



Yale school of medicine

# **DC MOMS Partnership<sup>sm</sup> Pilot Evaluation Report**

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**Elevate: A Policy Lab to Elevate Mental Health and Disrupt Povertv Yale School of Medicine** 

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# **Executive Summary**

#### **OVERVIEW**

The DC Department of Human Services (DHS) partnered with Elevate Policy Lab to bring the Mental health Outreach for MotherS (MOMS) Partnership® model to the district's TANF program as the DC MOMS Partnership<sup>SM</sup> (DC MOMS). The MOMS Partnership was designed to reduce depressive symptoms and meet the mental health needs of low-income mothers and primary caregivers. At the core of the model is MOMS Stress Management (SM), an 8-week, Cognitive Behavioral Therapy-based group course. The DC MOMS Pilot delivered the MOMS SM course to 183 TANF customers between April 2019 and February 2021. Services were delivered in person between program launch and March 2020, when the pilot transitioned to virtual service delivery in response to the COVID-19 pandemic.

Elevate carried out an evaluation of the DC MOMS Pilot, including a pre-post study of participant outcomes and a randomized delayed-start study. This report addresses findings from the pre-post study, which includes data from a subset of 84 participants in Cohorts 1 - 7 of the DC MOMS pilot. The evaluation examined participation in and satisfaction with DC MOMS, as well as outcomes from participant self-reported data. The pre-post evaluation aimed to answer the following questions:

- Did DC MOMS participants experience improvements in measures of mental health following participation in the SM course?
- Did DC MOMS participants experience increased social support following participation in SM?
- Did DC MOMS participants experience improvements in economic security following participation in SM?
- Did DC MOMS participants experience improvements in their parenting experience following participation in SM?

## **KEY FINDINGS**

## **Participant Characteristics**

Among 84 participants included in the study, most identified as Black or African American and Non-Hispanic, were single, and had at least a high school education or GED. At the start of MOMS SM, almost 50% of participants indicated needing mental health treatment or counseling in the last year but not receiving it.

# **Participation**

Participants attended most classes (6 out of 8). About 40% of participants attended at least 7 classes, and 21% attended all 8 classes. There was no significant difference in MOMS SM attendance and assessment completion between participants who attended MOMS SM in person and those who attended virtually after March 2020.

Most participants (88%) said they were "Satisfied" or "Very satisfied" with the MOMS SM course. Participants also shared reflections on the difference that the MOMS SM course has made in their lives, including that:

"The program gave me techniques that best suited me and my situation to help me to defuse stress in my life. I'm grateful to have attended the program."

"I have gained a lot of insight about myself... DC MOMS has taught me great strategies to handle my stress that I actually use in my everyday life and actually see progress."

# **Mental Health and Wellbeing**

Participants experienced significant improvements across a number of mental health measures. Participants' depressive symptoms decreased significantly between Baseline and Endpoint and remained significantly lower at 3-Month Follow-Up. At Endpoint and 3-Month Follow-Up, more than twice as many scored below the threshold for risk of clinical depression on the CES-D scale than at Baseline. Perceived stress and anxiety symptoms decreased significantly between Baseline and Endpoint.

# **Social Support**

Participants experienced significant increases in perceived social support across all types of support measured, and scores remained significantly higher at 3-Month Follow-Up than at Baseline. In addition, participants reported significantly greater instrumental support — support to meet concrete and tangible needs — at Endpoint and 3-Month Follow-Up compared to Baseline.

# **Economic Security**

A larger proportion of DC MOMS participants reported "no trouble" paying for certain goods at Endpoint compared to Baseline. The percentage of participants who reported a high level of financial stress decreased significantly between Baseline and Endpoint and remained significantly lower at 3-Month Follow-Up.

# **Parenting Skills and Satisfaction**

Participants reported an increase in their perception of effective limit setting with their child(ren) at 3-Month Follow-Up.

# CONCLUSION

The DC MOMS pilot was well-received by participants, with high levels of attendance and program satisfaction. While this study was limited by small sample size and an observational pre-post design, the evaluation suggests that DC MOMS was associated with positive outcomes for participants' well-being, including significant improvements in depression, stress, and anxiety, as well as significant and sustained increases in perceived social and instrumental support. Maternal mental health has been identified as an important factor in longer-term child outcomes; these findings are encouraging for participants and their families and support the alignment of DC MOMS with DHS's two-generational

approach to family and child wellbeing. Elevate and DC DHS continue to explore opportunities for further investigation of the pilot data to further understand the DC MOMS program and its impact.

# Introduction

# BACKGROUND

In the spring of 2018, the DC Department of Human Services (DHS) introduced a new Temporary Assistance for Needy Families (TANF) policy as part of the agency's emphasis on a twogenerational approach to family and child wellbeing. DHS partnered with Elevate Policy Lab at the Child Study Center, Yale School of Medicine to create, administer, and analyze a survey of families receiving TANF at the time of the policy's implementation.<sup>1</sup> Approximately 60% of TANF customers interviewed reported depressive symptoms indicative of clinical depression. Elevate also found that 40% of caregivers with children in diapers reported experiencing diaper need and only 20% of all customers surveyed reported currently working for pay.<sup>2</sup>

To help support mental health and wellbeing among DC families, Elevate and DHS collaborated to bring the Mental health Outreach for MotherS (MOMS) Partnership® program to the district. The MOMS Partnership, founded at Yale in 2011, is a model of services designed to reduce depressive symptoms and meet the mental health needs of low-income mothers and primary caregivers so that they can achieve family stability and economic mobility. The result of this collaboration was the development and pilot implementation of the DC MOMS Partnership<sup>5M</sup> (DC MOMS). The pilot phase of the program (DC MOMS Pilot) launched in February 2019 and concluded in February 2021. Following the conclusion of the pilot, DHS has continued to offer DC MOMS in the TANF system.

To assess the impact of DC MOMS, Elevate designed and carried out an evaluation of the DC MOMS Pilot, including a pre-post study of participant outcomes and a randomized delayed-start study. This report describes the DC MOMS Pilot and the results of the pre-post study.

## **MOMS PARTNERSHIP MODEL**

The MOMS Partnership was founded with the mission of creating a pathway to economic mobility by meeting mothers where they are with mental health supports. At the core of the model is the MOMS Stress Management (SM) course. MOMS SM is a Cognitive Behavioral Therapy-based group course that meets once per week for 8 weeks. The course was originally adapted from "The Mothers and Babies Course"<sup>3</sup> for the population of mothers served by the MOMS Partnership.

The MOMS SM course is co-delivered by a mental health clinician and a Community Mental Health Ambassador (CMHA), a member of the staff who is also a parent or caregiver from the local community and shares lived experience with program participants. Unlike traditional mental health services in a clinical setting, MOMS Partnership programming is offered in community locations that prospective participants identify as convenient, accessible, and safe. The MOMS Partnership

<sup>&</sup>lt;sup>1</sup> Elevate, which was part of Yale School of Medicine at the time, formally launched in 2019; the organization used the working name *Center on Policy Innovation for Family Mental Health* at the time of the survey initiative.

