

Georgia State University

ScholarWorks @ Georgia State University

Public Health Capstone Projects

School of Public Health

Spring 5-12-2023

Epigenetic Changes and Health Disparities: An Evaluation Plan for Mamatoto Village Programming

Diamond T. Robinson
Georgia State University

Follow this and additional works at: https://scholarworks.gsu.edu/iph_capstone

Recommended Citation

Robinson, Diamond T., "Epigenetic Changes and Health Disparities: An Evaluation Plan for Mamatoto Village Programming." , Georgia State University, 2023.
doi: <https://doi.org/10.57709/35407179>

This Capstone Project is brought to you for free and open access by the School of Public Health at ScholarWorks @ Georgia State University. It has been accepted for inclusion in Public Health Capstone Projects by an authorized administrator of ScholarWorks @ Georgia State University. For more information, please contact scholarworks@gsu.edu.

ABSTRACT

Epigenetic Changes and Health Disparities: An Evaluation Plan for Mamatoto Village

Programming

By

Diamond T. Robinson

April 28, 2023

In the United States, Black birthing parents experience high infant and maternal mortality rates. Infants born to Black birthing parents are more likely to be born preterm or at a low birthweight and have poorer health outcomes when compared to their counterparts. Organizations like Mamatoto Village and its programs and services work to address and prevent epigenetic changes which are a significant contributor to the maternal and child health disparities common among Black birthing parents. The evaluation plan provides guidance for the monitoring and evaluation of the Mamatoto Village programs. The plan includes recommendations for collecting data utilizing mixed methods non-experimental concurrent triangulation design, pre- and post-test, and qualitative interviews. If implemented, the results of the evaluation could highlight the impact of Mamatoto Village on maternal and child health outcomes in the District of Columbia's Prince George's County and influence the expansion of programming for birthing parents across the United States.

An Evaluation Plan for Mamatoto Village Programming

By

Diamond T. Robinson

B.A., EMORY UNIVERSITY

A Capstone Submitted to the Graduate Faculty
of Georgia State University in Partial Fulfillment

of the

Requirements for the Degree

MASTER OF PUBLIC HEALTH

ATLANTA, GEORGIA

30303

APPROVAL PAGE

An Evaluation Plan for Mamatoto Village Programming

By

Diamond T. Robinson

Approved:

Emily Graybill, PhD
Committee Chair

Daniel J. Whitaker, PhD
Committee Member

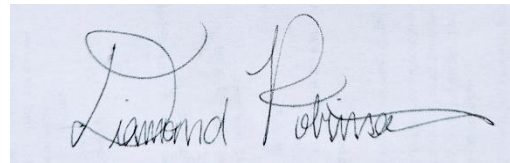
April 28, 2023
Date

Acknowledgments

I would like to recognize my committee, Dr. Emily Graybill and Dr. Daniel J. Whitaker. Your direction and guidance were priceless in producing this work. I also acknowledge my wonderful parents, siblings, partner, and closest friends. Your love, encouragement, and support made the enormous task of completing a graduate degree possible.

Author's Statement Page

In presenting this capstone as a partial fulfillment of the requirements for an advanced degree from Georgia State University, I agree that the Library of the University shall make it available for inspection and circulation in accordance with its regulations governing materials of this type. I agree that permission to quote from, to copy from, or to publish this capstone may be granted by the author or, in his/her absence, by the professor under whose direction it was written, or in his/her absence, by the Associate Dean, School of Public Health. Such quoting, copying, or publishing must be solely for scholarly purposes and will not involve potential financial gain. It is understood that any copying from or publication of this capstone which involves potential financial gain will not be allowed without written permission of the author.

A rectangular box containing a handwritten signature in black ink. The signature is written in a cursive style and appears to read "Diamond Robinson".

Signature of Author

Table of Contents

Tables and Figures	6
Literature Review	7
Program Description	10
Logic Model	11
Evaluation Questions	12
Goals, Objectives, and Indicators	14
Stakeholders	18
Evaluation Design	19
Data Sources and Data Measures	20
Data Analysis	21
Impact on Public Health	22
References	25
Appendix	27

Tables and Figures

Figure 1.1	11
Table A	18

Literature Review

Preterm birth and Low birthweight in the U.S.

