Yale SCHOOL OF MEDICINE

Bridgeport MOMS Partnership℠ Pilot Evaluation Report

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Table of Contents

Preface 4
  Acknowledgements 4
  Note on Language 4
Executive Summary 5
  Overview 5
  Evaluation 5
  Key Findings 5
The MOMS Partnership Overview 7
  The MOMS Partnership® 7
  The Bridgeport MOMS Partnership℠ 8
Bridgeport MOMS Design 9
  Recruitment 9
  Screening and Eligibility 9
  Engagement Session and Consent 9
  Incentives 10
  Stress Management Course 10
  Instructors 10
  Basic Needs Resource Connections 11
    Challenges, Adaptations, and Unique Features 11
  Leadership and Staffing 11
  Outreach and Referral Pathways 13
  COVID-19 Pandemic 13
  Language Barriers 14
  Integration of the CMHA role 14
Measures 15
  Evaluation Questions 15
  Measures 15
  Data Sources and Analysis 16
  Limitations 17
Bridgeport MOMS Participants 18
  Recruitment 18
  Participant Characteristics 20
    Demographics 20
  Engagement in Stress Management 26

Attendance 26
Engagement with Bridgeport MOMS Staff 27
Participant Satisfaction 28
Program Outputs and Outcomes 30
Mental Health and Wellbeing 30
Depressive Symptoms 30
Depressive Severity 33
Perceived Stress 34
Anxiety 35
Emotion Regulation 36
Self-Efficacy 37
Attitudes Toward Mental Health Treatment 38
Parenting Satisfaction and Efficacy 38
Social Support 39
Bridgeport Moms Partner Reflections 41
Conclusion 43

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Preface

ACKNOWLEDGEMENTS

The pilot would not have been possible without the support of Viking Global Foundation and the Pfizer Foundation.

We sincerely thank the leadership and staff of the Alliance for Community Empowerment, the Greater Bridgeport Area Prevention Program, Southwest Community Health Centers, and the East End Neighborhood Revitalization Zone (NRZ) Market and Café for their commitment to and support for the Bridgeport MOMS Partnership Pilot and its evaluation.

We extend special thanks to the staff who carried out the day-to-day work of service delivery and data collection. This report is a testament to their dedication to the Bridgeport MOMS participants. We also thank all those who attended the pilot evaluation results meetings and/or shared feedback or edits to this document.

Finally, we want to express our thanks to the mothers and caregivers who participated in the Bridgeport MOMS Pilot. Their time, effort, and knowledge made the pilot and evaluation possible, and we extend to them our deepest gratitude.

NOTE ON LANGUAGE

The Mental health Outreach for MotherS (MOMS) Partnership® was established with the conviction that the unique socioeconomic, cultural, and psychological implications of gender and sex, particularly for parenting and caregiving individuals, demand mental health programming tailored to the experiences of mothers and women. This language is imperfect, though. While we use the term *mother* and *woman* as shorthand in this report, the individuals who participate in MOMS Partnership programming — in the Bridgeport MOMS Partnership℠ and other sites nationwide — have diverse identities and roles in the lives of the children for whom they are caregivers: kin and non-kin, custodial and informal. In this pilot, eligibility involved self-identification as *women*; this language, too, may not perfectly describe the gender identities of all MOMS participants, nor all those who have the social and biological experiences of pregnancy, motherhood, or categorization as female.

Executive Summary

OVERVIEW

Launched in New Haven in 2011, the Mental Health Outreach for MotherS (MOMS) Partnership is a program model and package of principles and approaches that, when brought together, have the potential to significantly reduce depressive symptoms among under-resourced, over-burdened pregnant women and mothers, and increase the social and economic mobility of their families. The focus of MOMS programming is on directly strengthening maternal mental health in order to bolster family stability, economic, and social mobility.

The Bridgeport MOMS Partnership[SM] (Bridgeport MOMS) is a partnership with the Alliance for Community Empowerment (Alliance), the Greater Bridgeport Area Prevention Program (GBAPP), and Southwest Community Health Centers (Southwest CHC). The partnership offers the MOMS Stress Management (MOMS SM) course, a manualized, evidence-based intervention that is delivered in a closed group setting over eight weeks, to mothers and women caregivers living in the greater Bridgeport area. MOMS SM is co-delivered by a mental health clinician and a Community Mental Health Ambassador (CMHA), a paid staff member who is also a parent or caregiver from the local community and shares lived experience with program participants. In establishing Bridgeport MOMS, partners aimed to expand the local offerings available to address maternal mental health.

Bridgeport MOMS delivered eight virtual cohorts of MOMS SM during the pilot between May 2021 and April 2023. Over the course of the pilot, 111 individuals attended at least one MOMS SM class.

EVALUATION

The evaluation of Bridgeport MOMS utilized self-report data collected from participants as well as data provided by staff. Participants completed assessment surveys at three time points ((Baseline, Endpoint (i.e., course completion) and Follow-up (i.e., three months after course completion)). The assessments contained questions about participants' mental health, wellbeing, and social support.

KEY FINDINGS

Participants in Bridgeport MOMS

Over 40% of individuals screened heard about Bridgeport MOMS from a professional referral. The majority of the individuals screened for Bridgeport MOMS (86%) were eligible to participate in the program. In addition, 80% of eligible individuals attended at least one MOMS SM class.

Most participants in Bridgeport MOMS identified as "Black or African-American, Non-Hispanic," had never been married and had at least a high school education or GED, and had experienced financial or material hardship in the past year.

While about 30% of participants received outpatient treatment or counseling for mental health in the past year, 40% indicated there was a time when they wanted mental health treatment and were not able to get it.

Participant Engagement and Satisfaction

- Participants attended most classes: the median attendance was 7 out of 8 classes.
- Most participants (91%) were satisfied or very satisfied with the MOMS SM course.
- Participants reported frequently utilizing skills or strategies from the MOMS SM course.

Improvements in Measures of Mental Health

- Overall, participants reported improvements in mental health indicators.
- Significant improvement was seen on measures of **depressive symptoms**, **depressive severity**, **perceived stress**, and **anxiety** between Baseline and Endpoint and remained improved at Follow-up.
- After engagement in MOMS SM, almost 40% of participants had **depressive symptoms** that were below the threshold for at risk for clinical depression.
- Improvements were also seen with **emotion regulation**, feelings of **self-efficacy** and **competence in parenting**.
- Participants indicated an overall increase in **positive attitudes towards seeking mental health treatment** from the beginning to end of the course

Increased Social Support

Participants indicated more social support after the course: **overall social support** as well as **emotional / informational support** and **positive social interaction** significantly increased from Baseline to Endpoint to Follow-up.

Summary

Evaluation findings suggest that participation in Bridgeport MOMS was associated with positive changes in participants' self-reported mental health and wellbeing indicators. The findings from the pilot evaluation suggest that, as intended, participants generally reported improvements in indicators of mental health and social support.

The MOMS Partnership Overview

THE MOMS PARTNERSHIP®

Launched in New Haven in 2011, the Mental Health Outreach for MotherS (MOMS) Partnership is a program model and package of principles and approaches that, when brought together, have the potential to significantly reduce depressive symptoms among under-resourced, over-burdened pregnant women and mothers, and increase the social and economic mobility of their families. The focus of MOMS programming is on directly strengthening maternal mental health in order to bolster family stability, economic, and social mobility. Since 2018, the Elevate Policy Lab (Elevate) has worked to scale the model through partnerships that embed the MOMS Partnership in human services agencies and public safety net programs — meeting mothers where they are to bring mental health services within reach.

At the heart of the MOMS Partnership is the MOMS Stress Management (MOMS SM) course. MOMS SM is a manualized, cognitive behavioral therapy-based group course that meets once per week for 8 weeks. MOMS SM was originally adapted from The Mothers and Babies Course[1] for the population of mothers served by the MOMS Partnership. MOMS SM encourages active participation and skill acquisition through interactive exercises, discussion, and practice. Participants learn:

- skills to recognize their mood;
- skills to change their mood through intentionally changing thoughts and behaviors; and
- effective functioning skills including response inhibition, metacognition, and flexibility.

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 delivered in a clinical setting, MOMS Partnership programming is offered in community locations identified as convenient, accessible, and safe for participants. MOMS SM may also be delivered virtually. The MOMS Partnership model includes incentives to compensate participants for their time — including class, recruitment activities, and assessments — and to support them in meeting their family's material needs.

[1] Le, H.N. Le & Muñoz, R.F. (2011). *The Mothers and Babies Course: Instructor's Manual* (8-Session Course Adaptation) and 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).

THE BRIDGEPORT MOMS PARTNERSHIP℠

The Bridgeport MOMS Partnership℠ (Bridgeport MOMS) is a partnership with the Alliance for Community Empowerment (Alliance), the Greater Bridgeport Area Prevention Program (GBAPP), and Southwest Community Health Centers (Southwest CHC). The partnership offers MOMS SM classes to mothers and women caregivers living in the greater Bridgeport area.

Before implementing the MOMS Partnership in Bridgeport, a Goals and Needs Assessment (GNA) was conducted in Spring of 2019, to further understand the needs of maternal caregivers in the Bridgeport community.[2] Around 40% of survey respondents indicated low levels of social support and were at risk for clinical depression. Around 60% of GNA respondents also screened positive for food insecurity, housing insecurity and diaper need. These findings, together with conversations with leaders of Bridgeport community-based and faith-based organizations supported the idea that the MOMS Partnership would be a good fit for maternal caregivers in Bridgeport.

Planning for MOMS Partnership programming began in the fall of 2020. Together with Alliance and GBAPP, the East End Neighborhood Revitalization Zone (NRZ) Market and Café engaged in the planning process. Bridgeport partners emphasized the need to bring accessible mental health treatment into Bridgeport.

In establishing Bridgeport MOMS, partners aimed to expand the local offerings available to address maternal mental health. After implementation planning and staff training were completed, Bridgeport MOMS services launched in April 2021. As with each MOMS site, Elevate worked with local partners to design and carry out an evaluation. The evaluation was designed to assess the impact of Bridgeport MOMS and included a pre-post study of participant outcomes. Following the conclusion of the Bridgeport MOMS Pilot in July 2023, partners are continuing to offer MOMS programming. This report describes the Bridgeport MOMS Pilot and the results of the pre-post evaluation study.

