet and have been on a waiting list for over two years**, I don't quite know how to handle that, but they always tell us we are on a waiting list to have a lawyer handle our case."*

Another participant shared struggles when the MPPTI site was forced to cut benefits.

*"I couldn't pay rent at the time. MPPTI helped me with one month. They offered to help me with the next month, but **unfortunately, because the people who were giving the money to [MPPTI site] no longer gave it. They kind of cut the benefits.**"*

A few participants also expressed that it would be helpful to increase the flexibility of the timing of MPPTI meetings/sessions, since it can be challenging to join them while working:

"For me, it's kinda hard because I work five days a week. And I work 9 to 5, so it's hard for me to join in on those groups or calls, cause I can't just leave work randomly. So, for me, it's hard to join those groups cause of the time."

Some participants also noted that they would recommend extending the age limits of MPPTI program past the age of 24, as young people still would benefit from program support even beyond 24:

*"I was supposed to be closed when I turned 24, and I just feel like **we're growing and learning as we go, so, like, 24 shouldn't be the cutoff, 'cause we're still learning**. I think that was the only thing that I didn't really agree with the part of the program."*

¹⁰ CBT, or Cognitive Behavioral Therapy, is a type of psychological treatment that involves efforts to change thinking and behavioral patterns. It has been demonstrated to be effective in treating a range of conditions (American Psychological Association, 2023).

Lastly, the ICH team has several recommendations for improving MPPTI program data systems.

This includes improving indicators measuring housing stability (for example, including additional specific questions about housing, such as “how many housing situations have you lived in in the past month?”), including validated fields to capture implausible dates entered, and instituting a more consistent review of data entered to avoid data entry errors. These changes would help facilitate future data analysis processes to inform MPPTI program leadership.

CONCLUSION

The MPPTI program met many important needs for young pregnant and parenting individuals. Key MPPTI supports included housing assistance, assistance with applying for benefits, educational and employment support, and support with food and other basic needs. For those who participated in the MPPTI program, over time, there was a statistically significant increase in the number of people who moved from unstable housing at intake to stable housing, and those who remained stably housed. However, significant barriers to housing remained, such as housing costs, housing availability, wait times, lack of shelters, and limits on housing options due to immigration status and age. Future recommendations for the MPPTI program include expanded programming, funding, and flexibility.

ACKNOWLEDGEMENTS

This report would not have been possible without the assistance of MDPH and MPPTI program staff, and the participation of MPPTI clients. We thank Lissette Gil-Sanchez and Justine Egan at MDPH for their significant contributions to this work. ICH is also grateful for the assistance provided by all MPPTI sites for their assistance with the execution of this evaluation, particularly with participant recruitment and engagement. This work would have not been possible without the contributions of MPPTI participants, and we thank them for sharing their experiences with us.

APPENDIX A: LIMITATIONS

There were several limitations in the process of carrying out the evaluation, which are outlined below.

Definitions

This evaluation required us to combine data from two different data systems. Items were not always tracked consistently and sometimes we needed to move to broader categories to accommodate entries across the two systems.

One limitation was the challenge in defining housing status for the evaluation. We recognize that each participant has unique living circumstances which impact how 'stable' or 'unstable' they would consider their housing situation. For example, living with extended family members or friends may be unstable for some, but stable for others. For future analyses, there are questions included in the 'new' database which may improve the ability to categorize housing status (for example, a question asking if the participant ever slept in an emergency or supervised shelter, a hotel or motel, a place not meant for human habitation, a friend or family member's home in the past 12 months due to unstable housing). However, this information was not available in the 'old' data entry systems, and therefore was not included in this analysis.

Data Assumptions

As previously mentioned, the quantitative database included some incorrect and implausible dates, which needed to be cleaned for analysis. The team made assumptions to fill in this data, based on best judgment. For example, those with missing discharge dates were assumed to be actively enrolled at the end of the measurement period (June 30th, 2020). Participants with a birth year of 9999 were assumed to be born in 1999. However, these changes may not reflect the most accurate situation in some cases.

Repeated measures (data point over time)

To explore housing trends over time, the team selected the participant form that was less than one month away and closest to each of the four time points. This selection process excluded forms in between the time points, which could have led to underreporting of housing status change. In addition, the current measure of housing change only includes changes between stable and unstable housing. It is also unknown whether participants moved within the same housing status (for example moving from one -relative's home to another).

Engagement definition

Lastly, there was a lack of clarity in defining engagement of some participants in the program. For example, since for many participants' pregnancy timing was unknown, maternity leave was not considered in the analysis as one of the reasons for non-engagement in education and employment. Additionally, a combined outcome of education and employment engagement was created to

explore the association between housing outcome and engaging in either education or employment. However, no statistically significant trends were found at any of the time points.

APPENDIX B: ADDITIONAL GRAPHS AND FIGURES

Participant Demographics

Table 1. MPPTI Quantitative Analysis Participant Demographics¹¹.