In 2021 the preterm birth rate in the United States rose by 4% from 10.1% to 10.5% with 1 in 10 infants being born preterm (CDC, 2022). An infant is generally considered preterm if they are born before 37 weeks gestation. There are three preterm birth categories: extremely preterm (born less than 28 weeks gestation), very preterm (born 28 to 32 weeks gestation), moderate to late preterm (32 to 37 weeks gestation) (WHO, 2022). Low birthweight is associated with preterm birth. Infants are considered to have a low birthweight if their first weight after birth is less than 2500 grams. Infants born at less than 1500 grams are considered to have a very low birthweight. In 2020, 8.24% of infants born in the United States were considered low birthweight and 1.34% were considered very low birthweight (CDC, 2022). Premature birth is one of the risk factors for infant mortality.

The issues of preterm birth and low birth weight become more concerning when viewed according to race and ethnicity. From 2018-2020 on average, Black birthing parents carried the highest preterm birth rate at 14.2% well over their White counterparts (9.2%) (March of Dimes, 2022). The same can be observed for the rate of infants born at a low birthweight for the same period, Black birthing parents had the highest low birthweight rate at 13.8% compared to White birthing parents at 7% (March of Dimes, 2022). Data support that the differences in preterm birth and low birthweight rates are caused by health disparities such as lack of access to pre/postnatal care and lack of health insurance. Health disparities are preventable and when left unaddressed have the ability to further perpetuate poor health outcomes, especially those associated with pregnancy and childbirth.

Preterm birth, Low birthweight, and Epigenetics

In the United States, Black Americans specifically Black birthing parents, make up a significant portion of the socially disadvantaged. Given that Black birthing parents are more likely to give birth to preterm birth and low birthweight infants, these already vulnerable children become more disadvantaged if subjected to experiences that negatively impact health in all children such as poverty and adverse childhood experiences (Beck, 2020). Preterm birth, low birthweight, and their associated negative health outcomes are preventable and can be alleviated by way of early programming. Conceived by David Barker in 1995, and based primarily in nutrition, the fetal origins hypothesis implies that poor conditions during development will disrupt fetal growth and cause a susceptibility to disease in later life (Keller, 2020). Certain environmental exposures during gestation facilitate the development of health issues in later life. Fetal programming may be preventable, and in preventing it many of the health disparities related to birth outcomes faced by Black birthing parents and their children may be avoided. Modern discussions of fetal programming involve the topic of epigenetics. Epigenetics describes the effect of environmental exposures on gene “activation” or expression which impacts many of the biological mechanisms and pathways that contribute to the process of fetal programming and health outcomes in later life. While epigenetic changes can happen throughout the life course, fetal programming can be marked as the “start” of those changes that influence health disparities in birth outcomes. For example, in utero, the placenta acts as the main organ of pregnancy, removing toxins and providing protection (Matoba et al., 2020). Placental issues can result in preterm birth which may cause long-term issues for preterm infants. Researchers are aware that socioeconomic status as well as structural racism and epigenetic processes may have an effect on placental development and preterm birth, but the extent is unknown. In a study involving pregnant women in 4 race/ethnic groups researchers found that “maternal cardiometabolic

factors such as pregnancy, obesity, and gestational weight gain, along with genetic ancestry, influenced placental epigenetic aging” (Matoba et al., 2020). Stress is also a major factor in determining placental development and the risk for preterm birth. Chronic maternal stress has been shown to impact placental development, resulting in placental DNA methylation, increasing the risk of still birth, and restricting fetal growth (Matoba et al., 2020). While epigenetics plays a key role in birth outcome related health disparities, there are few public health programs that address those disparities from an epigenetic perspective. Epigenetics often focuses on the individual, while the field of public health is population based. This means the focus is turned instead to tackling the determinants of health and health outcomes that lead to disparities in birth outcomes. In this case, tackling disparities in birth outcomes may involve addressing access to health care, access to housing and economic stability, and nutritious foods.