Elevate has prepared this report for local program partners with the hope that the information can be used to demonstrate the impact of the program to stakeholders and garner continued investment for MOMS Programming. The information provided may also be used to inform ongoing conversations around health and wellness in the Bridgeport community. Elevate plans to use information gathered through this pilot and evaluations conducted at other Elevate sites for the purposes of improving MOMS Partnership programming. For example, Elevate will use information to improve how MOMS programming is evaluated, to improve training for MOMS staff and to improve how participants learn about programming. As MOMS program improvements are made, they will be shared with all MOMS Partnership sites, including Bridgeport MOMS.

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[2] Elevate (2019). *Findings from Six MOMS Partnership® Goals & Needs Assessments. chrome-*
https://ysph.yale.edu/elevate/our-work/scaling/gna%20findings%20from%20six%20sites_413158_284_52073_v1.pdf

Bridgeport MOMS Design

The Bridgeport MOMS Partnership began delivering virtual MOMS SM classes in May 2021. Eight cohorts of MOMS SM classes were delivered during the pilot between May 2021 and April 2023. Data collection continued through July 2023 to allow for collection of follow-up data from the last cohort of participants in the pilot. Over the course of the pilot, 111 individuals attended at least one MOMS SM class.

RECRUITMENT

Potential participants were recruited through a variety of recruitment strategies including distribution of posters, flyers, tabling at community events and online social media content. In addition, referral pathways were developed to channel potential participants into Bridgeport MOMS from other programs at Bridgeport MOMS partner organizations and other local organizations such as Bridgeport Hospital. Through these referral pathways potential participants who expressed interest in Bridgeport MOMS allowed their contact information to be shared with Bridgeport MOMS staff who reached out to provide more information on Bridgeport MOMS and begin the screening process.

SCREENING AND ELIGIBILITY

Eligibility screening was conducted by the Bridgeport MOMS Clinician[3]. Individuals were eligible to participate in Bridgeport MOMS if the following criteria were met at screening:

- identify as a woman
- are at least 18 years of age
- are pregnant and/or a primary caregiver to a child under 18 years of age
- score 16 or higher on the Center for Epidemiological Studies Depression Scale (CES-D) (indicating at risk for clinical depression)
- speak English
- do not demonstrate acute psychosis or suicidal ideation

ENGAGEMENT SESSION AND CONSENT

If an individual was eligible for participation in Bridgeport MOMS after screening, the MOMS Clinician or CHMA invited the individual to an engagement session where the participant indicated their consent to participate in programming; participants consented before attending their first MOMS SM class.

The goals of the engagement session were to increase investment in MOMS SM Course participation; communicate key virtual class guidelines; address individual barriers to participation that might include technological or other practical barriers like childcare, as well as psychological or cultural barriers to participation in mental health treatment; convey understanding of clients' individual and culturally embedded perspectives, help clients recognize how the potential benefits of

[3] Final clinical eligibility to participate in MOMS SM was determined by the Bridgeport MOMS Clinician after using the clinical screener as a guide for assessing acute psychosis or suicidal ideation.

treatment align with their own priorities and concerns; and ensure that the participant can meet the unique requirements of participation.

The consent provided a written description of the course, assessments and incentives. Since Bridgeport MOMS services were conducted virtually, the participant was first verbally consented. The consent form was then emailed to the participant, who then returned a signed copy of the consent to the Bridgeport MOMS team.

The engagement session and consent were scheduled as a follow-up meeting to the screening or combined with the screening into one phone call based upon the preferences and availability of the participant. The majority of the participants chose to combine the screening, engagement session, and consent into one meeting.

INCENTIVES

The Bridgeport MOMS program offered monetary incentives for participation to compensate caregivers for their time and support them in meeting their families' basic needs. Participants in Bridgeport MOMS were incentivized for participation as follows:

- $40 for assessment completion (Baseline, Endpoint, and Follow-up)
- $20 for weekly class attendance

Incentives were provided in the form of gift cards. During the first three cohorts of the pilot, most incentives were delivered by MOMS staff to participants' residences. For the remainder of the pilot, participants picked up the incentives from the Clinician at a GBAPP location. In addition, if needed, diapers were also available at no cost to participants through the Diaper Bank partnership at GBAPP.

STRESS MANAGEMENT COURSE

The MOMS SM course is a manualized, evidence-based intervention that is delivered in a closed group setting over eight weeks. MOMS SM is based on cognitive behavioral therapy and builds skills for changing mood and behavior. Classes meet for 90 minutes per week. Since MOMS SM groups are closed, an individual must attend either class 1 or 2 to be considered enrolled in MOMS SM and continue attending classes.

INSTRUCTORS

MOMS Partnership courses are co-delivered by a mental health clinician (MOMS Clinician) and a CMHA.

The MOMS Clinician provides participants with light-touch clinical support during their journey to improved mental health and wellbeing and may support referrals to additional supports if participants express additional need. As a trained and experienced mental health professional, the MOMS Clinician takes the lead on participant eligibility screening and delivery of MOMS courses.

The CMHA, typically a mother from the local community who shares similar lived experiences to women enrolling in MOMS Partnership programming, accompanies participants from outreach through course delivery. Sharing aspects of identity with participants, the CMHA helps to ensure that service delivery is culturally relevant and sensitive and may assist with reducing barriers and stigmas associated with receiving mental health support.

BASIC NEEDS RESOURCE CONNECTIONS

As part of Bridgeport MOMS, staff worked to connect participants with community resources to help address unmet needs. The MOMS Clinician and CMHA gathered information about participants' individual needs in several ways.

During the screening and engagement session process, Bridgeport MOMS staff asked about unmet basic needs. After each participant completed the Baseline assessment, the Bridgeport MOMS staff received an email that provided information about the participant's responses to some key basic need questions. The staff followed up with participants to connect them with resources or referrals. Bridgeport MOMS staff also announced during MOMS SM classes that participants were welcome to reach out to the MOMS Clinician or CHMA for assistance accessing resources to meet basic needs.

In addition, a list of local resources was compiled utilizing existing resource documents from the partner organizations and was expanded and updated over the duration of the pilot. This list of resources was provided to all participants during the MOMS SM course, thus providing some general resource information to participants. Finally, the MOMS Clinician provided referrals for additional mental health support for participants who requested such or demonstrated greater need throughout the course.

Challenges, Adaptations, and Unique Features

The Bridgeport MOMS Pilot was a replication of the MOMS Partnership model led by a community-based organization. Key roles in implementation were filled by two other community-based organizations. While Elevate has primarily worked with partners to scale the model through partnerships that embed the MOMS Partnership in human services agencies and public safety net programs, this replication with community partners provided an opportunity to assess and address challenges with replicating in a different setting, to make adaptations where fidelity to the core model permitted, and to understand unique features of MOMS implementation and service delivery in this context. This section describes some programmatic and contextual elements of Bridgeport MOMS implementation that highlight adaptations, unique features and challenges.

LEADERSHIP AND STAFFING

Alliance Executive Director Dr. Monette Ferguson acted in a leadership capacity for the MOMS Partnership throughout the planning and pilot phases. In this role, Dr. Ferguson contributed significant time and expertise to planning and program set-up, oversaw the participation of the Alliance team, collaborated with Elevate in fundraising efforts and independently initiated and led fundraising efforts to support Bridgeport MOMS.

As with leaders in other MOMS Partnership sites, Dr. Ferguson's leadership role was not specifically funded; however, Bridgeport MOMS differed from other MOMS Partnership sites in two significant ways. First, Dr. Ferguson pro-actively fundraised for MOMS programming during the early stages of implementation. This was not only time-consuming but also called for investment of critical capital. Dr. Ferguson's investments paid off in the form of an ARPA grant, which was secured and offered significant and needed support for programming in the second year of the pilot. Second, the participation of the MOMS leader was not subsidized by a public sector partner. Instead, since Dr. Ferguson is the leader of a community-based organization, her organization was effectively called upon to subsidize the efforts she allocated to MOMS[4]. Understandably, commitment at this level is not sustainable without funding support. Dr. Ferguson stepped back from her formal leadership role in May 2023, but continues to offer her expertise and support to the Bridgeport MOMS, which has now transitioned to be formally led by Dr. Nancy Kingwood at GBAPP.

In addition to the essentially unfunded contributions made by Dr. Ferguson throughout program planning and pilot implementation, the contributions of the other two community leaders were notable. Dr. Nancy Kingwood, Executive Director of GBAPP initially partnered with Elevate on the GNA and continued as a key member of the Bridgeport MOMS Partnership leadership team throughout the planning and pilot phases. Under her leadership, the MOMS Clinician and MOMS Clinical Supervisor were selected and trained. As Bridgeport MOMS continues services following the pilot phase, GBAPP has assumed the leadership role. Ms. Mollie Melbourne, President/CEO of Southwest Community Health Center, joined the Bridgeport MOMS Leadership team during the implementation phase, at the invitation of Dr. Ferguson. With Ms. Melbourne's leadership, the Bridgeport MOMS Partnership was able to engage the services of a dynamic Community Health Worker when the original MOMS CMHA was offered a promotion. In addition, Ms. Melbourne has helped the Partnership to explore the integration of MOMS programming with healthcare services offered at Southwest and make vital community connections.

The vital contributions of these community organizations, and the personal commitments of the dynamic women who lead them, are the heart of the Bridgeport MOMS Partnership. Dr. Ferguson has remarked more than once that it is this collaboration that makes Bridgeport MOMS distinctive. Although fewer of the current MOMS sites have such close-knit decision-making networks guiding programming, the approach taken by the Bridgeport MOMS Partnership is reminiscent of the New Haven MOMS Guide Team. Like the original New Haven Guide Team, the leaders of the Bridgeport MOMS Partnership come together to weigh in on key programmatic decisions (i.e., incentives) and set the course for future programming (i.e., applications for funding, decisions about whether to explore billing for services). While not governed by formal Guiding Principles as the New Haven Guide Team was, the longstanding relationships between these organizations and their leaders which predates MOMS clearly has laid a foundation for collaborative practice from which Bridgeport MOMS has benefited.