<sup>&</sup>lt;sup>2</sup> Clayton, A., Callinan, L. C., Gaztambide, K. K., & Smith, M. V. (2018). *Embracing 2-Gen: Findings from the District of Columbia's TANF Survey.* 

<sup>&</sup>lt;sup>3</sup> Le, H.N. Le & Muñoz, R.F. (2011). *The Mothers and Babies Course: Instructor's Manual* (8-Session Course Adaptation).; Muñoz, R. F., Ghosh Ippen, C., Le, H. N., Lieberman, A. F., Diaz, M.A., & La Plante, L. (2001). *The Mothers and Babies Course: A reality management approach* (Participant manual).

model includes participant incentives for class attendance, for recruitment activities, and for evaluation assessments to support participants in meeting their families' basic needs.

## **DC MOMS PILOT**

The DC MOMS Pilot, housed within the DHS Economic Security Administration (ESA), aimed to provide the MOMS SM course to approximately 180 eligible TANF customers. The roles of MOMS Clinician and MOMS CMHA were filled by existing DHS staff who were trained to deliver the MOMS SM course. The MOMS SM course was delivered in sequential 8-week sessions. Up to ten customers made up a MOMS SM course group and met for a 90-minute class once per week. During each 8-week session (a participant "cohort"), three to four groups participated concurrently, with each group scheduled to meet at a different time in the week. The DC MOMS Pilot delivered MOMS SM to eight cohorts between April 2019 and February 2021. In total, 183 TANF customers attended at least one MOMS SM class over the course of the DC MOMS Pilot. An early analysis from the first two cohorts, published in *Psychiatric Services*, showed that MOMS SM participants experienced a decrease in depressive symptoms and perceived stress and an increase in perceived social support.<sup>4</sup>

Two locations in Southeast DC were selected as sites for MOMS SM group meetings based on customer input: Bright Beginnings, a nonprofit childcare provider, and Phillips@THEARC, a community arts space within Ward 8's Town Hall Education Arts Recreation Campus (THEARC) West. Each site was able to provide DC MOMS with a private meeting space for two MOMS SM groups per week between April 2019 and March 2020. In March 2020, DC MOMS transitioned to virtual programming in response to the Covid-19 pandemic; more details are provided in the section Covid-19 Adjustments below.

Customers were recruited to participate in DC MOMS through in-person outreach and screening events, DHS social media outreach, and referrals from TANF Employment Program (TEP) Providers. To participate in DC MOMS, an individual must have met a set of eligibility criteria, which were assessed by DC MOMS staff in a two-part screening process. The first screening confirmed requirements that an individual was:

- 1. a woman at least 18 years of age,
- 2. pregnant and/or a primary caregiver to a child under 18,
- 3. a current TANF customer, and
- 4. experiencing depressive symptoms, as indicated by a score of 16 or greater on the Center for Epidemiological Studies-Depression (CES-D) screening instrument<sup>5</sup>.

Randomization, as a part of the random delayed-start study, occurred after the first screening. If a customer was determined to be eligible in the first screening, they were randomly assigned to participate in MOMS SM immediately after screening (the immediate-start group) or in the subsequent MOMS SM cohort after a delay period (the delayed-start group).

In the second screening, an individual was excluded from participation if they demonstrated acute psychotic symptoms or suicidal ideation, assessed by clinical interview using the Mini International

<sup>&</sup>lt;sup>4</sup> Smith, M. V., Callinan, L. S., Posner, C. S., Holmes, S. C., & Ebling, R. (2021). Improving Maternal Mental Health as a Pathway to Economic Mobility in the TANF System. *Psychiatric Services*, *72*(10), 1139–1144.

<sup>&</sup>lt;sup>5</sup> Radloff, L. S. (1977). The CES-D Scale: A Self-Report Depression Scale for Research in the General Population. *Applied Psychological Measurement*, 1(3), 385–401.

Neuropsychiatric Inventory<sup>6</sup> Psychotic Disorders module and question nine of the Patient Health Questionnaire-9 (PHQ-9) instrument<sup>7</sup>. If a customer remained eligible after the second screening, they were invited to participate in the MOMS SM course according to their randomization assignment. In certain cases, eligible customers were not randomized and were invited to participate in the immediate next group of the course. Figure A in the <u>Appendix</u> provides details on the number of customers who were eligible at each stage of screening.

Following the two-part screening process, eligible customers provided consent to participate and were scheduled for a MOMS SM group. MOMS SM operates in a closed group format; a customer was required to attend at least Class 1 or Class 2 in order to continue participating in the group. Prior to March 2020, all MOMS SM groups were held in person. Evaluation assessments were administered in-person and completed by participants using staff-provided computers or tablets. Further details about the evaluation assessments are provided in the <u>Measures</u> section of this report.

Participants received incentives in the form of Giant supermarket gift cards for attendance of Classes 1, 3, 5, and 8 as well as for the completion of the eligibility screening and evaluation assessments. Non-cash incentives — including journals, calendars, books, and raffle entries — were offered at Classes 2, 4, 6, and 7.

## **Covid-19 Adjustments**

In March 2020, during the fifth cohort of the MOMS SM course, DC MOMS transitioned to virtual programming in response to the Covid-19 pandemic. For the remainder of the DC MOMS Pilot, MOMS SM classes were held via a videoconferencing platform.

Initially, recruitment for the DC MOMS Pilot relied on in-person outreach events, with screening questionnaires administered in-person by DC MOMS staff. Beginning in May 2020, an online assessment to assess the first part of the screening process (eligibility on criteria 1 - 4 above) was made available to prospective participants. The second part of the screening process, which assessed for acute psychotic symptoms or suicidal ideation, was conducted over video or telephone call with the MOMS Clinician or CMHA. DHS permitted customers to provide consent for MOMS SM electronically, and evaluation assessments were also modified to facilitate at-home completion by participants.

<sup>6</sup> Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., Hergueta, T., Baker, R., & Dunbar, G. C. (1998). The Mini-International Neuropsychiatric Interview (M.I.N.I.): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *The Journal of Clinical Psychiatry*, *59 Suppl 20*, 22–57.

<sup>7</sup> Kroenke, K; Spitzer, R.L.; Williams, J.B.W. (2001). The PHQ-9: Validity of a Brief Depression Severity Measure. *Journal of General Internal Medicine*. 16 (9), 606–613.

# **Evaluation**

The DC MOMS Pilot was administered as a randomized, delayed-start study in which customers were randomly assigned to the immediate-start group or the delayed-start group. This design allows for both a pre-post evaluation of immediate-start participant outcomes and a comparison of depressive symptoms between the immediate-start and delayed-start groups to assess the impact of MOMS SM participation on these depressive symptoms. **This report addresses findings from the pre-post evaluation, which includes data from a subset of 84 DC MOMS Pilot participants** (see <u>Participant Sample</u> below). A comparison of the immediate-start and delayed-start groups is being prepared at the time of this report.