Ameliorating Disparities in Birth Outcomes

There are many programs and initiatives within the United States that work to ameliorate disparities associated with birth outcomes such as the Alliance for Innovation on Maternal Health (AIM), Perinatal Quality Collaboratives (PQCs), the Georgia Maternal and Child Health Initiative, and the District of Columbia Preterm Birth Reduction Initiative. AIM is funded by the Health Resources and Services Administration and the American College of Obstetricians and Gynecologists. It utilizes data and quality improvement strategies to support evidence-based practices that increase birth safety, save lives, and improve maternal health outcomes (AIM, 2022). AIM is able to conduct their work by collaborating with PQCs which are a series of teams across the United States that identify practices within healthcare systems that can be improved upon to support the safety and well-being of birthing parents and children (CDC, 2022). Through collaboration AIM is able to implement Patient Safety Bundles which are evidence-based strategies specific to clinical conditions that are structured to improve patient experiences and

outcomes. Developed in 2021, the Georgia Maternal and Child Health Initiative supports Black women aged 15-45 and their children. The initiative works to employ evidence-based programs and interventions meant to reduce maternal and infant mortality and morbidity (Healthcare Georgia Foundation). The District of Columbia Preterm Birth Reduction Initiative aims to reduce disparities associated with preterm birth and infant mortality in the District of Columbia (Community Affairs DC). It does so by supporting evidence-based approaches that work to combat these issues, such as Mamatoto Village located in the District of Columbia's seventh ward. The goal of this paper is to present an evaluation plan for Mamatoto Village programming while addressing the role such organizations and programs play in preventing the epigenetic changes that result in preterm birth, low birthweight, and the resulting negative health outcomes.

Program Description

Conceived in 2012, Mamatoto Village is a non-profit organization dedicated to workforce development in the field of maternal and child health and public health as a whole. The organization provides birthing mothers and their families with the resources necessary to take control of their maternity care and parenting practices. They have a strong focus on providing access and education by way of lactation training, support groups, parenting programs, home-visiting programs, birth education, workforce development, and postpartum support. It is through these services that the organization works to decrease the maternal and infant mortality and morbidity rates and the number of infants born preterm and at a low birthweight.

Logic Model

Figure 1.1 In the U.S. Black birthing parents give birth to preterm infants at a rate of 14.2% (March of Dimes, 2022). Many of these infants are born with a low birthweight, a leading cause of infant mortality. Mamatoto Village exists to decrease the rate of infants born prematurely by providing Black birthing parents and families in the District of Columbia with perinatal health resources.

Inputs	Activities		Outcomes – Impact		
	Activities	Outputs	Short	Medium	Long
<ul style="list-style-type: none"> • Funding from the Greater Washington Community Foundation and Groundswell Fund • Outreach coordinators • Perinatal Health Worker Training Program (PHWTP) Curriculum • Mothers Rising Home Visitation Program (MRHVP) Curriculum • Mental health providers • Doulas/Birth workers • Wellness coaches • Health educators • Lactation specialists 	<ul style="list-style-type: none"> • Recruit participants and students • Train those interested in becoming birth or community health workers • Educate and support birthing parents and families through pregnancy and postpartum • Visit and train Black birthing parents and their families in their homes • Link Black birthing parents to the appropriate services (prenatal care and support, counseling, health education, lactation, etc.) 	<ul style="list-style-type: none"> • # of individuals enrolled in training • # of parents enrolled in services • # of parents receiving education and pregnancy postpartum support • # of homes visited • # of parents linked to care and services 	<ul style="list-style-type: none"> • Increase awareness of causes of preterm/low birthweight infants • Increase awareness of causes of infant mortality • Increase awareness of causes of maternal mortality • Increase awareness of the importance of healthy self-care and parenting techniques • Increase awareness of culturally competent birth and education services available within the community 	<ul style="list-style-type: none"> • More individuals are trained to become birth or community health workers • Parents more likely to engage in practices that decrease their chances of having a preterm/low birthweight infant • Parents more likely to engage in behaviors and practices that increase the well-being of themselves and their children • More parents have access to culturally competent pregnancy and postpartum care 	<ul style="list-style-type: none"> • Reduce preterm and low birthweight infant rate • Reduce infant mortality rate • Reduce maternal mortality rate • Increased number of culturally competent birth and community health workers • Decrease in negative outcomes related to poor parenting practices • Decrease in rates of postpartum depression • Family stability and cohesion increases • Access to pregnancy and postpartum healthcare increases

Evaluation Questions

Process Evaluation Questions:

Questions Addressing Referrals:

- To what extent are impacted Black birthing parents in the District of Columbia being referred to Mamatoto Village as intended?
- To what extent are Black birthing parents being referred appropriately to services and resources within the organization?