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[4] A small proportion of administrative overhead supported Alliance, in addition to the funds that were utilized to support the CMHA during the first phase of the pilot. Additionally, once the Alliance secured ARPA funds, administrative overhead support may have been available to support efforts, although this was estimated to be very minimal and did not cover the costs of Dr. Ferguson's contributions.

Over time, Elevate has learned that the role of a dedicated Program Manager is critical to smooth MOMS Partnership program operations. Typically, the MOMS Program Manager is responsible for overseeing program setup, coordinating MOMS staff training, onboarding, and supervising the MOMS CMHA, and overseeing the implementation of MOMS programming once it has launched. The MOMS Program Manager works closely with all members of the MOMS team, supporting them to carry out their responsibilities. In the Bridgeport MOMS Partnership context, which required coordination between three busy partner organizations, this role was of particular importance. However, because there was not dedicated funding for this role until Spring 2023, the responsibilities for coordination fell to various team members at times. The Alliance supported Bridgeport MOMS with coordination efforts, as did the Elevate team. With the availability of dedicated funding for a Program Manager employed by one of the local partners, partners anticipate that some of the strain experienced around building referral pathways, scheduling, communication, etc. will be alleviated.

OUTREACH AND REFERRAL PATHWAYS

As the MOMS Partnership model has been scaled through partnerships that embed the programming in human services agencies and public safety net programs, referral pathways to MOMS programming have typically been established by first engaging existing clients or customers. A defining feature of Bridgeport MOMS is that it is embedded in a network of community-based organizations. Each partner organization has significant reach in the community and also intersects with under-resourced, over-burdened mothers and caregivers who may be at risk for depression and may benefit from maternal mental health programming. While the three partner agencies have overlapping clientele, each partner agency also has unique opportunities to offer and engage caregivers in MOMS programming. Partners explored the value of offering MOMS to caregivers through their agency programming (e.g., through healthcare channels at Southwest and by sharing information about MOMS to caregivers engaging in early childhood programming at Alliance). In addition, the Bridgeport MOMS team worked to build awareness among community partners about the availability of MOMS as a resource in the community, thus cultivating a network of external referral partners. The team also utilized deep awareness of the community to plan targeted outreach, including flyer distribution and tabling at community events.

COVID-19 PANDEMIC

Since the onset of the pandemic, MOMS SM has been successfully delivered as a virtual program, and Bridgeport MOMS received training in virtual service delivery. Although in-person Hub options were explored during the program planning phase, at the time-of-service launch, public health measures did not allow for in-person service delivery and the decision was made to offer virtual classes exclusively. This mode of service delivery was comfortable for staff and appeared to be well-received by participants. At various times throughout the pilot the team considered whether to add options for in-person classes. However, local MOMS leadership and staff determined that increased rates of Covid-19 in the community or the exposure of staff or participants increased the risk of in-person services; moreover, practical barriers (e.g., childcare and transportation) were identified as potentially significant deterrents to in-person participation. Preparations to address these barriers can be made prior to beginning in-person classes in the future.

LANGUAGE BARRIERS

From the start, the Bridgeport MOMS Partnership expressed interest in, and commitment to, offering Spanish-language programming. Funding constraints and well as practical considerations (i.e., the complications of recruiting, scheduling and running two separate MOMS SM classes without the benefit of a MOMS Program Manager) prevented the expansion of the MOMS team during the pilot period. The Bridgeport MOMS Pilot was limited to English-language programming, which required that participants have sufficient fluency in English to engage in MOMS SM. This reduced the number of potential pilot participants and limited the reach of services.

INTEGRATION OF THE CMHA ROLE

The CMHA engages with participants within and outside of class time for the duration of the MOMS SM session, helping participants to identify and solve problems, supporting connections to needed resources, and acting as an advocate for participants. Within each of the three partner organizations, there is precedence for employment of Community Health Workers and/or persons with lived experience. Thus, the CMHA role was not an entirely new role for Alliance, GBAPP or Southwest. Initially, Alliance recruited and employed the CMHA. While (again) a significant investment of time and resources committed to Bridgeport MOMS to recruit, hire and onboard the CMHA, this helped to operationalize the programmatic collaboration envisioned between Alliance's Early Childhood Programming and GBAPP. Bridgeport MOMS subsequently experienced staff turnover in the CMHA role due to the promotion of the CMHA during the first year of programming; however, this ended up being fortuitous for the program as well as for the CMHA herself, as it led to the engagement of Southwest as a partner. Southwest employs trained Community Health Workers and agreed to dedicate an existing Southwest Community Health Worker's time to MOMS. Following training in the MOMS model and delivery of MOMS SM, the Southwest CHW was able to take up the MOMS CMHA role and has been effectively partnering with the GBAPP-based MOMS clinician and clinical supervisor for over a year. Despite the complexities of having a team employed and supervised by different agencies, the Bridgeport MOMS team has developed a strong and effective approach to multi-agency collaborative service delivery.

Measures

EVALUATION QUESTIONS

This report explores the following evaluation questions:

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

Did Bridgeport MOMS participants experience increased social support following participation in MOMS SM course?

MEASURES

Participants were asked to complete a self-report assessment survey at three time points: Baseline, Endpoint and Follow-up. The timing of each assessment is described in Table 1.

Table 1: Assessment time points

ASSESSMENT	TIME
Baseline	Completed after the engagement session before the participant attended the first MOMS SM class
Endpoint	Completed within 3 weeks after the date of Class 8 by participants who attended at least one class
Follow-up	Completed within 3 weeks of 3-months after Class 8 by participants who attended at least one class

The assessments contained questions about participants' mental health, wellbeing and social support. Assessments were administered through REDCap (Research Electronic Data Capture), which is a secure online platform for managing databases and surveys[5]. Bridgeport MOMS staff shared a unique survey link with each participant to complete the assessment. No identifiable information was collected in the assessments. Table 2 contains additional information on instruments included in this report from the participant assessments.

[5] Data were collected and managed using REDCap electronic data capture tools hosted at Yale University. REDCap (Research Electronic Data Capture) is a secure, web-based software platform designed to support data capture for research studies.

Table 2: Select Bridgeport MOMS self-report measures in participant assessments

DOMAIN	INDICATOR	INSTRUMENT
Program Satisfaction	SM Program Satisfaction	Client Satisfaction Scale
Mental Health & Wellbeing	Depressive Symptoms	CES-D, PHQ-9
	Perceived Stress	Perceived Stress Scale 4 (PSS-4)
	Anxiety	General Anxiety Disorder – 7 (GAD-7)
	Emotional Regulation	Difficulties in Emotional Regulation Scale, Short Form (DERS-SF)
	General Self-Efficacy	New General Self-Efficacy Scale (NGSE)
	Attitudes toward mental health treatment	Attitudes Toward Mental Health Treatment-Depression (ATMHT)
	Parenting satisfaction and efficacy	Parenting Sense of Competence Scale (PSOC)
Social Support	Perceived Social Support	Medical Outcomes Study Social Support Survey (MOS-SSS)

DATA SOURCES AND ANALYSIS

Data used in this report includes self-report data collected from participants (Table 2) at the three timepoints: Baseline, Endpoint and Follow-up and data collected from Bridgeport MOMS staff. Site staff input weekly class attendance for each participant into REDCap.

Demographic and clinical characteristics are presented for participants who attended at least one class and completed a Baseline assessment. Analyses looking at change in outcomes include participants who completed both the Baseline and either the Endpoint or Follow-up assessment. Individuals who attended MOMS SM class in more than one cohort were excluded from outcome analyses.

Mean and standard deviation (SD) are presented for normally distributed data. The paired t-test was used to examine differences in time points to account for repeated measures. Data that was not normally distributed is described using quartiles: first quartile (Q1), second or median quartile (Median), third quartile (Q3) and differences in time points were examined with the Wilcoxon signed-rank test.

Table 3: Descriptive statistics and statistical tests

VARIABLE TYPE	DESCRIPTIVE STATISTICS	STATISTICAL TEST FOR PRE-POST COMPARISON
Continuous, normally distributed	**Mean, standard deviation (SD)**	**Paired t-test**
Continuous, not normally distributed	**Median, Q1 (first quartile), Q3 (third quartile)**	**Wilcoxon signed-rank test**

Statistical significance was considered at $p<0.05$ and is denoted in tables under the significance column (SIG.) using the notation: * $p<.05$, ** $p< .01$, *** $p<.001$. When something is noted as statistically significant, it is indicating that the difference seen in the data is unlikely due to chance.

LIMITATIONS

There are limitations that should be considered while interpreting the evaluation results. Participants were not required to complete assessments, and the Endpoint and Follow-up assessments were only administered to participants who attended at least one class. Some self-report outcomes were not included due to small sample size; this information is available upon request from the authors of this report.

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

- Participants were incentivized for participation in the Bridgeport MOMS Pilot, including eligibility screening, attendance, and assessment completion.
- 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 reflect change in self-report measures, which are subject to bias.
- The Baseline assessment does not represent a perfect baseline measurement, as the Baseline assessment was completed after several interactions with staff.

This report indicates whether statistically significant change was found for participant outcomes, this does not always translate to meaningful change. The pre-post design of this evaluation means that significant findings in this report include an association between Bridgeport MOMS participation and change in outcomes but do not establish causation.

