



Center for Early Learning
+ Public Health

Research Case Statement

TMW Center for Early Learning + Public Health aspires to create a population-level shift in the knowledge and behavior of parents and caregivers to optimize the foundational brain development in children, birth to five years of age, particularly those born into poverty.

We develop and test evidence-based interventions and tools, with a commitment to rigorous research and evaluation that is fueled by the belief that science is the basis for real social change.

The Thirty Million Words® (TMW) suite of interventions aims to empower parents and caregivers with knowledge and skills to develop their children’s intellectual and educational potential. Developed in partnership with parents and other stakeholders, the programs translate emerging brain science into parent-directed strategies to enhance children’s early learning environments.

This suite of interventions has been designed for different contexts and delivery sites, as well as translated and culturally adapted for Spanish speakers. Pre-pilot, each TMW program has undergone a process of formative review, including multiple rounds of feedback-driven iteration and refinement. The development of TMW-Newborn, for example, consisted of 8 waves of formative testing, with 10-15 parents per wave. This continuous cycle, bolstered by qualitative feedback collected during the pilot stage, creates a dynamic evidence base that simultaneously drives innovation and ensures that TMW programs are responsive to the needs of stakeholders.

With partners from over 60 community-based organizations, the TMW Center has conducted 12 randomized control, quasi-experimental and implementation trials. Our studies have reached more than 3,000 families in the Chicagoland area, with early results indicating an increase in parent and caregiver knowledge of brain development, an improvement in the quality and quantity of parent-child interactions, and richer early language environments for children.

In the coming year and beyond, the TMW Center will continue its active randomized control and implementation trials, including ongoing data collection and analysis. We will not only evaluate changes in parent and caregiver knowledge, but more importantly changes in their behavior and child outcomes. We will examine impact on parents’ reading quality and their toddlers’ interest in the reading activity, as well as caregivers’ sustained enrichment of home language environments and social, emotional and cognitive growth fostering behaviors over time. We will continue to adapt and validate SPEAK, our tool designed to assess expectations and knowledge of early childhood cognitive and language development, for early childhood educators. We will launch new partnerships and evaluation of projects in Palm Beach County, Chicago, and online. And, as we look ahead to wider dissemination, an emerging line of inquiry will be the science of scaling, i.e., the use of ‘big data’ and machine learning to better understand the population-level impact of interventions, what works and with whom and to better ‘personalize’ or target future programs.

TMW Suite of Interventions: Research Findings

	Parent/Caregiver Knowledge	Parent/Caregiver Behavior	Child Outcomes
TMW-Newborn	<ul style="list-style-type: none"> Caregivers significantly gained knowledge about brain, cognitive and language development 1 day and 4-6 weeks after intervention. Impact on knowledge gain was largest among English-speaking mothers of high-SES and middle-SES, and moderate among Spanish-speaking mothers of low-SES. 	<ul style="list-style-type: none"> Caregivers of all SES/languages learned strategies fostering infant secure attachment and language acquisition. Caregivers of all SES/languages were more likely than others to recognize the importance of timely follow-up for infants who failed the Universal Newborn Hearing Screening. 	<ul style="list-style-type: none"> This study focused on parent/caregiver knowledge and behavior. Child outcomes were not measured in this study.
TMW-Well Baby	<ul style="list-style-type: none"> Caregivers significantly gained knowledge about infant brain, cognitive and language development immediately and 1 month after intervention. 	<ul style="list-style-type: none"> English-speaking caregivers were significantly more likely to use complex language, e.g., provide more verbal guidance and engage the child verbally more often, during a teaching task. At 9 months of age, TMW parents were more likely to engage in positive parenting behavior, e.g. sensitivity to cues, social emotional growth and cognitive growth fostering, than Control parents. 	<ul style="list-style-type: none"> Currently, we are processing the data related to child outcomes.
TMW-Home Visiting (Feasibility)	<ul style="list-style-type: none"> Low-SES caregivers were significantly more knowledgeable about young children's cognitive and language development 1 week and 4 months after intervention. 	<ul style="list-style-type: none"> During intervention, caregivers had more back-and-forth conversational interactions. Caregivers and toddlers used more different types of words with each other 1 week after intervention. Caregivers and toddlers talked more about number, shape and size with each other at 1 week and 4 months after the intervention. 	<ul style="list-style-type: none"> During intervention, toddler vocalization increased.
TMW-Home Visiting (Longitudinal)	<ul style="list-style-type: none"> Low-SES caregivers were significantly more knowledgeable about young children's cognitive and language development immediately and 6 months after intervention. 	<ul style="list-style-type: none"> TMW parents used more praise, explanations, and open-ended questions, and less criticism, physical control, and intrusiveness with their toddlers than Control parents. TMW parents provided more diverse and complex language inputs to their toddlers than Control parents. TMW parent-child dyads showed an average increase of 44% in their conversational turn taking before and after intervention, compared with a 14% increase among Control parent-child dyads. 	<ul style="list-style-type: none"> Preliminary analyses reveal increases in parent-child conversational interactions at 19 to 22 months (right after intervention) positively predicted children's language skills one year later.