Questions Addressing Program Implementation:

- Are the goals and objectives of Mamatoto Village programs being communicated to parents and families?
- What is the quality of Mamatoto Village staff training?
- Is the MRHVP being implemented as designed? Explain.
- What is the quality of PHWTP training and education?
- What percentage of PHWTP participants have completed training?
- To what extent are PHWTP participants meeting training milestones?
- To what extent have Mamatoto Village birth workers implemented with fidelity, program activities?
- Is funding being utilized as designed? Explain.

Questions Addressing Participant Reactions:

- To what extent did Black birthing parents improve their knowledge of self-care and parenting techniques?
- To what extent did Black birthing parents find the labor support packages helpful?

- To what extent did Black birthing parents find lactation support (The Latch Clinic and/or The Milk Bar) helpful?

Outcome Evaluation Questions:

Short-term Impact:

- To what extent have Mamatoto Village services and resources increased awareness of causes of preterm and low birthweight infants among Black birthing parents?
- To what extent have Mamatoto Village services and resources increased awareness of causes of infant and maternal mortality among Black birthing parents?
- To what extent have Mamatoto Village services and resources increased awareness of healthy self-care and parenting techniques among Black birthing parents?

Medium-term Impact:

- What is the impact of wellness coaching on self-care techniques utilized by mothers?
- What is the impact of parent education on appropriate parenting techniques?
- What is the impact of lactation support on breastfeeding successfully?
- How has awareness of culturally appropriate pregnancy and postnatal care and services impacted maternal and infant health in Prince George's County, DC?

Long-term Impact:

- To what extent have preterm and low birthweight infant births decreased in Prince George's County, DC since the implementation of Mamatoto Village services?
- To what extent has the number of culturally competent birth and community health workers increased since the implementation of PHWTP?

- What is the impact of MRHVP on improving maternal and child health among Black birthing parents and families in Prince George’s County, DC?

Goals, Objectives, and Indicators

- **Goal 1:** Provide Black birthing parents and families with culturally relevant services to reduce the rate of infants born preterm and low birthweight and reduce infant and maternal mortality rates.
 - **Objective 1:** By the end of 2024, at least 150 Black birthing parents will be referred to the Mothers Rising Home Visitation Program (MRHVP).
 - **Indicator:** Number of birthing parents enrolled in MRHVP.
 - **Objective 2:** By the end of 2024, at least 75 birthing parents will receive labor support from Mamatoto Village birth workers.
 - **Indicator:** Number of birthing parents who receive labor support services.
 - **Short term outcome:** Mothers’ increased awareness of what to expect during labor and delivery.
 - **Long term outcome:** Labor, delivery, and hospital-related causes of maternal and infant mortality decrease.
 - **Objective 3:** By the end of 2024, at least 75 Black birthing parents will receive postpartum support from Mamatoto Village birth workers.
 - **Indicator:** Number of birthing parents who receive postpartum support services.
 - **Short term outcome:** Mothers’ increased awareness of the importance of postpartum care for both parent and infant.

- **Long term outcome:** Decreased maternal and infant mortality. Decreased likelihood of postpartum depression.
 - **Objective 4:** By the end of 2024, at least 150 Black birthing parents will be referred to lactation support from a Mamatoto Village certified lactation support specialist via The Latch Clinic or The Milk Bar.
 - **Indicator:** Number of birthing parents who receive lactation support services.
 - **Short term outcome:** Increased awareness of the importance of breast/chestfeeding.
 - **Medium term outcome:** Parents more likely to engage in breast/chestfeeding.
 - **Long term outcome:** Infant mortality rate decreases. Increased family cohesion and bonding.
- **Goal 2:** Support workforce development within and outside of Mamatoto Village by providing interested individuals with training and education to increase the number of culturally competent birth and community health workers.
 - **Objective 1:** By the end of 2024, at least 50 individuals will be enrolled in the Perinatal Health Worker Training Program (PHWTP).
 - **Indicator:** Number of individuals who enroll in PHWTP.
 - **Short term outcome:** Enrolled individuals aware of the importance of culturally competent birth and community health workers and the role they play in the health system.