#### **METHODS**

#### **Evaluation Questions**

The pre-post evaluation addressed the following primary evaluation questions:

Did DC MOMS participants experience improvements in measures of mental health following participation in the SM course?

**Did DC MOMS participants experience increased social support following participation in SM?** 

**Did DC MOMS participants experience improvements in economic security** following participation in SM?

Did DC MOMS participants experience improvements in their parenting experience following participation in SM?

#### Measures

Participants were asked to complete evaluation assessments at several time points relative to the start of the MOMS SM course for their group. The assessments used in this report are described in Table 1 below, along with the allowable window of assessment completion for inclusion in the pre-post analysis.

#### Table 1: Assessment time points

ASSESSMENT	TIME POINT	ALLOWABLE WINDOW
Baseline	Start of Class 1	Before or within one week after Class 1
Endpoint	Immediately after Class 8	Within three weeks after Class 8

ASSESSMENT	TIME POINT	ALLOWABLE WINDOW
3-Month Follow- Up	Three months after Class 8	Three weeks before or after target date (class 8 + three months)

The assessments asked participants questions about their mental health, social support, economic security, and parenting experience. Table 2 lists the specific outcomes within each category that are included in this report.

#### Table 2: Outcomes measured in the assessments

CATEGORY	OUTCOMES MEASURED
Mental health	Depressive symptoms
	Perceived stress
	Generalized anxiety
Social support	Social support
	Instrumental social support
	Basic need
Economic security	Financial stress
	Employment
Parenting experience	Parenting skills and satisfaction

#### Analysis

Descriptive statistics used to summarize data in this report are given in Table 3. The sample size of participants (n) for each set of analyses is provided in the table heading. If the sample size is different for one or more measures in the table — e.g., if some participants did not respond to a particular question — the sample size for those measures is indicated in the table.

#### Table 3: Descriptive statistics and examples

VARIABLE TYPE	STATISTICS REPORTED FORMAT	EXAMPLE	
Continuous data	Mean and standard deviation	CES-D scores at	Mean (SD)
that is normally distributed	Mean (SD)	Screening (n = 82)	33.5 (10.0)

VARIABLE TYPE	STATISTICS REPORTED FORMAT	EXAMPLE	
Continuous data	Median, first quartile, and third	GAD-2 scores at	<u>Median (Q1, Q3)</u>
that is <u>not</u> normally distributed	quartile Median (Q1, Q3)	Baseline (n = 57)	3 (2, 4)
		Health Insurance Provider (n = 84)	
Categorical data Frequency and percentage n (%)	<u>Provider</u>	<u>n (%)</u>	
	n (%)	Medical Assistance	82 (97.6%)

Statistical analyses were used to test for differences between pre- and post-participation outcome measures. These include paired t-tests for continuous, normally distributed data; Wilcoxon signed-rank tests for continuous data that was not normally distributed; and McNemar's tests for dichotomous (binary) categorical data. Statistical significance is considered to be p < .05 in this report. For cases where pre-post tests were conducted, significance level is given in the *Sig.* column using the following notation: \* p < .05, \*\* p < .01, \*\*\* p < .001.

An example of the presentation of statistical results in this report is provided in Table 4 below. The table compares CES-D scores at Baseline to scores at Endpoint for a sample of 59 participants. The table reports the mean and standard deviation of the scores at each time point. The significance column indicates that the scores were found to be significantly different at the level p<.001. The key to interpreting significance is provided below the table along with the statistical test that was used for the analysis; in this case, scores were compared using a paired t-test.

#### Table 4: CES-D scores, Baseline to Endpoint

		ENDPOINT Mean (SD)	SIG.
CES-D (n = 59)	26.4 (11.1)	16.6 (10.0)	***

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; paired t-test

## **Participant Sample**

A total of 183 DC TANF customers attended at least one MOMS SM class in Cohorts 1 - 8 of the DC MOMS Pilot. The pilot included a randomized, delayed-start study, which meant that customers either participated in MOMS SM immediately following screening or after a delay period. To better reflect typical MOMS SM delivery outside of a study setting, the sample of participants included in the pre-post study ("analytic sample") includes only customers who participated in MOMS SM

*immediately following screening.* Those who followed the delayed-start protocol were excluded from the analytic sample. In addition, customers who participated in Cohort 8 were excluded from analysis in light of significant disruptions to MOMS SM services during the cohort.

The analytic sample for this report includes **84** participants from DC MOMS Pilot Cohorts 1-7, which ran between April 2019 and September 2020. To be included in the analytic sample, customers must have been eligible to participate, attended at least one MOMS SM class ("participated") in the cohort immediately following screening, and have completed at least the Baseline evaluation assessment within the appropriate time frame (see Table 1 under <u>Measures</u>, above). Customers who participated in more than one cohort of MOMS SM were excluded from the analytic sample. Figure 1 on the following page illustrates the criteria for determining the analytic sample.

#### Figure 1: Which participants are included in the analytic sample?

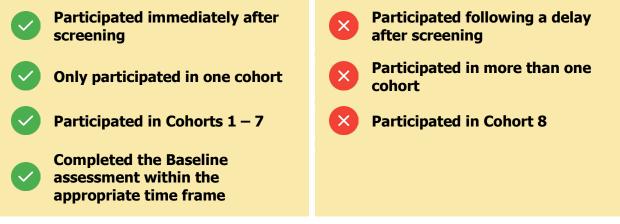


Figure A in the <u>Appendix</u> shows the detailed flow of customers from screening to participation and inclusion in the analytic sample.

#### Limitations

There are several limitations that should be considered while interpreting the evaluation results. Due to the Covid-19 pandemic and other contextual factors, some modifications had to be made to the original evaluation plans. Some of the original evaluation questions could not be studied and were dropped from the evaluation.

Participants were not required to complete assessments, and the Endpoint and 3-Month Follow-Up assessments were only administered to customers who attended at least one class. Analyses of some self-report outcomes measures are not included in the report due to small sample size; this information is available upon request from the authors of this report. Additionally, the completion rate at the 3-Month Follow-Up assessment was low, and outcomes data for the follow-up timepoint represent only a portion of all participants.

Some sources of potential bias to consider when interpreting the results of this evaluation include the following:

- DC TANF customers were incentivized for participation in the DC MOMS Pilot, including eligibility screening, attendance, and assessments.
- Completion of assessments was voluntary, and the kinds of outcomes studied in the evaluation may be associated with participants' likelihood of completing the assessments.
- Outcomes were assessed using self-report measures, which are subject to bias.
- The Baseline assessment did not represent a perfect baseline measurement, as the assessment was completed after initial interactions with DC MOMS staff.