Bridgeport MOMS Participants

RECRUITMENT

KEY POINTS

Over 40% of individuals screened heard about Bridgeport MOMS from a professional referral

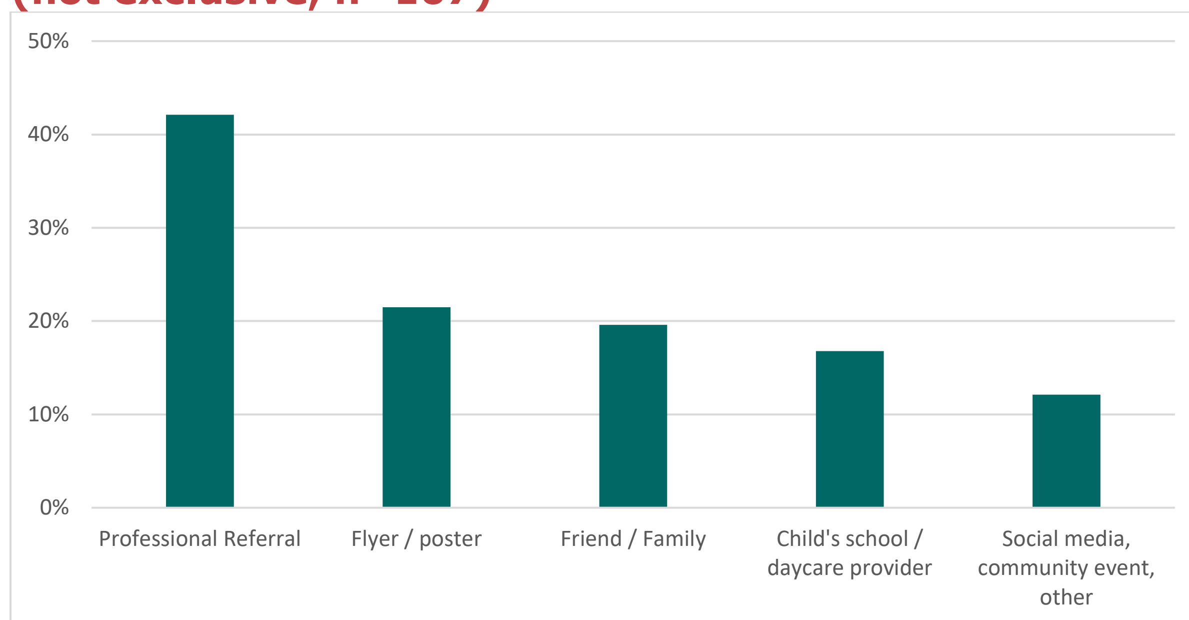
Most individuals screened for Bridgeport MOMS were eligible

80% of individuals who were eligible to participate in Bridgeport MOMS attended at least one MOMS SM class.

As described in the recruitment section above, potential participants were recruited to Bridgeport MOMS through a variety of recruitment strategies. A total of 165 individuals engaged with the eligibility screener (Figure 2) and 162 individuals completed the eligibility screener. Of those who completed an eligibility screening, 44% were referred to MOMS staff while the remaining 56% reached out directly to MOMS staff.

During the eligibility screener, individuals were asked "How did you hear about Bridgeport MOMS?". Of those who responded to this question, most, 42%, indicated they heard about Bridgeport MOMS from a professional referral (Figure 1)[6].

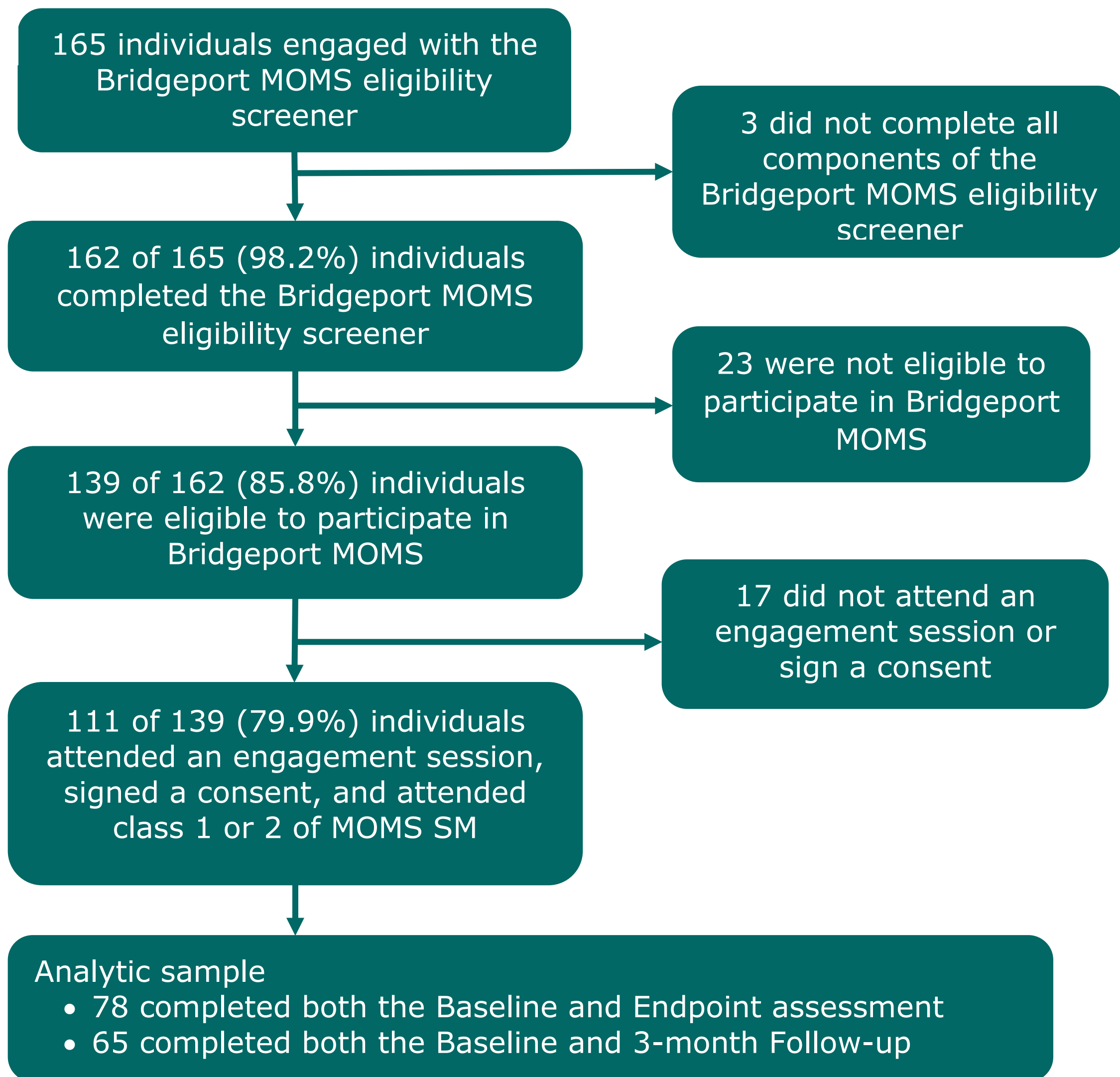
Figure 1: How participants heard about Bridgeport MOMS (not exclusive, n=107)



[6] Questions around how the participant heard about Bridgeport MOMS were added into the screener in October 2021; these questions were not asked of all conducted screenings.

Most participants who completed the eligibility screener were eligible to participate in Bridgeport MOMS (86%). This indicates that the recruitment methods yielded a group of potential participants where the majority met eligibility criteria for Bridgeport MOMS. Of the 139 individuals who were eligible to participate in Bridgeport MOMS, 111 (80%) attended at least one SM class and were, therefore, considered enrolled in the program. This indicates that the majority of eligible individuals completed the required steps for enrollment and successfully accessed the SM class. A description of the flow of individuals from screening to participation in MOMS SM is described in Figure 2.

Figure 2: Bridgeport MOMS Pilot Flow of Individuals from Screening Through Participation[7]



[7] *Note:* Figure 1 is modeled after the STROBE Reporting guidelines: https://www.strobe-statement.org/. If a participant completed a part of the screening more than once, only one screening is represented above. If an individual attended classes in more than one cohort, they are included in the count for the number who attended at least one class but not in the analytic sample.

PARTICIPANT CHARACTERISTICS

KEY POINTS

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

Most participants had experienced financial or material hardship in the past year.

While about 30% of participants received outpatient treatment or counseling for mental health in the past year, 40% indicated there was a time when they wanted mental health treatment and were not able to get it.

Demographics

In order to better understand the needs and experiences of Bridgeport MOMS participants, a series of questions were included in the Baseline assessment to assess demographics, basic needs, connection with available resources, and prior clinical and treatment experiences. Some of this information was utilized by the program staff to connect participants with additional resources. These demographics and participant characteristics are summarized in the next few tables. For the purposes of this report some responses may have been grouped, full expanded tables are available on request.

Of the 111 individuals who attended class 1 or class 2 of MOMS SM, 95 completed the Baseline assessment before their first class and are included in the demographic and characteristic tables below.[8] Over half of participants who engaged with MOMS SM were Black or African-American, Non-Hispanic (58%), were never married (55%) and had some college education (63%). Participants ranged in age from 20 to 54 years; the average age was 32.

Responses to various questions suggested that participants experienced several areas of basic need; over 70% indicated they or their family had gone without things they needed in the past year due to being short of money, around 50% indicated borrowing food or money in the past year, and over 60% indicated trouble paying for diapers, clothes and shoes or cleaning supplies. At Baseline, 34% of participants were working for pay.

The majority of participants reported having experienced a traumatic event based on responses to a screening for lifetime exposure to traumatic events[9]. Bridgeport MOMS participants included individuals who had previously received treatment for mental health (31%) as well as participants who reported unmet mental health needs in the past year (40%). This suggests that Bridgeport

[8] To preserve anonymity, small categories (generally <5) were combined into "Other" categories in the following tables.
[9] Prins, A., Bovin, M. J., Kimerling, R., Kaloupek, D. G., Marx, B. P., Pless Kaiser, A., & Schnurr, P. P. (2015). *The Primary Care PTSD Screen for DSM-5 (PC-PTSD-5).* [Measurement instrument].

MOMS demonstrated the ability to serve as an access point to mental health services in addition to supplementing existing mental health resources.