- **Medium term outcome:** Enrolled individuals less likely to perpetuate behaviors that harm birthing parents such as ignoring patient concerns, communicating critical information poorly, and disrespecting patients.
 - **Long term outcome:** Health system related infant and maternal mortality rates decrease. The workforce of culturally competent birth and community health workers increases.
- **Goal 3:** Support family stability and cohesion by empowering Black birthing parents to prioritize the care of their children and themselves.
 - **Objective 1:** As necessary, by the end of 2024, refer at least 150 Black birthing parents to mental health counseling.
 - **Indicator:** Number of birthing parents who receive mental health counseling.
 - **Short term outcome:** Increased awareness of the role of mental health in pregnancy and parenting.
 - **Medium term outcome:** Birthing parents develop the tools necessary to appropriately manage their mental health and care for their children.
 - **Long term outcome:** Decreased likelihood of postpartum depression. Increased family stability and cohesion.
 - **Objective 2:** As necessary, by the end of 2024, refer at least 150 Black birthing parents to wellness coaching.
 - **Indicator:** Number of birthing parents who receive wellness coaching.
 - **Short term outcome:** Increased awareness of the roles that nutrition and fitness play in pregnancy and postpartum.

- **Medium term outcome:** Birthing parents more likely to develop healthful skills surrounding fitness and nutrition.
- **Long term outcome:** Decreased likelihood of postpartum depression.
- **Objective 3:** By the end of 2024 distribute at least 150 Black Mama's Guide booklets.
 - **Indicator:** Number of booklets distributed.
 - **Short term outcome:** Empower mothers to take charge of their health and lives. Increased awareness of the importance of self-perception. Increased awareness of services and resources available through Mamatoto Village.

Stakeholders**Table A**

Stakeholders	Outcomes of Interest
Black mothers, birthing parents, partners, and infants	Improvement of birth outcomes and access to resources that improve health, well-being, and overall quality of life
Prospective students	Improvement of health outcomes associated with maternal and child health, impact of training on maternal and infant health, well-being, and overall quality of life
Policymakers	Gaps in services, rate of use for each service to determine opportunities for expansion
Mamatoto Village	Impact of services and training on maternal and infant health, well-being, and overall quality of life; utilization of services
District of Columbia Department of Health	Decreased rate of infants born preterm and with a low birthweight, decrease of maternal and infant mortality
Medical professionals	Increased access to care, improvement in maternal and child health outcomes, reduction in maternal and infant morbidity

Evaluation Design

This study will focus on both process and outcome evaluation, with outcome evaluation as the main focus. Being that the program has been implemented since 2012, outcome evaluation will allow for the measurement of the impact of Mamatoto Village programs and services. Process evaluation will assess the resources available for Mamatoto Village programs and services and whether they are being utilized for implementation adequately and efficiently. The study will utilize a mixed methods non-experimental concurrent triangulation design. The design is non-experimental because it would be unethical to deny or delay access to Mamatoto Village programs and services. All participants will receive the intervention, but a subset of those participants will be randomly selected to collect quantitative and qualitative measures from and inform the evaluation of Mamatoto Village. Quantitative data will be collected through pre- and post-test surveys. A subset of individuals will be randomly selected and given an opportunity to complete a pre-test when they are recruited into Mamatoto Village programs. These same individuals who will have participated in programs will be given the opportunity to complete the post-test survey as well. To collect qualitative data, these same individuals will also be selected to participate in face-to-face interviews.

Advantages and disadvantages exist for the concurrent triangulation study design. Use of a concurrent triangulation study design makes it possible to collect both quantitative and qualitative data in the same period. Both sets of data may be analyzed and compared simultaneously as well. The methodology allows evaluators to view consistencies and differences between quantitative and qualitative data simultaneously. Concurrent triangulation study designs are cost-effective and efficient. As mentioned previously, the study design may increase efficiency by removing the time constraints that are a common issue in sequential study

designs. If staff are trained appropriately, ethical concerns may be reduced as well. Properly trained staff will conduct culturally sensitive interviews, possess the skills and knowledge required to engage with participants and stakeholders, and will maintain confidentiality and integrity throughout the study (Harris, 2016). Concurrent triangulation often requires a team of evaluators from various backgrounds, individuals must be trained in mixed methods approaches because the study design utilizes diverse types of data collection tools such as surveys, in-depth interviews, focus groups, etc. While time efficiency with data collection is an advantage for concurrent triangulation study designs, time can also be a disadvantage. These types of studies can be very time intensive because quantitative and qualitative data are being collected, analyzed, and compared simultaneously. Staff may introduce ethical concerns as well. Untrained staff may not conduct interviews well, incorporate stakeholders as they should, fail to draw appropriate conclusions on the data, etc. It is essential that participants trust the staff and feel represented by and invested in the work being conducted.