This report indicates whether statistically significant change was found for participant outcomes, but this does not always translate to meaningful change. At the same time, the absence of a statistically significant finding does not always mean the absence of change. Finally, the pre-post design of this evaluation means that significant findings in this report indicate an association between DC MOMS participation and change in outcomes but do not establish causation.

# **Participation in DC MOMS**

### **PARTICIPANT CHARACTERISTICS**

#### **KEY POINTS**

Most participants identified as Black or African American and Non-Hispanic, were single or never married, and had at least a high school education or GED.

At the start of MOMS SM, almost 50% of participants indicated needing mental health treatment or counseling in the last year but not receiving it.

## **Demographics**

Participants in DC MOMS answered questions about demographics and other characteristics, including health insurance and housing, as part of the Baseline Assessment. Data were self-reported by participant and were not cross-referenced with administrative records. These characteristics are summarized in Table 5 for the 84 participants who were included in analysis.

# Table 5: Characteristics of DC MOMS participants at Baseline (n = 84)

CHARACTERISTIC	n (%)
Racial/Ethnic Identity	
Black or African American, Non-Hispanic	73 (86.9%)
Black or African American, Hispanic	9 (10.7%)
Other	2 (2.4%)
Country of Birth	
United States	84 (100%)
Marital Status	
Married	4 (4.8%)
Partnered	11 (13.1%)
Single and never married	60 (71.4%)

CHARACTERISTIC	n (%)
Separated or divorced	8 (9.5%)
Chose not to answer	1 (1.1%)
Highest Level of Education Completed	
Did not complete high school or GED	9 (10.7%)
High school graduate or GED completed	34 (40.5%)
Some college / vocational school	33 (39.3%)
College graduate or more than college	8 (9.5%)
Health Insurance Provider, check all that apply	
Medical Assistance	82 (97.6%)
No insurance	2 (2.4%)
Housing Situation ( $n = 83$ )	
Own apartment, house, or condo	2 (2.4%)
Rent apartment, house, or condo with housing voucher	52 (62.7%)
Live with friends or family	13 (15.7%)
Transitional housing or emergency shelter	7 (8.4%)
Other	9 (10.8%)

## **Past Mental Health Service Utilization**

The Baseline Assessment also included questions about participants' use of mental health services in the past twelve months, adapted from questions used in the National Survey on Drug Use and Health<sup>8</sup>. The majority of DC MOMS participants had not received mental health services in the past year. Nearly half of participants indicated that they needed mental health care in the past year but did not receive it.

#### Table 6: Past-year receipt of mental health services at Baseline

CHARACTERISTIC	n (%)	
Received inpatient mental	health services during last 12 months (n = 83)	
Yes	5 (6.0%)	
No	78 (94.0%)	
Received outpatient mental health services during last 12 months ( $n = 83$ )		
Yes	23 (27.7%)	
No	60 (72.3%)	
"During the past 12 months, was there any time when you needed mental health treatment or counseling for yourself but didn't get it?" ( $n = 82$ )		
Yes	39 (47.6%)	
No	43 (52.4%)	

<sup>&</sup>lt;sup>8</sup> Center for Behavioral Health Statistics and Quality. (2014). 2015 National Survey on Drug Use and Health (NSDUH): CAI Specifications for Programming (English Version). Substance Abuse and Mental Health Services Administration, Rockville, MD.

## ENGAGEMENT IN STRESS MANAGEMENT

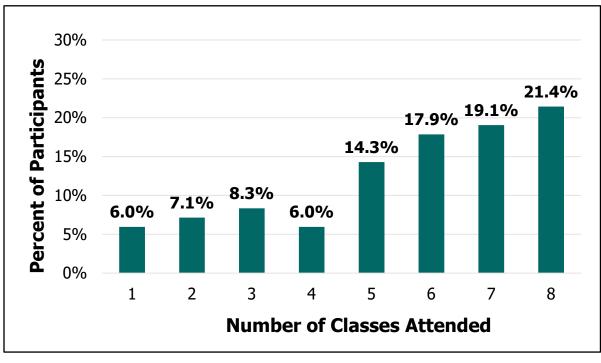
#### KEY POINTS

Participants attended most classes (6 out of 8). About 40% of participants attended at least 7 classes and 21% attended all 8 classes.

There was no significant difference in MOMS SM attendance and assessment completion between participants who attended MOMS SM in person and those who attended virtually after March 2020.

#### Attendance

The MOMS SM course was delivered as eight 90-minute classes once per week. A customer must have attended either Class 1 or Class 2 to participate in the remaining classes for the MOMS SM cohort. Median attendance was six out of eight MOMS SM classes, and more than 20% of participants attended all eight classes. A breakdown of total attendance is provided in Figure 2. Table 7 summarizes mean and median class attendance.



#### Figure 2: SM class attendance (n = 84)

#### Table 7: SM class attendance (n = 84)

	Mean (SD)	Median (Q1, Q3)*
Number of classes attended	5.5 (2.2)	6 (4, 7)

\*Class attendance is measured as whole numbers, so both mean and median are included.

## **Impact of Covid-19 Pandemic**

The Covid-19 pandemic required that the DC MOMS Pilot transition from in-person to virtual programming in March 2020, during Cohort 5 of MOMS SM. Of the 84 participants included in analysis:

- 61.9% (52) completed the MOMS SM course in person before the transition to virtual services (Cohorts 1 4),
- 25% (21) participated in virtual MOMS SM programming only (Cohorts 6 7), and
- 13% (11) began MOMS SM in person and transitioned to virtual services (Cohort 5).

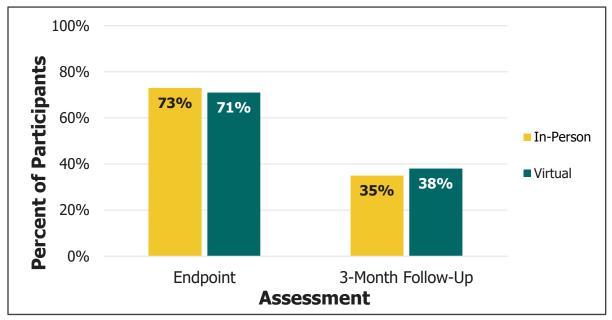
Mean class attendance among in-person participants and virtual participants is shown in Table 8. There was no significant difference in attendance between the two groups, suggesting that the mode of delivery of MOMS SM classes did not impact participant attendance.

# Table 8: SM class attendance among in-person and virtualparticipants

	IN-PERSON (n = 52) Mean (SD)	VIRTUAL (n = 21) Mean (SD)	SIG.
Number of classes attended	5.5 (2.1)	6.2 (1.9)	_

#### \* *p*<.05, \*\* *p*<.01, \*\*\* *p*<.001; paired t-test

Once evaluation assessments could no longer be administered in person, assessments were modified to facilitate at-home completion by participants. The percentages of in-person and virtual participants who completed the Endpoint and 3-Month Follow-Up Assessments are provided in Figure 3. Assessment completion did not differ significantly between in-person and virtual cohorts for either Endpoint or 3-Month Follow-Up.