Table 4A: Baseline characteristics of participants (n=95)

CHARACTERISTIC	n (%)
Race / Ethnicity (n=94)	
Black or African-American, Non-Hispanic	54 (57.5%)
Black or African-American, Hispanic	15 (16.0%)
White, Hispanic	9 (9.6%)
White, Non-Hispanic	5 (5.3%)
Other	11 (11.7%)
Marital status (n=94)	
Never Married	52 (55.3%)
Married	17 (18.1%)
Living with a partner	10 (10.6%)
Divorced	8 (8.5%)
Other	7 (7.4%)
Highest level of education completed	
Not a high school graduate or some GED classes	15 (15.8%)
High school graduate or GED completed	20 (21.1%)
Some college or vocational school	40 (42.1%)
College graduate	20 (21.1%)
	Mean (SD)
Age in years	32.4 (7.1)
	Median (Q1, Q3)
Number of many adults (18 or older) living in participant household, including participant (n=90)	2 (1, 2)
Number of children (under 18) living in participant household (n=93)	2 (1, 3)

Table 4B: Baseline characteristics of participants (n=95)

CHARACTERISTIC	n (%)
Current housing situation (n=94)	
Rent your own apartment, house or condo	47 (50.0%)
Live with family or friends and pay part of the rent	15 (16.0%)
Own your own apartment, house or condo	13 (13.8%)
Live with family or friends and do not pay rent	11 (11.7%)
Other	8 (8.5%)
Health insurance (responses are non-exclusive)	
HUSKY A, B, C, D (Medicaid)	72 (75.8%)
Private Insurance	12 (12.6%)
No insurance	5 (5.3%)
Other	14 (14.7%)
Currently receiving the following service: (responses are non-exclusive)	
SNAP (food stamps)	65 (68.4%)
WIC	44 (46.3%)
Disability benefits (SSDI or SSI)	17 (17.9%)
Energy assistance	14 (14.7%)
Working for pay	
Yes	32 (33.7%)
No	63 (66.3%)
Working full-time or part-time (n=32)	
Full-time	18 (56.3%)
Part-time	14 (43.8%)

Table 4C: Baseline characteristics of participants (n=95)

CHARACTERISTIC	n (%)
Gone without things you or family really needed in the past year because you were short of money.	
Yes, sometimes or often	69 (72.6%)
No	26 (27.4%)
In the past year participant's family has: (n=94) (responses are non-exclusive)	
Borrowed food or money from family or friends	49 (52.1%)
Used a food bank	37 (39.4%)
Run out of food before the end of the month	32 (34.0%)
Gone without food sometimes	12 (12.8%)
Of participants with children in diapers: Trouble paying for diapers for child (n=63)	
Lots of trouble or Some Trouble	42 (66.7%)
No trouble	21 (33.3%)
Of participants with children in diapers: Feel that they do not have enough diapers to change them as often as you would like (n=58)	
Yes	24 (41.4%)
No	34 (58.6%)
Trouble paying for food or formula (n=93)	
Lots of trouble or Some Trouble	29 (31.2%)
No trouble	64 (68.8%)
Trouble paying for clothes and shoes	
Lots of trouble or Some Trouble	71 (74.7%)
No trouble	24 (25.3%)
Trouble paying for other cleaning / hygiene supplies (n=94)	
Lots of trouble or Some Trouble	58 (61.7%)
No trouble	36 (38.3%)

Amount of stress or worry about personal finances (n=94)	
None, very little, or some	28 (29.8%)
A fair amount, or a lot	66 (70.2%)

Table 4D: Baseline clinical and treatment characteristics of participants (n=95)

CHARACTERISTIC	
	Mean (SD)
CES-D Score at Screening	**32.2 (9.5)**
	n (%)
Experienced an unusually or especially frightening, horrible, or traumatic event.[10] (n=94)	
Yes	**70 (74.5%)**
PTSD Checklist for DSM-5 (PCL-5) score[11]	**33.3 (17.6)**
Received outpatient treatment or counseling for any problem with emotions, nerves, or mental health ; not including treatment for alcohol or drug use, in the last 12 months. (n=94)	
Yes	**29 (30.9%)**
No	**65 (69.2%)**
Taken any prescription medication that was prescribed to treat a mental or emotional condition, in the last 12 months. (n=94)	
Yes	**24 (25.5%)**
No	**70 (74.5%)**
Needed mental health treatment or counseling but didn't get it, in the last 12 months.	
Yes	**38 (40.0%)**
No	**57 (60.0%)**

[10] Using the question below which is from: Prins, A., Bovin, M. J., Kimerling, R., Kaloupek, D. G., Marx, B. P., Pless Kaiser, A., & Schnurr, P. P. (2015). *The Primary Care PTSD Screen for DSM-5 (PC-PTSD-5).* [Measurement instrument]. "Sometimes things happen to people that are unusually or especially frightening, horrible, or traumatic. For example: a serious accident or fire, a physical or sexual assault or abuse, an earthquake or flood, a war, seeing someone be killed or seriously injured, having a loved one die through homicide or suicide. Have you ever experienced this kind of event?"

[11] Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). *The PTSD Checklist for DSM-5 (PCL-5) – Standard* [Measurement instrument]. Available from https://www.ptsd.va.gov/

ENGAGEMENT IN STRESS MANAGEMENT

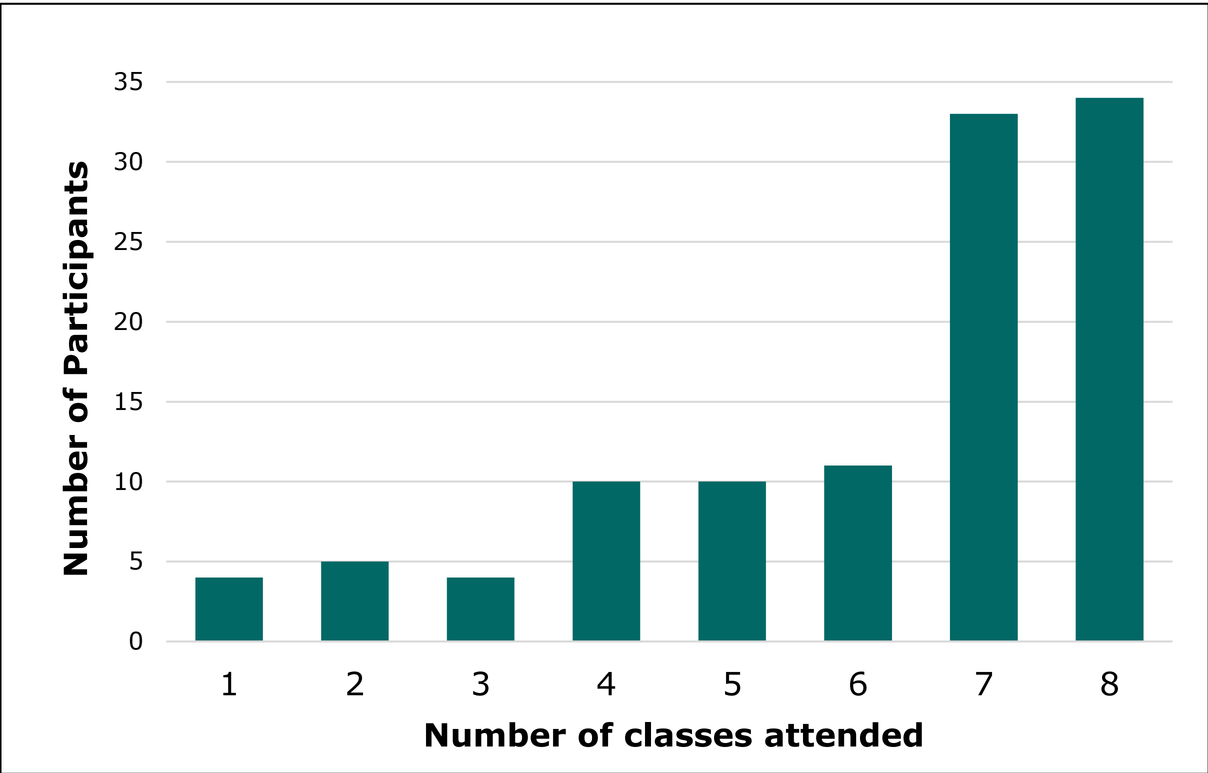
KEY POINTS

Participants attended most classes (7 out of 8).

Attendance

A participant must attend either class 1 or class 2 to be considered enrolled in MOMS SM and attend the remaining classes. In the MOMS SM course, as with other cognitive therapy-based courses, participants receive homework assignments to practice and apply skills learned in class. Homework was assigned after each class and then discussed in the following class. Participants were encouraged and supported to complete the homework.

Figure 3: SM class attendance for participants in Bridgeport MOMS (n=111)



Attendance was high; of the 111 participants who attended at least one class, the median number of MOMS SM classes attended was 7 out of 8. This is in line with the median attendance of other MOMS Partnership sites.

ENGAGEMENT WITH BRIDGEPORT MOMS STAFF

Participants had additional engagement with Bridgeport MOMS staff outside of routine engagement directly related to MOMS SM class.[12] After each MOMS SM class, the MOMS Clinician and MOMS CMHA were asked to document their individual contact with each participant over the past week. The information presented here represents Bridgeport MOMS staff documented contact with participants from up to one week before MOMS SM class 1 through MOMS SM class 8. These contacts could be either virtual or in-person.

Except for one participant who could not be reached by phone or email, all participants who enrolled in MOMS SM had contact with Bridgeport MOMS staff outside of class.

Participant contact with Bridgeport MOMS staff outside of routine class engagement ranged from less than 15 minutes to more than two hours. Participants' contact with Bridgeport MOMS staff most often related to referrals to resources or programs (79.2%) and 1:1 support (46.7%); some contacts may have covered more than one topic.

[12] Routine engagement includes, engagement sessions, reminders for class, incentive delivery.