Data Sources and Data Measures

Mamatoto Village provides a number of services to Black pregnant and postpartum birthing parents, their families, and prospective students who reside in the District of Columbia or Prince Georges County, DC. Mamatoto Village program-based measures are broken down by the individuals served. Program-based measures for birthing parents: number of Black birthing parents enrolled in MRHVP, number of birthing parents who receive labor support services, number of birthing parents who receive postpartum support services, number of birthing parents who receive lactation support services, number of birthing parents who receive mental health counseling, number of birthing parents who receive wellness coaching, and number of Black

Mama's Guide booklets distributed. The program-based measure for prospective students is the number of individuals who enroll in PHWTP.

While concurrent triangulation is the study design being utilized it is important to note that the Mamatoto Village houses several programs. The programs may begin and end in phases and the failure to properly track them may present a significant limitation or barrier to the evaluation plan.

Data Analysis

Mamatoto Village program enrollment information will be collected, and enrolled individuals will be randomly selected and contacted via text, call, and email address to participate. Individuals will participate by completing pre- and post-test surveys and participating in face-to-face interviews. Surveys should be web-based for ease of access and will be analyzed using Microsoft Excel. Pre- and post-test surveys will be created and distributed through the Qualtrics platform. Surveys will collect information from participants such as their names and email addresses, demographic information, and will include questions that gauge the effectiveness of Mamatoto Village through numerical and categorical survey questions. Responses will be imported into SAS version 9.4 for analysis. Users will analyze the quantitative data to find descriptive and inferential statistics. Inferential statistics such as t-tests and chi-square tests will determine if there is a change in effectiveness between the pre- and post-test surveys. This information will make it possible to determine the impact of Mamatoto Village on those its programs serve and the impact the programs could potentially have on the larger population of the DC metro area and surrounding counties. Face-to-face interviews may be conducted in person or virtually, recorded, transcribed, and analyzed using software-assisted analysis software, NVivo 12. The software will be used to identify and code themes across

interviews. NVivo will allow staff to determine answers to the evaluation questions, which when combined with quantitative data will provide a greater perspective on the effectiveness of the programs and the evaluation as a whole. Additionally, the staff collecting, analyzing, and interpreting the data must be trained efficiently to draw the correct conclusions about the outcomes of Mamatoto Village programs and services. Those working on the coding and data analysis sections will meet weekly to discuss collected data, identify, and code themes, and analyze and draw conclusions.

Impact on Public Health

There are opportunities for the Mamatoto Village programs and services to positively influence public health and contribute to the health of the population on various levels. At the micro-level those who participate in Mamatoto Village programs and receive services can improve the health and wellbeing of themselves and their infants. Black birthing parents who may have gone without care throughout their pregnancies receive access to healthcare, prenatal care, and may acquire a primary physician to continue receiving care. Accessing these resources that increase access to healthcare improves health and wellbeing for these parents and their children, decreasing the rate of infant mortality and the rate of infants born preterm or at a low birthweight. As mentioned previously, Black birthing parents are more likely to die during and after childbirth when compared to their counterparts across race. Receiving labor and postpartum support from Mamatoto Village has the potential to reduce the maternal mortality rate. Black birthing parents who receive lactation support may see an improvement in the health of their infants and could increase bonding. Family cohesion and stability may be improved in Black birthing parents who receive mental health counseling, wellness coaching, and receive the Black Mama's Guide booklet. Additionally, those who complete the Perinatal Health Worker Training

Program receive training that potentially increases their chances of employment within the field of public health, specifically maternal and child health leading to an improvement of health outcomes associated with the field.

At the meso-level Mamatoto Village and organizations who seek partnership with them are impacted. Data gathered gives Mamatoto Village the opportunity to determine the impact and utilization of services and training on maternal and infant health, well-being, and overall quality of life. Process evaluation data has the potential to drive quality improvement within the organization while strengthening programs, services, and training. Outcome evaluation data may potentially lead to an increase in funding, program participants, and partnerships. Furthermore, organizations that hire professionals who have completed training from Mamatoto Village may see an improvement in the standards and quality of their workforce and the implementation of their services. Meso-level contributions impact those seen at the micro-level. It is here that properly trained Mamatoto Village staff are able to connect and provide participants with the appropriate programs and services which leads to desired outcomes such as increased access to healthcare, a reduction in the infant mortality rate, and the birth of infants born preterm or at a low birthweight.