# Figure 3: Assessment completion among in-person and virtual participants (n = 84)

## PARTICIPANT SATISFACTION

#### **KEY POINTS**

Most participants (88%) said they were "Satisfied" or "Very satisfied" with the MOMS SM course.

Participants shared reflections on the difference that the MOMS SM course has made in their lives.

Participants who attended at least one MOMS SM class were asked about their level of satisfaction with the MOMS SM course as part of the Endpoint Assessment. Overall, most participants were satisfied with the MOMS SM course (88.3%) and the majority (70%) reported that they were "Very satisfied."

# Table 9: Participant satisfaction with the MOMS SM course at Endpoint (n = 60)

SATISFACTION	n (%)
Very satisfied	42 (70.0%)
Satisfied	11 (18.3%)
Neutral	5 (8.3%)

Somewhat satisfied	2 (3.3%)
Not at all satisfied	0 (0.0%)

Participants were asked to "please explain why you gave this [satisfaction] rating". Below are several examples of these reflections on the value of DC MOMS and the MOMS SM course.

#### IN PARTICIPANTS' OWN WORDS

"I have gained a lot of insight about myself... DC MOMS has taught me great strategies to handle my stress that I actually use in my everyday life and actually see progress."

"The classes were geared towards reality and real-life situations. Being able to practice the various skills in the classroom environment gave me the confidence to do things outside of class."

"The program gave me techniques that best suited me and my situation to help me to defuse stress in my life. I'm grateful to have attended the program."

"I made a lot of new friends and [the DC MOMS staff] are awesome, amazing, and understanding. I learned a lot from the other women and loved that everybody shared their stories and we all could relate."

"The things that we discuss in this class really do help with the daily stress triggers of life."

"It was refreshing to share my bottled-up emotions, gain insight from others, and to absorb the instruction from the staff."

# Outcomes

#### **MENTAL HEALTH**

#### **KEY POINTS**

Participants' depressive symptoms decreased significantly between Baseline and Endpoint. At 3-Month Follow-Up, scores remained significantly lower than at Baseline.

At Endpoint and 3-Month Follow-Up, more than twice as many participants scored below 16 on the CES-D — the cutoff for clinical depression risk— than at Baseline.

Participants' perceived stress decreased significantly between Baseline and Endpoint.

Participants' anxiety symptoms decreased significantly between Baseline and Endpoint.

#### **Depressive Symptoms**

Depressive symptoms were measured using the Center for Epidemiological Studies Depression Scale (CES-D). The CES-D is a 20-question instrument that asks respondents to identify how often they may have felt certain ways in the past week. Responses range from "Rarely or none of the time (Less than 1 day)" to "Most or all of the time (5 - 7 days)." Scores range from 0 - 60, with higher scores indicating greater depressive symptoms.

The CES-D was administered as part of screening for DC MOMS. Participants were eligible to participate in DC MOMS if they received a CES-D score of at least 16, in addition to meeting other eligibility criteria. The CES-D was administered again as part of the Baseline, Endpoint, and 3-Month Follow-Up assessments.

Change in depressive symptoms is described in two ways in this report: first, using numeric CES-D scores (described here as *linear change*); second, categorizing CES-D scores into one of two groups, CES-D <16 or CES-D  $\geq$ 16 (*dichotomous change*).

## A Note on Screening and Baseline Scores

The Baseline Assessment was typically administered before a participant's first MOMS SM class but may have been completed within a week after the participant's first class. In either case, participants experienced some level of engagement with the DC MOMS program and staff before the Baseline Assessment. In light of this,<sup>9</sup> we examined whether there was a change in CES-D scores between Screening and Baseline, shown in Table 10. We found that CES-D scores at Baseline were significantly lower than those at Screening.

Table 10: CES-D	scores, Screening	j to Baseline	
	SCREENING	BASELINE	

		BASELINE Mean (SD)	SIG.
CES-D (n = 82)	33.5 (10.0)	26.4 (11.4)	***
* <i>p</i> <.05, ** <i>p</i> < .01, *** <i>p</i> <.001; paired t-test			

## Linear Change

To examine the change in participant depressive symptoms, we compared CES-D scores at Baseline to those at Endpoint and 3-Month Follow-Up (Table 11). In all comparisons, CES-D scores at Endpoint or 3-Month Follow-Up were found to have decreased significantly from those at Baseline.

#### Table 11: CES-D scores, Baseline to Endpoint and 3-Month Follow-Up

	BASELINE Mean (SD)		FOLLOW-UP Mean (SD)	SIG.
CES-D (n = 59)	26.4 (11.1)	16.6 (10.0)	—	***
CES-D (n = 32)	25.1 (11.4)	—	17.8 (10.8)	**

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; paired t-test

## **Dichotomous Change**

A score of 16 or higher on the CES-D is a commonly used threshold to identify individuals at risk for clinical depression. We categorized CES-D scores into above-cutoff ("At risk") and below-cutoff ("Not at risk") groups to test for change in the proportion of participants considered at risk for clinical depression between Baseline and Endpoint and Baseline and 3-Month Follow-Up (all participants were above cutoff at Screening). At both Endpoint and 3-Month Follow-Up, a

<sup>&</sup>lt;sup>9</sup> A qualitative study of MOMS SM delivery in another setting found participants' interactions with program staff to be "an influential component of their treatment experience":

McMickens, C. L., Clayton, A., Rosenthal, M. S., Wallace, L., Howell, H. B., Bell, G., & Smith, M. V. (2019). A Qualitative Exploration of Mothers' Experiences Receiving Mental Health Services in a Supermarket Setting. *Maternal and Child Health Journal*, 23(4), 479–485.

significantly larger proportion of participants were considered **not at risk** for clinical depression more than twice as many as at Baseline.

Table 12: Clinical depression risk, Baseline to Endpoint (n = 59)			
CES-D SCORE CATEGORY	BASELINE n (%)	ENDPOINT n (%)	SIG.
At risk	49 (83.0%)	30 (50.9%)	***
Not at risk	10 (17.0%)	29 (49.2%)	

. . . Ξ.

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; McNemar's test

#### Table 13: Clinical depression risk, Baseline to 3-Month Follow-Up (n = 32)

CES-D SCORE CATEGORY	BASELINE n (%)	FOLLOW-UP n (%)	SIG.
At risk	26 (81.3%)	17 (53.1%)	*
Not at risk	6 (18.8%)	15 (46.9%)	·

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; McNemar's test

## **Perceived Stress**

Stress was measured at Baseline and Endpoint using the Perceived Stress Scale 4 (PSS-4), a fouritem questionnaire that measures "the degree to which situations in one's life are appraised as stressful"<sup>10</sup>. The questions ask how often the respondent felt or thought a certain way during the past month on a five-point scale; responses range from "Never" to "Very Often". The total score is the sum of response values for all four questions. Scores range from 0 - 16, with higher scores indicating greater perceived stress.