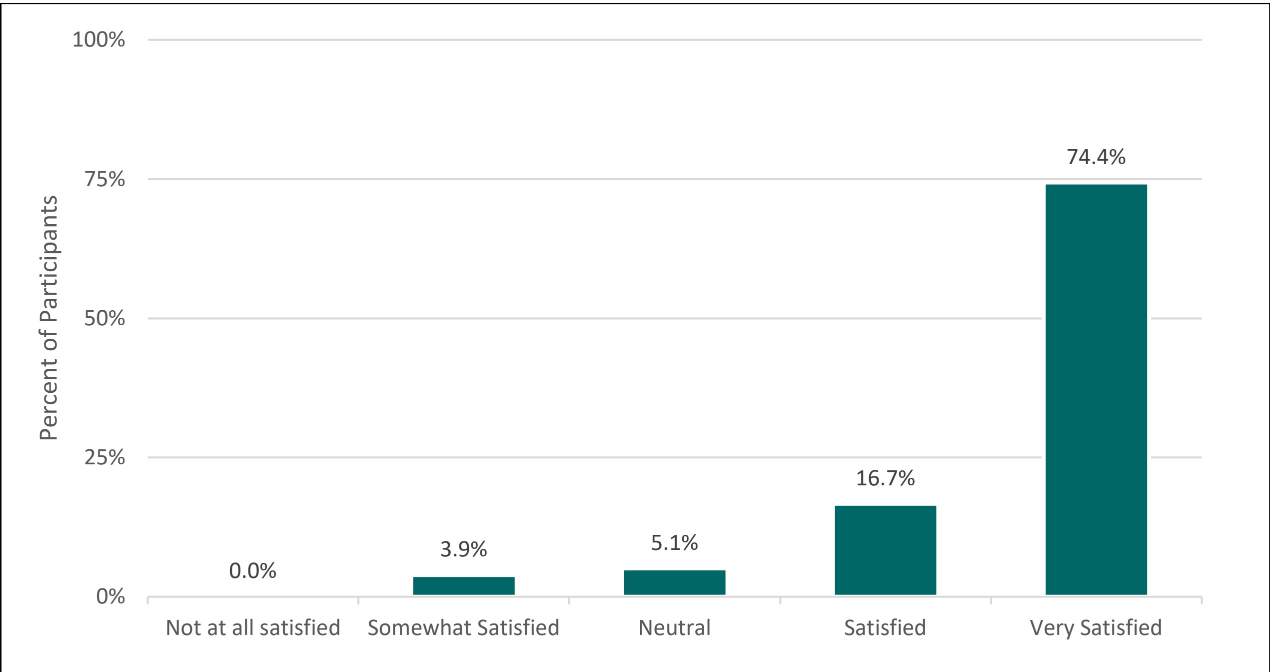
PARTICIPANT SATISFACTION

KEY POINTS

Most participants were satisfied with the MOMS SM class and were using components taught in the class often.

Participants who attended at least one MOMS SM class were asked to complete a client satisfaction questionnaire at the Endpoint assessment; 78 participants are included in this analytic sample.

Figure 4: Satisfaction with the MOMS SM Course at Endpoint (n=78)



Overall, participants were satisfied with the MOMS SM course (91%). This is comparable with satisfaction ratings seen at other MOMS Partnership sites. When asked to explain their satisfaction rating, participants frequently stated that the course was helpful, they learned new skills, and they enjoyed connecting with other participants. Some responses suggested areas for improvement including recommending the course be extended beyond 8 weeks and providing more engagement strategies during class.

The MOMS SM course covers a number of topics (skills and ideas) aimed at helping participants to manage stress. At the Endpoint assessment, participants were asked to indicate how helpful they found and how often they used 10 of these topics – or "core components" -- of the MOMS SM Course; examples include practicing breathing exercises, fixing unhelpful thoughts, and implementing problem solving steps. Two scales are derived from these ratings:

1. **Helpfulness** scale is derived from responses to the question: "Please tell us how helpful you found each component of the MOMS Stress Management Course". Responses were on a 5-point scale and ranged from "Not at all helpful" to "Extremely helpful". An average helpfulness score was calculated when at least 8/10 components were rated; a higher score indicates the components were more helpful.
2. **Frequency of use** scale is derived from responses to the question: "Now, thinking about the past month, please tell us how often you used / applied each component in your life". Responses were on a 5-point scale and ranged from "Never used" to "Used every day". An average frequency of use score was calculated when at least 8 of 10 components were rated; a higher score indicates the components were used more frequently.

Overall, participants found the course components generally helpful, with the median rating between "Very helpful" and "Extremely helpful" and they reported using the components often; the median rating was "Used often". This suggests that participants found the content of the course useful and applicable in their daily lives.

Program Outputs and Outcomes

Participants who attended at least one class were asked to complete the Endpoint and Follow-up assessments. This allowed for pre-post examination of change in outcomes described below. There are 78 participants who contributed data to the Endpoint analyses and 65 who contributed data to the Follow-up analyses.

MENTAL HEALTH AND WELLBEING

KEY POINTS

Overall, participants reported improvements in mental health indicators.

Significant improvement was seen on measures of depression, stress and anxiety between Baseline and Endpoint and remained improved at Follow-up.

Improvements were also seen with emotion regulation, feelings of self-efficacy and competence in parenting.

Depressive Symptoms

The MOMS Partnership aims to support women experiencing depressive symptoms, better equipping them to pursue and reach their goals related to social and economic mobility. The main goal for participants who engage with the MOMS SM course is to develop mood management skills which can lead to a decrease in depressive symptoms.

Depressive symptoms were measured using the Center for Epidemiological Studies Depression Scale (CES-D)[13]. The CES-D is a 20-question instrument designed to measure depressive symptomology that asks respondents to identify ways they may have felt 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. A score of 16 or higher on the CES-D is a commonly used threshold to identify individuals at risk for clinical depression.

A component of the eligibility screening for Bridgeport MOMS was for a participant to have a score of 16 or higher on the CES-D. Every participant eligible for Bridgeport MOMS had a CES-D score at screening that was at risk for clinical depression. The CES-D was completed again at three timepoints as part of the Baseline, Endpoint and Follow-up assessments.

It is important to note that while the Baseline assessment was administered before the participant’s first MOMS SM class, participants experienced some level of engagement with the Bridgeport MOMS program and staff before completing the Baseline assessment. In light of this, we examined

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[13] 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. https://doi.org/10.1177/014662167700100306

if there was a change in CES-D scores between Screening and Baseline. We found that there was a significant decrease in mean CES-D scores from Screening (mean: 32.2) to Baseline (mean: 28.4) for 91 participants who completed the CES-D at Baseline. This could suggest that there is a decrease in CES-D scores due to the initial engagement with Bridgeport MOMS staff, due to the anticipation of attending a class, or due to some other cause.

Change in depressive symptoms can be described in several ways. In this report, we have included both an examination of linear change in CES-D scores and dichotomous change in CES-D scores.

Change in Depressive Symptoms: Linear Change

Change over time in depressive symptoms was examined from Baseline to Endpoint and Follow-up (Figure 5, Table 5).

Figure 5: Average CES-D scores from Baseline to Follow-up

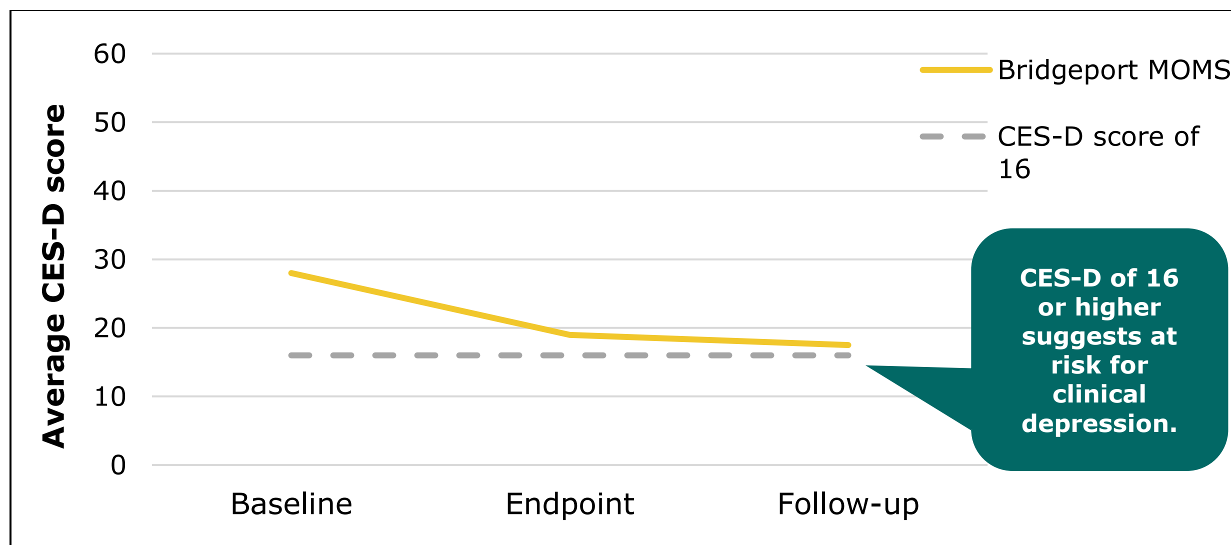


Table 5: CES-D scores from Baseline to Endpoint and Follow-up

	BASELINE Mean (SD)	ENDPOINT Mean (SD)	FOLLOW-UP Mean (SD)	SIG.
CES-D (n = 72)	28.3 (11.5)	19.2 (10.4)	–	***
CES-D (n = 59)	28.7 (11.1)	–	17.5 (11.8)	***

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

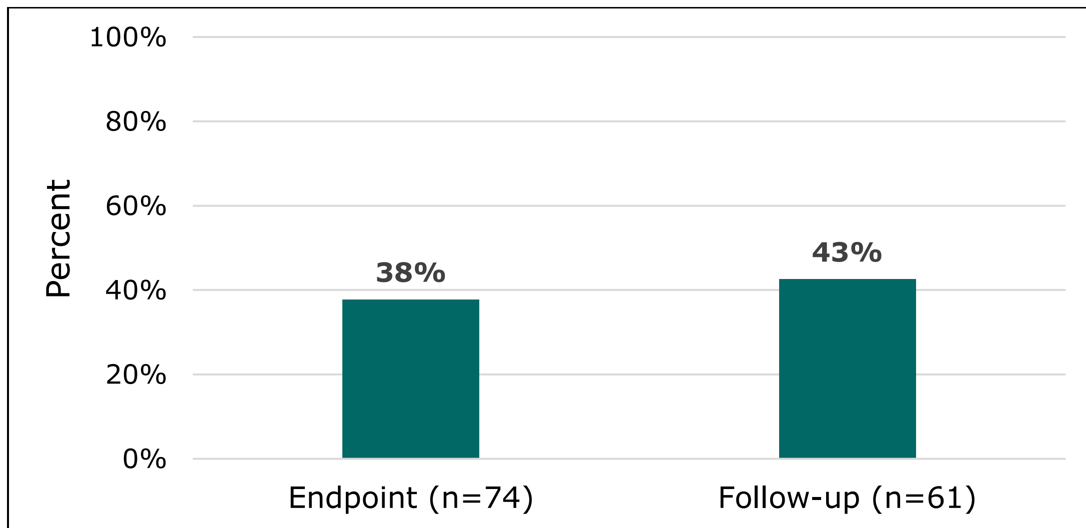
There was a significant decrease in CES-D scores from Baseline to Endpoint and Follow-up, suggesting an overall decrease in depressive symptoms observed from the beginning to the end of the MOMS SM course. This decrease in depressive symptoms is in the expected direction and is comparable with changes seen in other MOMS Partnership sites.