Macro-level contributions impact contributions found at the meso- and micro-level. For Mamatoto Village these macro-level contributions would be viewed at the policy level. Policymakers may utilize evaluation data to inform policy decisions. For example, evaluation data that demonstrates a positive impact on reducing negative outcomes associated with maternal and child health may lead to an increase in funding for Mamatoto Village and similar organizations, which may result in the expansion and improvement of programs and services for birthing parents. Influencing the macro-level has the potential to impact birthing parents that

reside outside of DC metro area and Prince Georges County, DC. Policymakers in states that are similar to the DC metro area may view the evaluation data on Mamatoto Village and its impact and make the decision to fund and implement initiatives that result in similar outcomes. At the macro-level there is potential for evaluation data to make sweeping changes.

Finally, there is potential for the evaluation of Mamatoto Village to contribute to public health as a whole. In public health it is recognized that health disparities exist, but it is important to acknowledge that they are also preventable. The field often teaches the importance of addressing upstream issues to prevent downstream outcomes. Fetal programming is the “start” of those epigenetic changes that lead to the health disparities that are found downstream. Programs like Mamatoto Village that focus on empowering Black birthing parents through resource allocation, education, and training address many barriers that facilitate poor maternal and child health outcomes. Evaluation data from these organizations can be utilized to further advocate for the dissemination and implementation of programs that advance maternal and child health and combat issues such as infant mortality, infants born preterm or with a low birthweight, and maternal mortality and morbidity.

References

00 – *Homepage—Mamatoto Village*. (n.d.). Mamatoto Village -. Retrieved February 3, 2023, from

<https://www.mamatotovillage.org/>

A profile of prematurity of United States. (n.d.). March of Dimes | PeriStats.

<https://www.marchofdimes.org/peristats/reports/united-states/prematurity-profile>

AIM | *Alliance For Innovation On Maternal Health*. (n.d.). <https://saferbirth.org/>

AMENDED NOTICE OF FUNDING AVAILABILITY (NOFA) RFA# CHA_

PBRI_07.01.2022 Preterm Birth Reduction Initiative. (n.d.). DC Department of Health

Community Health Administration. <https://communityaffairs.dc.gov/publication/preterm-birth-reduction-initiative>

Beck, A. F., Edwards, E. M., Horbar, J. D., Howell, E. A., McCormick, M. C., & Pursley, D. M.

(2020). The color of health: How racism, segregation, and inequality affect the health and well-being of preterm infants and their families. *Pediatric Research*, 87(2), Article 2.

<https://doi.org/10.1038/s41390-019-0513-6>

FastStats. (2022, June 23). <https://www.cdc.gov/nchs/fastats/birthweight.htm>

Harris, M. J. (2016). *Evaluating Public and Community Health Programs*. John Wiley & Sons,

Incorporated. <http://ebookcentral.proquest.com/lib/gsu/detail.action?docID=4722974>

Keller, C. (n.d.). Fetal Programming. *The Embryo Project Encyclopedia*.

<https://embryo.asu.edu/pages/fetal-programming>

Low birthweight by race: United States, 2018-2020 Average. (n.d.). March of Dimes | PeriStats.

<https://www.marchofdimes.org/peristats/data?reg=99&top=4&stop=45&lev=1&slev=1&obj=1>

Maternal and Child Health – Healthcare Georgia Foundation. (n.d.).

<https://www.healthcaregeorgia.org/maternal-and-child-health/>

Matoba, N., Mestan, K. K., & Collins, J. W. (2021). Understanding Racial Disparities of Preterm Birth Through the Placenta. *Clinical Therapeutics*, 43(2), 287–296.

<https://doi.org/10.1016/j.clinthera.2020.12.013>

Perinatal Quality Collaboratives | Perinatal | Reproductive Health | CDC. (2022, September 26).

<https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pqc.htm>

Preterm birth | WHO. <https://www.who.int/news-room/fact-sheets/detail/preterm-birth>

Preterm Birth | Maternal and Infant Health | Reproductive Health | CDC. (2022, November 1).