There was a significant decrease in PSS-4 scores from Baseline to Endpoint, suggesting an overall decrease in perceived stress after the course.

Table 14: PSS-4 scores	<b>Baseline to</b>	Endpoint (	(n = 57)
------------------------	--------------------	------------	----------

	_	ENDPOINT Mean (SD)	SIG.
PSS-4	8.5 (2.9)	6.6 (2.8)	**

#### \* *p*<.05, \*\* *p*<.01, \*\*\* *p*<.001; paired t-test

<sup>&</sup>lt;sup>10</sup> Cohen, S., & Williamson, G. (1988). Perceived Stress in a Probability Sample of the United States. In S. Spacapan, & S. Oskamp (Eds.), The Social Psychology of Health: Claremont Symposium on Applied Social Psychology (pp. 31-67). Newbury Park, CA: Sage.

## **Generalized Anxiety**

Anxiety was measured at Baseline, Endpoint, and 3-Month Follow-Up using the Generalized Anxiety Disorder 2-item scale (GAD-2), a 2-item questionnaire that asks about often the respondent has been bothered by certain problems over the past two weeks<sup>11</sup>. Responses range from "Not at all" to "Nearly every day". The total score is the sum of response values for the two questions. Scores range from 0 - 6, with higher scores indicating greater severity of anxiety.

There was a significant decrease in GAD-2 scores from Baseline to Endpoint, suggesting an overall decrease in generalized anxiety symptoms immediately after the course. No difference was found between Baseline and Follow-up scores.

#### Table 15: GAD-2 scores, Baseline to Endpoint (n = 57)

		ENDPOINT Median (Q1, Q3)	SIG.
GAD-2	3 (2, 4)	2 (0, 3)	***

\* *p*<.05, \*\* *p*<.01, \*\*\* *p*<.001; Wilcoxon signed-rank test

#### Table 16: GAD-2 scores, Baseline to 3-Month Follow-Up (n = 31)

		FOLLOW-UP Median (Q1, Q3)	SIG.
GAD-2	2 (1, 4)	2 (0, 3)	-

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; Wilcoxon signed-rank test

<sup>&</sup>lt;sup>11</sup> Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of Internal Medicine*, *166*(10), 1092-1097.

# SOCIAL SUPPORT

#### **KEY POINTS**

Participants' social support increased significantly between Baseline and Endpoint across all types of support measured. At 3-Month Follow-Up, scores remained significantly higher than at Baseline.

Participants report significantly greater instrumental support — that is, support with concrete and tangible needs — at Endpoint and 3-Month Follow-Up compared to Baseline.

#### **Social Support**

Social support was measured at Baseline, Endpoint, and 3-Month Follow-Up using the Medical Outcomes Study Social Support Survey (MOS-SSS), a 19-item questionnaire that measures overall functional social support and four social support subscales<sup>12</sup>. The four subscales are:

- Emotional/Informational Support
- Tangible Support
- Affectionate Support
- Positive Social Interaction

The questions ask about how often certain forms of support are available to the respondent; response choices range from "None of the time" to "All of the time". Scores for this scale and subscales were calculated according to guidance from the publisher and range from 0 - 100, with higher scores indicating greater availability of support.

Example items from each subscale are given below.

MOS-SSS SUBSCALE	EXAMPLE ITEM Prompt: How often is each of the following kinds of support available to you if you need it?
Emotional / Informational Support	Someone you can count on to listen to you when you need to talk
Tangible Support	Someone to help you if you were confined to bed
Affectionate Support	Someone who shows you love and affection
Positive Social Interaction	Someone to have a good time with

#### Table 17: MOS-SSS subscales and example items

<sup>&</sup>lt;sup>12</sup> Sherbourne, C. D., & Stewart, A. L. (1991). The MOS social support survey. *Social Science & Medicine*, 32(6), 705-714. doi:10.1016/0277-9536(91)90150-b

Social support scores overall and for all four subscales were significantly higher at Endpoint and 3-Month Follow-Up compared to Baseline.

ENDPOINT BASELINE SIG. SUBSCALE Median (Q1, Q3) Median (Q1, Q3) Emotional/Informational \*\*\* 43.8 (28.1, 65.6) 62.5 (43.8, 78.1) Support (n = 59)50.0 (25.0, 75.0) \*\*\* Tangible Support 25 (12.5, 59.4) \*\*\* Affectionate Support 58.3 (33.3, 79.2) 83.3 (58.3, 100.0) \*\*\* Positive Social Interaction 50.0 (25.0, 66.7) 66.7 (50, 83.3) \*\*\* 44.7 (28.9, 63.2) 61.8 (48.7, 78.9) **Overall Social Support** 

#### Table 18: MOS-SSS scores, Baseline to Endpoint (n = 60)

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; Wilcoxon signed-rank test

# Table 19: MOS-SSS scores, Baseline to 3-Month Follow-Up (n = 33)

SUBSCALE	BASELINE Median (Q1, Q3)	FOLLOW-UP Median (Q1, Q3)	SIG.
Emotional/Informational Support	40.6 (21.9, 62.5)	68.8 (53.1, 90.6)	***
Tangible Support	31.3 (18.8, 62.5)	50 (31.3, 87.5)	***
Affectionate Support	58.3 (33.3, 75.0)	83.3, (58.3, 100.0)	*
Positive Social Interaction	50.0 (25.0, 66.7)	75.0 (50.0, 100.0)	***
Overall Social Support	46.1 (26.3, 63.2)	67.1 (48.7, 89.5)	***

\* *p*<.05, \*\* *p*<.01, \*\*\* *p*<.001; Wilcoxon signed-rank test

# **Instrumental Social Support**

Instrumental support — social support that helps to meet concrete and tangible needs — was measured at Baseline, Endpoint, and 3-Month Follow-Up using four questions from Jackson et al.<sup>13</sup> Questions ask respondents to "indicate the level of help they could acquire from others if such support was needed." Response choices range from "Never true" to "True all of the time". The total score is the average of response values for all four questions. Scores range from 0 - 2, with higher scores indicating greater instrumental support.

There was a significant increase in instrumental support scores from Baseline to Endpoint and 3-Month Follow-Up, suggesting that participants felt more support was available to them after the course to help meet concrete and tangible needs.