Change in Depressive Symptoms: Dichotomous Change

An additional way to examine change in depression symptoms is to dichotomize or create two categories of depression symptoms. We examined two categories using the commonly used threshold of 16 (at risk for clinical depression); one category includes CES-D scores below 16 and the other category includes CES-D scores of 16 or higher.

We examined the category of CES-D scores below 16 to get an estimate of how many participants reduced their depressive symptoms below the threshold of at risk for clinical depression. Examination of the proportion of participants in this category is another way to understand the decrease in depressive symptoms; we examined this at Endpoint and Follow-up.

Figure 6: Percent of participants with CES-D score <16 at Endpoint and Follow-up



At Endpoint and Follow-up around 40 percent of participants had CES-D scores that were below the threshold for at risk for clinical depression. This supports what was seen when examining linear change in CES-D scores; there was an overall decrease in depressive symptoms from beginning to the end of the course.

Depressive Severity

Another way to examine change in mental health utilizes the Patient Health Questionnaire-9 (PHQ-9) to measure depressive severity. This 10-question instrument asks respondents to identify how often they have been bothered by problems in the last 2 weeks[14]. Responses range from "Not at all" to "Nearly every day". A total score is calculated by summing 9 questions; scores range from 0-27 with higher scores indicating greater depressive severity; the score can also be categorized into levels of depression severity. The PHQ-9 was administered at Baseline, Endpoint and Follow-up.

Table 6: PHQ-9 scores from Baseline to Endpoint and Baseline to Follow-up

	BASELINE Median (Q1, Q3)	ENDPOINT Median (Q1, Q3)	FOLLOW-UP Median (Q1, Q3)	SIG.
PHQ-9 (n=73)	9 (6, 13)	5 (1, 9)	—	***
PHQ-9 (n=61)	9 (6, 14)	—	3 (0, 8)	***

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

Consistent with the change seen in CES-D scores, there was a significant decrease in PHQ-9 scores from Baseline to Endpoint and Follow-up suggesting an overall decrease in depression severity. The median PHQ-9 score at baseline was consistent with a "mild" level of depression severity. At Follow-up the median PHQ-9 score was a "minimal" level of depression severity.

[14] 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

Perceived Stress

It is expected that perceived stress will decrease as stress management skills are strengthened. We used the Perceived Stress Scale 4 (PSS-4) to measure perceived stress. The PSS-4 is a 4-item questionnaire that measures "the degree to which situations in one's life are appraised as stressful" (Cohen, 1988)[15]. Responses range from "Never" to "Very Often" in response to how often the respondent felt or thought a certain way during the past month. The PSS-4 total score is calculated by summing all responses to the questions; scores range from 0-16 where a higher score is correlated with more stress. The PSS-4 was asked at Baseline, Endpoint and Follow-up.

Table 7: PSS-4 scores from Baseline to Endpoint and Follow-up

	BASELINE Mean (SD)	ENDPOINT Mean (SD)	FOLLOW-UP Mean (SD)	SIG.
PSS-4 (n=76)	**8.4 (2.5)**	**6.3 (3.0)**	**—**	***
PSS-4 (n=63)	**8.4 (2.4)**	**—**	**6.5 (3.3)**	***

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

There was a significant decrease in PSS-4 scores from Baseline to Endpoint and Follow-up; suggesting an overall decrease in perceived stress from the beginning to the end of the course. This decrease is in the expected direction and is comparable with other MOMS Partnership sites.

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[15] 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.

Anxiety

Learning mood management skills in the MOMS SM course may help participants to manage feelings of anxiety. We used the Generalized Anxiety Disorder 7-Item Scale (GAD-7) to assess generalized anxiety symptoms.[16] The GAD-7 is an 8-item questionnaire assesses severity of generalized anxiety symptoms. Respondents are asked how often they have been bothered in the last 2 weeks by a symptom; responses range from "Not at all" to "Nearly every day." GAD severity score is obtained by summing the first 7 responses to the questionnaire, scores range from 0-21 with higher scores indicating greater severity; the score can also be categorized into levels of anxiety severity. The GAD-7 was asked at Baseline, Endpoint and Follow-up.

Table 8: GAD-7 scores from Baseline to Endpoint and Baseline to Follow-up

	BASELINE Median (Q1, Q3)	ENDPOINT Median (Q1, Q3)	FOLLOW-UP Median (Q1, Q3)	SIG.
GAD-7 (n=72)	7 (4, 11)	3 (0, 5.5)	—	***
GAD-7 (n=61)	7 (4, 11)	—	3 (0, 6)	***

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

There was a significant decrease in GAD-7 scores from Baseline to Endpoint and Follow-up, suggesting an overall decrease in generalized anxiety symptoms from the beginning to the end of the course. The GAD-7 score at baseline was consistent with "mild" levels of anxiety, this decreased to "minimal" levels of anxiety at both Endpoint and Follow-up. This decrease in general anxiety symptoms is comparable with changes seen in other MOMS Partnership sites. Together with the decrease seen in depressive symptoms, the evaluation shows an overall improvement in mental health indicators from beginning to the end of the MOMS SM course.

[16] Spitzer RL, Kroenke K, Williams JBW, Lowe B. A brief measure for assessing generalized anxiety disorder. Arch Inern Med. 2006; 166:1092-1097.

Emotion Regulation

The MOMS SM course teaches participants strategies for regulating mood and internal state, one way to understand impact of these strategies is to look at emotion regulation. We used the Difficulties in Emotion Regulation Scale – Short Form (DERS-SF) to assess emotion regulation[17]. Emotion regulation refers to the ability to identify, understand, and accept emotional experience, and to modulate emotional responses based on the situation. The DERS-SF is an 18-item questionnaire that assesses 6 types (subscales) of emotional regulation and produces a total score. The respondent is asked how often statements apply; responses range from "Almost never (0-10%)" to "Almost always (91-100%). The total score is calculated as an average and ranges from 1-5 with higher scores indicating greater difficulties with emotion regulation. The DERS-SF was administered at Baseline, Endpoint and Follow-up.

Table 9: DERS-SF total scores from Baseline to Endpoint and Baseline to Follow-up

	BASELINE Mean (SD)	ENDPOINT Mean (SD)	FOLLOW-UP Mean (SD)	SIG.
DERS-SF (n=75)	**2.3 (0.7)**	**1.9 (0.6)**	—	***
DERS-SF (n=60)	**2.3 (0.7)**	—	**1.9 (0.7)**	***

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

We examined changes in emotion regulation across the three assessment timepoints. There was a significant decrease in difficulties with emotion regulation over time, which indicates improvement in emotional regulatory capacities.

[17] Kaufman, E. A., Xia, M., Fosco, G., Yaptangco, M., Skidmore, C. R., & Crowell, S. E. (2015). The difficulties in emotion regulation scale short form (DERS-SF): Validation and replication in adolescent and adult samples. *Journal of Psychopathology and Behavioral Assessment*, doi:10.1007/s10862-015-9529-3

Self-Efficacy

The MOMS SM course teaches participants that while there are parts of our reality that are outside our control, other parts of our reality are ours to shape. This fundamental idea, which is threaded through the course, is consistent with the healthy concept of self-efficacy. General self-efficacy, which describes one's belief in their ability to succeed in different situations and at tasks and goals, was measured using the New General Self-Efficacy Scale (NGSE).[18] The NGSE asks the respondent to indicate their level of agreement (5-point scale) with statements around self-efficacy and self-esteem; responses range from "Strongly disagree" to "Strongly agree". The NGSE contains a total score created by averaging the responses and ranges from 1-5 with a higher score indicating greater self-efficacy / self-esteem. The NGSE was administered at Baseline, Endpoint and Follow-up.

Table 10: NGSE scores from Baseline to Endpoint and Baseline to Follow-up

	BASELINE Median (Q1, Q3)	ENDPOINT Median (Q1, Q3)	FOLLOW-UP Median (Q1, Q3)	SIG.
NGSE (n=75)	**3.9 (3.4, 4)**	**4.1 (3.8, 4.8)**	**—**	***
NGSE (n=61)	**3.9 (3.3, 4)**	**—**	**4 (3.8, 4.5)**	**

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

A significant increase in the NGSE score was seen at Endpoint and Follow-up, suggesting and overall increase in sense of self-efficacy / self-esteem from the beginning to the end of the course.

[18] Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a New General Self-Efficacy Scale. Organizational Research Methods, 4(1), 62–83. https://doi.org/10.1177/109442810141004

Attitudes Toward Mental Health Treatment

The Attitudes Toward Mental Health Treatment-Depression (ATMHT) was used to assess participants attitudes about seeking mental health treatment.[19] The ATMHT presents statements about seeking mental health treatment from any mental health professional and asks the respondent to indicate their level of agreement with the statement (4-point scale). A total score was calculated by summing the items in the scale. Scores range from 20-80 and a higher score indicated more positive attitudes about seeking mental health treatment. The ATMHT measure was administered at Baseline and Follow-up.

Table 11: ATMHT score from Baseline to Follow-up

	BASELINE Median (Q1, Q3)	FOLLOW-UP Median (Q1, Q3)	SIG.
ATMHT (n=58)	**56 (54, 59)**	**58 (55, 62)**	*

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

A significant increase in the ATMHT total score was seen at Follow-up, suggesting an overall increase in positive attitudes towards seeking mental health treatment from the beginning to end of the course.