Characteristics		All MPPTI Participants		Stable		Unstable		
		n (mean)	% (st.dev)	n (mean)	% (st.dev)	n (mean)	% (st.dev)	
Total number of participants in the sample		772		499		231		
Age (mean, sd)		20	2	20.3	2	20.2	2	
Age group	Below 20 years old	280	36%	173	35%	92	40%	
	20 years and older	491	64%	326	65%	138	60%	
	Missing	1	0%	0	0%	1	0%	
Race/Ethnicity*	Hispanic/Latinx	602	78%	411	82%	166	72%	
	White	74	10%	39	8%	32	14%	
	Black/African American	52	7%	26	5%	24	10%	
	American Indian/Alaskan Native	2	0%	2	0%	0	0%	
	Asian	2	0%	1	0%	1	0%	
	More than one race	3	0%	3	1%	0	0%	
	Other	1	0%	1	0%	0	0%	
	Missing	36	5%	16	3%	8	3%	
	Gender	Male	46	6%	29	6%	15	6%
		Female	716	93%	470	94%	216	94%
Missing		10	1%	0	0%	0	0%	
Sexual orientation	Straight	717	93%	477	96%	216	94%	
	Gay or lesbian	2	0%	1	0%	1	0%	
	Bisexual	14	2%	7	1%	7	3%	
	Something else/I have not decided	2	0%	2	0%	0	0%	
	Missing	37	5%	12	2%	7	3%	
Single		389	50%	246	49%	136	59%	

¹¹ The number of participants who were stably housed and unstably housed does not add up to the total number of MPPTI participants because those with missing housing data were excluded.

* This variable is significantly associated with housing stability at intake after running bivariate analyses. Some of the variables were regrouped due to small numbers.

		All MPPTI Participants		Stable		Unstable	
Characteristics		n (mean)	% (st.dev)	n (mean)	% (st.dev)	n (mean)	% (st.dev)
Relationship status*	Committed relationship (living with partner)	176	23%	142	28%	31	13%
	Committed relationship (NOT living with partner)	117	15%	78	16%	35	15%
	Married (living with spouse)	29	4%	22	4%	7	3%
	Separated/Divorced (not in a new relationship)	7	1%	6	1%	1	0%
	Missing	54	7%	5	1%	21	9%
Primary language	English	454	59%	300	60%	143	62%
	Spanish	257	33%	177	35%	77	33%
	Portuguese	4	1%	2	0%	2	1%
	Cape Verdean	1	0%	1	0%	0	0%
	Haitian Creole	1	0%	1	0%	0	0%
	Other	3	0%	1	0%	2	1%
	Unknown/missing	52	7%	17	3%	7	3%
Highest grade level completed	Less than high school	439	57%	291	58%	141	61%
	HS graduate	218	28%	148	30%	67	29%
	GED	39	5%	27	5%	11	5%
	Some college	19	2%	15	3%	4	2%
	College graduate	1	0%	1	0%	0	0%
	Missing	56	7%	17	3%	8	3%
Current school status	Enrolled in middle or high school	93	12%	78	16%	15	6%
	Enrolled in GED program	154	20%	83	17%	65	28%
	Enrolled in job training program	14	2%	11	2%	3	1%
	In college	37	5%	26	5%	11	5%
	Not in school	401	52%	270	54%	124	54%
	On maternity leave	15	2%	10	2%	5	2%
	Missing	58	8%	21	4%	8	3%
	Employment status*	Employed full time	56	7%	45	9%	11
Employed part time		109	14%	82	16%	27	12%
Not employed		554	72%	357	72%	185	80%

		All MPPTI Participants		Stable		Unstable	
Characteristics		n (mean)	% (st.dev)	n (mean)	% (st.dev)	n (mean)	% (st.dev)
Missing		53	7%	15	3%	8	3%
Employment and education engagement	Engage in either education or employment	358	46%	247	49%	105	45%
	Engage in both education and employment	48	6%	37	7%	11	5%
	Engage in neither education or employment	299	39%	190	38%	103	45%
	Missing	67	9%	25	5%	12	5%
Any disabilities	Yes	46	6%	29	6%	17	7%
	No	689	89%	458	92%	207	90%
	Missing	37	5%	12	2%	7	3%
Insurance	MassHealth	643	83%	440	88%	187	81%
	MassHealth and some other form of insurance	33	4%	21	4%	10	4%
	Uninsured	74	10%	20	4%	31	13%
	Private plan	9	1%	8	2%	1	0%
	MassHealth Limited	6	1%	4	1%	1	0%
	Healthy Start	2	0%	1	0%	1	0%
	Other	2	0%	2	0%	0	0%
	Health Safety Net	1	0%	1	0%	0	0%
	Missing	2	0%	2	0%	0	0%
Insurance group*	Public plan	682	88%	465	93%	198	86%
	Private plan	9	1%	8	2%	1	0%
	Uninsured	77	10%	22	4%	32	14%
	Other	2	0%	2	0%	0	0%
	Missing	2	0%	2	0%	0	0%
Site*	Chelsea (Roca)	177	23%	109	22%	61	26%
	Holyoke (Care Center)	135	17%	68	14%	55	24%
	Lawrence (FSMV)	229	30%	180	36%	42	18%
	New Bedford (Meeting St)	166	22%	114	23%	52	23%
	Springfield	60	8%	25	5%	19	8%
	Lynn	5	1%	3	1%	2	1%
Year of intake*	2014	144	19%	111	22%	25	11%
	2015	111	14%	85	17%	25	11%