# Table 20: Instrumental social support scores, Baseline to Endpoint (n = 60)

		ENDPOINT Mean (SD)	SIG.
Instrumental Support	0.8 (0.5)	1.0 (0.5)	**

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; paired t-test

#### Table 21: Instrumental social support scores, Baseline to 3-Month Follow-Up (n = 33)

		FOLLOW-UP Mean (SD)	SIG.
Instrumental Support	0.8 (0.5)	1.0 (0.5)	*

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; paired t-test

<sup>&</sup>lt;sup>13</sup> Jackson, A. P., Brooks-Gunn, J., Huang, C. C., & Glassman, M. (2000). Single mothers in low-wage jobs: financial strain, parenting, and preschoolers' outcomes. *Child Development*, *71*(5), 1409–1423.

## **ECONOMIC SECURITY**

#### KEY POINTS

A larger proportion of DC MOMS participants reported no trouble paying for basic supplies and hygiene products at Endpoint compared to Baseline.

The percentage of participants reporting a high level of financial stress decreased significantly from Baseline to Endpoint and remained lower at 3-Month Follow-Up.

#### **Basic Need**

Ability to meet basic needs was assessed at Baseline, Endpoint, and 3-Month Follow-Up.<sup>14</sup> Participants were asked about how much trouble they experienced paying for several categories of basic goods: supplies like formula, food, clothes, and shoes ("basic supplies"); cleaning and hygiene supplies like shampoo, toothpaste, pads, tampons, and toilet paper ("hygiene products"); and diapers, if applicable. Response choices were "No trouble", "Some trouble", and "A lot of trouble". For analysis, responses "A lot of trouble" and "Some trouble" were combined into a single category *trouble*.

A significantly larger proportion of participants indicated no trouble paying for basic supplies and hygiene products at Endpoint compared to Baseline. Similar changes in proportions were seen at 3-Month Follow-Up for hygiene products only. No difference was detected between Baseline and Endpoint or 3-Month Follow-Up responses for other items; this may be due in part to the small sample size for those items.

	BASELINE n (%)	ENDPOINT n (%)	SIG.
Trouble Paying for Basic Sup	olies (n = 47)		
Trouble	39 (83.0%)	29 (61.7%)	**
No trouble	8 (17.0%)	18 (38.3%)	.1.1.
Trouble Paying for Hygiene Products ( $n = 53$ )			
Trouble	43 (81.1%)	32 (60.4%)	***

# Table 22: Self-reported trouble paying for basic needs, Baseline toEndpoint

<sup>&</sup>lt;sup>14</sup> The number of participants who responded to these items was noticeably lower than for other outcomes measures, leading to the small sample sizes for analysis seen here. This is likely related to problems with the display of this set of questions for participants who completed the survey on a mobile device.

	BASELINE n (%)	ENDPOINT n (%)	SIG.
No trouble	10 (18.9%)	21 (39.6%)	
Trouble Paying for Diapers ( $n = 20$ )			
Trouble	15 (75.0%)	12 (60.0%)	
No trouble	5 (25.0%)	8 (40.0%)	_

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; McNemar's test

# Table 23: Self-reported trouble paying for basic needs, Baseline to3-Month Follow-Up

	BASELINE n (%)	FOLLOW-UP n (%)	SIG.
Trouble Paying for Basic Sup	plies (n = 27)		
Trouble	22 (81.5%)	16 (59.3%)	
No trouble	5 (18.5%)	11 (40.7%)	_
Trouble Paying for Hygiene P	Products (n = 28)		
Trouble	22 (78.6%)	16 (57.1%)	*
No trouble	6 (21.4%)	12 (42.9%)	
Trouble Paying for Diapers $(n = 14)$			
Trouble	8 (57.1%)	8 (57.1%)	
No trouble	6 (42.9%)	6 (42.9%)	_

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; McNemar's test

## **Financial Stress**

Financial stress was measured at Baseline, Endpoint, and 3-Month Follow-Up using the question "How much stress or worry do you feel about your personal finances?" Response choices were "None", "Very little", "Some", "A fair amount", and "A lot". For analysis, responses were grouped into two categories:

- "None", "Very little", and "Some" responses were combined as low to moderate financial stress.
- "A fair amount" and "A lot" responses were combined as high financial stress.

The proportion of participants reporting a high level of financial stress was significantly lower at Endpoint and 3-Month Follow-Up compared to Baseline.

#### Table 24: Financial stress, Baseline to Endpoint (n = 60)

	BASELINE n (%)	ENDPOINT n (%)	SIG.
Low to moderate financial stress	11 (18.3%)	22 (36.7%)	*
High financial stress	49 (81.7%)	38 (63.3%)	

\* *p*<.05, \*\* *p*<.01, \*\*\* *p*<.001; McNemar's test

#### Table 25: Financial stress, Baseline to 3-Month Follow-Up (n = 33)

	BASELINE n (%)	FOLLOW-UP n (%)	SIG.
Low to moderate financial stress	5 (15.2%)	12 (36.4%)	*
High financial stress	28 (84.9%)	21 (63.6%)	

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; McNemar's test

## **Employment**

Participants were asked whether they were currently employed at least 15 hours per week for pay at Baseline, Endpoint and 3-Month Follow-Up. No difference was detected in the proportion of participants employed at Baseline compared Endpoint or 3-Month Follow-Up.

# Table 26: Participant employment (15+ hours/week), Baseline to Endpoint (n = 60)

	BASELINE n (%)	ENDPOINT n (%)	SIG.
Working 15+ hours/week for pay	4 (6.7%)	5 (8.3%)	-

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; McNemar's test

# Table 27: Participant employment (15+ hours/week), Baseline to 3-Month Follow-Up (n = 33)

	BASELINE n (%)	FOLLOW-UP n (%)	SIG.
Working 15+ hours/week for pay	2 (6.1%)	4 (12.1%)	—

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; McNemar's test

# PARENTING SKILLS AND SATISFACTION

#### KEY POINTS

# Overall, participants reported an increase in their perception of effective limit setting with their child(ren).

Parenting skills and satisfaction were measured at Baseline and 3-Month Follow-Up using four scales from the Parent-Child Relationship Inventory (PCRI).<sup>15</sup> The PCRI asks respondents to indicate their level of agreement with statements regarding their attitudes toward parenting and their relationship with their child. The four PCRI scales included in the assessments were:

- Satisfaction (the degree of enjoyment received from being a parent)
- Involvement (the degree of engagement and familiarity with the child)
- Communication (the degree to which the parent communicates with their child in various situations)
- Limit setting (the perceived effectiveness of the parent's discipline practices)

The respondent indicates their level of agreement or disagreement with each statement on a fourpoint scale. Scores for each scale were calculated using standard guidance from the instrument manual. If a question in the scale was not answered, no score was calculated for that scale.

Participants' scores on the limit setting subscale were significantly higher at 3-Month Follow-Up compared to Baseline, suggesting that participants felt their discipline practices, or limit setting, were more effective after the course. No significant differences were detected for other subscale scores; this may be due in part to the small sample size.