Parenting Satisfaction and Efficacy

The Parenting Sense of Competence Scale (PSOC) was used to assess parenting self-esteem.[20]. The PSOC asks the respondent to indicate their level of agreement/disagreement with statements about attitudes towards parenting (6-point scale). The PSOC contains a total score (range 17-102) and two subscales that measure satisfaction (range 9-54) and efficacy (range 7-42). Scores were obtained by summing the responses in the scale or subscale. A higher score indicates a higher parenting sense of competence. The PSOC was administered at Baseline and Follow-up.

Table 12: PSOC scores from Baseline to Follow-up

	BASELINE Mean (SD)	FOLLOW-UP Mean (SD)	SIG.
PSOC total score (n=60)	**66.3 (12.0)**	**74.9 (11.3)**	***
PSOC satisfaction (n=61)	**32.6 (7.5)**	**37.7 (8.2)**	***
PSOC efficacy (n=62)	**28.7 (5.6)**	**32.0 (4.6)**	***

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

A significant increase in the overall PSOC score and subscales, satisfaction and efficacy were seen at Follow-up.

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[19] Brown C, Conner KO, Copeland VC, Grote N, Beach S, Battista D, Reynolds CF 3rd. DEPRESSION STIGMA, RACE, AND TREATMENT SEEKING BEHAVIOR AND ATTITUDES. J Community Psychol. 2010 Apr;38(3):350-368. doi: 10.1002/jcop.20368. PMID: 21274407; PMCID: PMC3026177.

[20] Johnston, C., & Mash, E. (1989). A Measure of Parenting Satisfaction and Efficacy. Journal of Clinical Child Psychology, 18, 167-175.

SOCIAL SUPPORT

KEY POINTS

Overall, participants reported improvements in perception of social support.

The MOMS SM course emphasizes the importance of building social connections in striving to improve our mental health and wellbeing. The course content teaches about social connection explicitly, and the group format of the course implicitly offers opportunities to build social connection. We measured social support using the Medical Outcomes Study Social Support Survey (MOS-SSS), a 19-item questionnaire that measures overall functional social support and 4 social support subscales that measure emotional / informational support, tangible support, affectionate support and positive social interaction.[21] Responses indicate participant report of how often the support is available and range from "None of the time (1)" to "All of the time (5)". Scores for this scale and subscales were calculated using guidance from the publisher[22] and range from 0-100, higher scores indicate more support. The MOS-SSS was asked at Baseline, Endpoint and Follow-up.

Table 13: MOS-SSS example questions from subscales

MOS-SSS SUBSCALES	EXAMPLE QUESTION
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

[21] 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

[22] MOS-SSS scores presented were calculated based on guidance from the publisher. The scores are calculated by calculating an average of the items in each scale and then transforming the values to a 0-100 scale using a formula provided by the publisher. This creates scores that can be compared to other studies if desired.

Table 14: Social Support scores from Baseline to Endpoint (n=78)

	BASELINE Median (Q1, Q3)	ENDPOINT Median (Q1, Q3)	SIG.
Overall Social Support (n=73)	**46.1 (28.9, 59.2)**	**52.6 (32.9, 75)**	*
Emotional / Informational Support (n=77)	**46.9 (25, 56.3)**	**50 (31.3, 75)**	***
Tangible Support (n=75)	**43.8 (18.8, 68.8)**	**50 (25, 75)**	–
Affectionate support	**50 (25, 75)**	**62.5 (33.3, 83.3)**	–
Positive Social Interaction	**37.5 (16.7, 66.7)**	**50 (25, 75)**	**

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

Table 15: Social Support scores from Baseline to Follow-up (n=63)

	BASELINE Median (Q1, Q3)	FOLLOW-UP Median (Q1, Q3)	SIG.
Overall Social Support (n=60)	**44.7 (27.6, 57.2)**	**52.0 (32.9, 68.4)**	***
Emotional / Informational Support	**46.9 (25, 56.3)**	**50 (31.3, 68.8)**	*
Tangible Support	**43.8 (18.8, 68.8)**	**50 (25, 68.8)**	–
Affectionate support (n=62)	**50 (33.3, 75)**	**66.7 (25, 100)**	*
Positive Social Interaction	**33.3 (25, 66.7)**	**50 (25, 83.3)**	***

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

There was a significant increase in the overall social support score from Baseline to Endpoint and Follow-up; this increase is consistent with other MOMS Partnership sites. An increase in emotional/informational support and positive social interaction was also seen at Endpoint and Follow-up suggesting that overall participants indicated more social support from the beginning to the end of the course.

BRIDGEPORT MOMS PARTNER REFLECTIONS

The Bridgeport MOMS partner organizations and Elevate share the vision to improve mental health access and economic mobility for women and mothers and their families. The evaluation findings described in this report are cause for celebration and recognition of the work of the committed partners in Bridgeport. Bridgeport MOMS was successfully implemented, achieved positive outcomes, and is now progressing toward sustained program delivery due to the successful collaboration of the Bridgeport MOMS partner organizations.

In addition to examining the participant reported outcomes, the end of the pilot offered an opportunity for stakeholders to provide Elevate with valuable insights and feedback regarding findings of the pilot, the implementation process, and the future of MOMS Partnership programming in Bridgeport and beyond.

Bridgeport MOMS key internal stakeholders, including leaders of partner organizations, Bridgeport MOMS staff, and other organizational staff, were invited to join one of two pilot evaluation results meetings to celebrate and review key findings of the pilot. The meetings also served as an opportunity for stakeholders to share reactions to the results of the pilot, offer reflections, and ask questions. A draft of the Bridgeport MOMS Pilot Evaluation Report was shared before and after the meetings.

Reviewing key findings of the pilot evaluation together as a group allowed Elevate and Bridgeport MOMS partners to contextualize the results, share the perspective of those interacting directly with Bridgeport MOMS participants, and reflect on elements of partnership and programming more deeply. Bridgeport MOMS partners graciously raised several important points of consideration and offered insightful feedback. Their reflections and comments align with five main themes:

- *Additional touchpoints for Participant Engagement.* Bridgeport MOMS partners reflected that an important contributor to the mental health and social support outcomes outlined in the evaluation may be related to the engagement strategies deployed by the MOMS staff. Although the MOMS SM course was delivered virtually throughout the entire pilot, there were several additional opportunities for connecting with participants outside of the course regarding gift card distribution, resource support, and requested meetings. When such activities and interactions occurred, they served as a form of additional participant engagement outside of the MOMS SM course.
- *Participants' Desire for Virtual Programming.* As the social restrictions due to the COVID-19 pandemic ended, Bridgeport MOMS continued to offer the MOMS SM course virtually. The MOMS Clinician and CMHA shared that once potential participants learned the MOMS SM course would take place virtually, they expressed feelings of relief. Specifically, they noted that virtual delivery of the program alleviated some logistical burdens.
- *Facilitating Social Support Among Participants.* Bridgeport MOMS partners, particularly the MOMS Clinician and CMHA, actively facilitated participants' knowledge around the importance of building active support networks, asking for help when needed, and maintaining connection with other participants.

- *Funding Burden on Community-Based Organizations.* Bridgeport MOMS partners noted concerns related to sustainability of funding to support ongoing programming as a significant stressor. They expressed that the constant worry about finding continued funding for MOMS programming in addition to the heightened community need and decreased financial resources following the COVID-19 pandemic is particularly challenging for community-based organizations.
- *Power of Partnership.* Bridgeport MOMS partners acknowledged the important role of collaboration and their shared commitment to implementing MOMS programming in their community. The trusted and respected role of each partnering organization in the community was named as a strength or supportive factor to the success of the Bridgeport MOMS pilot.

Elevate honors the input of Bridgeport MOMS partners and appreciates their commitment to helping us understand the impact of the MOMS Partnership in their community. Their reflections, some of which are outlined above, not only contributed to the interpretation of the pilot results but will also help support strong programming.

Conclusion

The Bridgeport MOMS partners aimed to expand the local offerings available to address maternal mental health; Bridgeport MOMS responded to this need by offering MOMS SM classes to mothers and women caregivers living in the greater Bridgeport area. While Bridgeport MOMS began delivering services after the initial disruption of COVID-19, a collective decision was made to deliver services virtually in hopes to make programming more accessible. Bridgeport MOMS was the first MOMS Partnership site to implement virtual programming throughout the entire course of the pilot, of which it successfully delivered eight cohorts of virtual MOMS SM classes between Spring 2021 and Spring 2023.

The results from the Bridgeport MOMS Pilot reveal that most individuals screened for Bridgeport MOMS were eligible for participation and participated in the MOMS SM program. One hundred and eleven participants attended at least one MOMS SM class during the pilot. Attendance was high and most participants were satisfied with the course.

Bridgeport MOMS was evaluated in part by assessing change in several participant self-reported outcome measures. In alignment with the goals of Bridgeport MOMS, participants experienced improvement in the mental health indicators examined. Depressive symptoms, perceived stress, and anxiety symptoms decreased from Baseline to end of class (Endpoint) and remained lower three months after the end of class (Follow-up). This indicates that participants reported improvements in mental health indicators after Bridgeport MOMS and these changes remained three months after the end of the program.

Similarly, improvements in participants' sense of self-efficacy and the ability to regulate emotion were also seen from Baseline to Endpoint and Follow-up. Increases in parenting sense of competence and positive attitudes toward seeking mental health treatment were also evident at Follow-up. Finally, Bridgeport MOMS Participants experienced increases in overall social support from Baseline to Endpoint and the increases remained at Follow-up.

Findings from the Bridgeport MOMS pilot are positive and similar to the pilot results of other MOMS Partnership sites. In the context that Bridgeport MOMS was the first site to implement the entire pilot virtually, these findings are very encouraging as they are similar to other sites that implemented MOMS Partnership in person or in combination of in person and virtual. It is also important to acknowledge that in addition to Bridgeport MOMS, there may also be other explanations for the changes identified such as impact from societal changes, natural change, spontaneous remission, etc. Taken together, these findings suggest that Bridgeport MOMS contributed to positive changes in participants' self-reported mental health and well-being indicators.

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