		All MPPTI Participants		Stable		Unstable	
Characteristics		n (mean)	% (st.dev)	n (mean)	% (st.dev)	n (mean)	% (st.dev)
	2016	146	19%	89	18%	55	24%
	2017	83	11%	43	9%	36	16%
	2018	153	20%	95	19%	48	21%
	2019	131	17%	75	15%	42	18%
	2020	4	1%	1	0%	0	0%
Intake duration (years)*	Less than one year	165	21%	103	21%	54	23%
	1	312	40%	192	38%	96	42%
	2	141	18%	111	22%	26	11%
	3	65	8%	37	7%	24	10%
	4	61	8%	34	7%	25	11%
	5	26	3%	20	4%	6	3%
	6	2	0%	2	0%	0	0%
	Missing	0	0%	0	0%	0	0%
Pregnancy status	Pregnant	150	19%	108	22%	40	17%
	Postpartum	552	72%	356	71%	175	76%
	Pregnant, with children	44	6%	31	6%	13	6%
	Missing	26	3%	4	1%	3	1%
Number of children at intake	0	26	3%	16	3%	6	3%
	1	385	50%	254	51%	124	54%
	2	124	16%	91	18%	32	14%
	3	36	5%	25	5%	9	4%
	4	6	1%	5	1%	1	0%
	Missing	195	25%	108	22%	59	26%

Table 2. MPPTI Focus Group Participant Demographics (N=26).

Variable	N (%)
Site	
Meeting Street	8 (31%)
Roca	8 (31%)
Care Center	6 (23%)
Family Services of Merrimack Valley	3 (12%)
Community Teamwork	1 (4%)
Race/Ethnicity	
Black	1 (4%)
Latinx/Hispanic	25 (96%)
Age (years)	
18-20	13 (50%)
21-24	13 (50%)
Gender Identity	
Female	26 (100%)
Language	
Spanish	23 (88%)
English	3 (12%)
Length of time in program (years)	
less than 1 year	13 (50%)
1-2 years	13 (50%)
Number of children	
1	22 (85%)
2	4 (15%)
Age of child one (years)	
less than 1 year	3 (12%)
1 to 2 years	13 (50%)
3 to 4 years	6 (23%)
over 4 years	3 (12%)
Missing	1 (4%)
Age of child two (years)	
less than 1 year	0 (0%)
1 to 2 years	2 (67%)
3 to 4 years	1 (33%)
over 4 years	0 (0%)

Housing situation

Figure 6. Breakdown of housing situation for stably housed participants at intake (n=486).

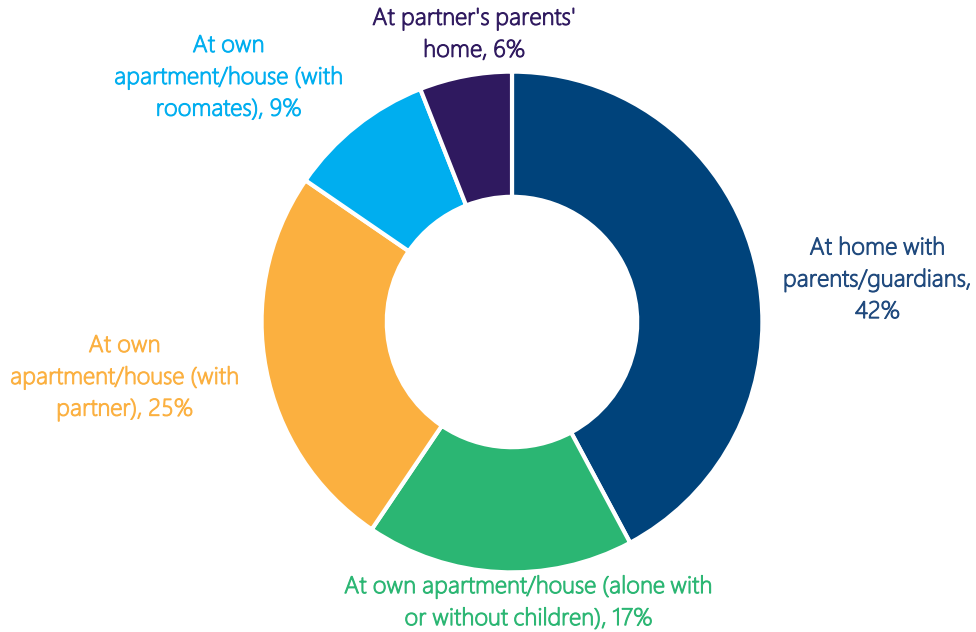


Figure 7. Breakdown of housing situation for unstably housed participants at intake (n=226).