#### Table 28: PCRI scores, Baseline to 3-Month Follow-Up (n = 32)

	1		
PCRI SUBSCALE	BASELINE Mean (SD)	FOLLOW-UP Mean (SD)	SIG.
Satisfaction	44.9 (9.7)	46.3 (11.8)	—
Involvement	48.5 (13.1)	50.0 (12.4)	—
Communication	45.9 (9.4)	48.3 (11.8)	—
Limit setting	45.9 (9.7)	48.8 (7.9)	*

\* *p*<.05, \*\* *p*< .01, \*\*\* *p*<.001; paired t-test

<sup>&</sup>lt;sup>15</sup> Gerard, A. B. (1994). Parent-Child Relationship Inventory (PCRI): Manual. Los Angeles, CA: Western Psychological Services.

# Conclusion

DC DHS and Elevate partnered to strengthen mental health supports for low-income women and their families by embedding the MOMS program within the District's TANF program. Between April 2019 and February 2021, the DC MOMS pilot successfully delivered MOMS SM to 183 TANF customers in eight successive cohorts. Services were delivered in person at two hub sites until March 2020, when DC MOMS transitioned to virtual programming in response to the COVID-19 pandemic. Despite implementation challenges presented by the pandemic, the DC MOMS pilot succeeded in implementing MOMS SM classes and collecting pilot data through a shift to completely virtual MOMS SM delivery and data collection. DC DHS has continued to offer DC MOMS programming beyond the pilot stage.

This study assessed outcomes for DC MOMS pilot participants through a pre-post evaluation of self-reported measures. Findings from the evaluation indicated high levels of MOMS SM attendance and participant satisfaction with the course. These findings are supported by the personal observations and experiences of MOMS staff throughout the course of the pilot.

#### **EVALUATION FINDINGS**

Participants experienced improvements in several key indicators of mental health: measures of depression, stress, and anxiety decreased significantly after MOMS SM participation, and reductions in depression were sustained three months after program completion. The evaluation found significant and sustained improvements in social and instrumental support for pilot participants.

These results — which align with similar outcomes found for MOMS SM participants in other settings nationwide<sup>16</sup> — are encouraging. Mental health challenges are pervasive among low-income mothers and caregivers, and increased social support is associated with lower levels of maternal depression.<sup>17</sup> In addition to the well-being of mothers, economic insecurity and maternal depression pose a risk for the current and future well-being of their children. Research indicates that maternal depression may be responsible for the harmful impact of economic pressure on child well-being,<sup>18</sup> making improvements in mothers' mental health a critical outcome not only for participants, but also for their families.

Participants reported lower levels of financial stress after participation and at follow-up, though overall financial stress remained high. The evaluation also found a reduction in trouble paying for certain basic needs over the course of participation. It's possible that this finding represents an effect of program participation, such as referrals to community resources or increased material and

<sup>&</sup>lt;sup>16</sup> Callinan, L.S., Yeh, E.J., Thompson, K., & Hahn, H. (2023). *Bridgeport MOMS Partnership*<sup>5M</sup> *Pilot Evaluation Report.* Elevate Policy Lab, Yale School of Medicine; Callinan, L.S., Yeh, E.J., & Hahn, H. (2023). *Vermont MOMS Partnership*<sup>5M</sup> *Pilot Evaluation Report.* Elevate Policy Lab, Yale School of Medicine; Posner, C.S. & Callinan, L.S. (2023).

NYC DHS MOMS Partnership<sup>5M</sup> Pilot Evaluation Report. Elevate Policy Lab, Yale School of Medicine. (Available upon request.)

<sup>&</sup>lt;sup>17</sup> Radey, M. (2018). Informal support among low-income mothers post welfare reform: a systematic review. *Journal of Child and Family Studies*, 27(12), 3782–3805.

<sup>&</sup>lt;sup>18</sup> Holmes, S. C., Ciarleglio, M. M., Song, X., Clayton, A., & Smith, M. V. (2020). Testing the Family Stress Model among Black Women Receiving Temporary Assistance for Needy Families (TANF). *Journal of Child and Family Studies, 29*(10), 2667–2677.

financial support from social networks, or an unrelated effect of economic and in-kind assistance if participants were newly enrolled in TANF or other benefits programs. The evaluation found an increase in participants' perception of effective limit setting with their child but did not detect change in other domains related to parenting; this may be attributable to both the small sample size for analysis and the appropriateness of the PCRI measure for assessing parenting outcomes.

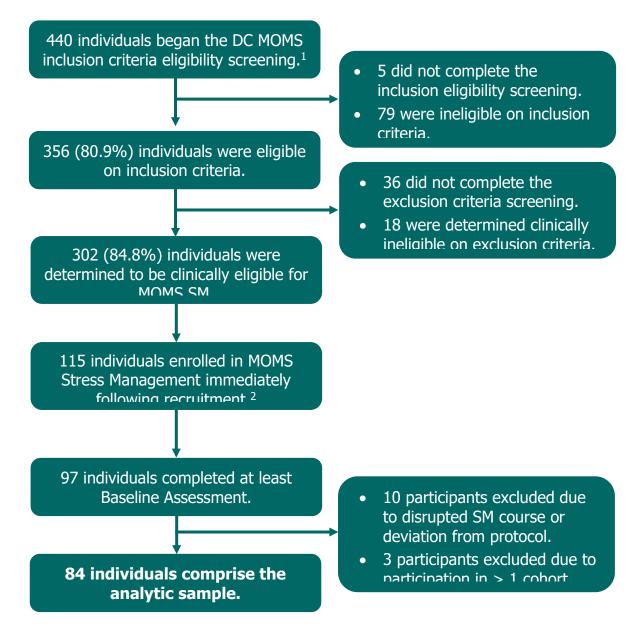
Limitations on statistical power due to small sample size may have contributed to other cases where significant changes were not detected. For those findings which were significant, there may also be explanations for the changes identified outside of DC MOMS, including the support of additional resources and services through DC DHS, other factors in participants' environments, or the alleviation of mental health symptoms with time.

# **NEXT STEPS**

The scope of this study was limited to the pre-post evaluation of self-reported participant data, and findings do not provide evidence for the causal role of DC MOMS participation in outcomes. A comparison of outcomes related to depression symptoms from the randomized delayed-start study is underway at the time of this report. This study suggests that participation in MOMS was associated with positive changes across a number of domains; further questions remain about the mechanisms by which MOMS SM participation contributes to these outcomes, as well as the role of individual characteristics and participants' level of engagement with MOMS in these outcomes. Elevate and DC DHS are currently exploring opportunities for further analysis of the pilot data.

# Appendix

# Figure A: Flow of customers from Screening to participation and inclusion in the analytic sample



<sup>1</sup>Some individuals began or completed the inclusion criteria eligibility screening more than once, but each individual is counted only once in this diagram.

<sup>2</sup>Recruitment for a cohort was considered as beginning after the last date of Class 2 for the prior cohort, if any, and as continuing until the last opportunity to enroll in the cohort (the last date of Class 2).

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