<https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm>

Preterm Birth Reduction Initiative | Mayors Office of Community Affairs. (n.d.).

<https://communityaffairs.dc.gov/publication/preterm-birth-reduction-initiative>

Appendix

Measures

Sample Quantitative Survey Questions

1. Did you know about the causes of preterm/low birthweight in infants before working with Mamatoto Village? *
 - a. Response: Yes/No
2. Did you know about the causes of infant mortality before working with Mamatoto Village? *
 - a. Response: Yes/No
3. Did you know about the causes of maternal mortality before working with Mamatoto Village? *
 - a. Response: Yes/No
4. What is your opinion about the following statement: Access to prenatal care and health services improved my birth outcomes.
 - a. Rating scale: Strongly disagree to strongly agree
5. What is your opinion about the following statement: Access to mental health counseling decreased the stress I have about motherhood.
 - a. Rating scale: Strongly disagree to strongly agree
6. What is your opinion about the following statement: Access to wellness coaching and related services improved my experience with pregnancy and the post-partum period.
 - a. Rating scale: Strongly disagree to strongly agree
7. What is your opinion about the following statement: Receiving lactation support increased my willingness to breastfeed/chestfeed?
 - a. Rating scale: Strongly disagree to strongly agree
8. I am satisfied with my pregnancy, birth, and postpartum experiences after participating in Mamatoto Village Mothers Rising Home Visitation Program (MRHVP)?
 - a. Rating scale: Strongly disagree to strongly agree
9. What is your age?
 - a. Response scale: 12-17/18-24/25-34/35-44/45-54/55-64
10. What is your ethnicity?
 - a. Response scale: White/Hispanic or Latino/Black or African American/Native American or American Indian/Asian Pacific Islander/Other
11. What is your marital status?
 - a. Response scale: Single, never married/Married or domestic partnership/Separated/Divorced/Widowed
12. What is the highest level of education you have completed?
 - a. Response scale: No schooling/Up to 8th grade/Highschool graduate, diploma (or GED)/Some college/Trade, technical, or vocational school/Associate's degree/Bachelor's degree/Master's degree/Doctorate degree
13. What is your current employment status?ⁱ

- a. Response scale: Full-time employed, receiving wages/Part-time employed, receiving wages/Self-employed/Out of work, looking for work/Out of work, not currently looking for work/Homemaker/Student/Military/Retired/Unable to work
14. Do you have health insurance?
- a. Response: Yes/No

Sample Qualitative Interview Questions

1. Describe your experience with the Mamatoto Village organization.
 - a. How did you learn about Mamatoto Village?
 - b. How do you feel the organization has impacted you since receiving services/participating in programs?
 - c. What has worked well with the organization?
 - d. What did not work well with the organization?
 - e. Compared to other programs/organizations/services what are some of the advantages and disadvantages of participating in Mamatoto Village programs?
2. Describe your experience with Mamatoto Village services and activities.
 - a. What services did you receive from Mamatoto Village?
 - i. Mothers Rising Home Visiting Program (MRHVP)
 1. Describe your experience with MRHVP.
 2. What did you find most helpful?
 - ii. Labor Support
 1. Describe your experience receiving labor support.
 2. What did you find most helpful?
 - iii. Post-partum support
 1. Describe your experience with receiving post-partum support.
 2. What did you find most helpful?
 - iv. Lactation support
 1. Describe your experience with receiving lactation support.
 2. What did you find most helpful?
 - v. Wellness coaching
 1. Describe your experience with receiving wellness coaching.
 2. What did you find most helpful?
3. Describe how participating in Mamatoto Village programs/services has impacted your experience with pregnancy and parenthood.
 - a. What are some major challenges or obstacles you may have experienced during pregnancy/postpartum/parenthood? Did the program assist you in overcoming them? How?
 - b. What are some major successes you have experienced during pregnancy/postpartum/parenthood? Did the program assist you in achieving them? How?
 - c. In your experience, how has participating in Mamatoto Village programs/services impacted your pregnancy and parenthood journey?

4. Describe Mamatoto Village strengths and weaknesses.
 - a. What did you find most helpful with being enrolled in Mamatoto Village programs/services?
 - b. What did not work for you while enrolled?
 - c. Are there any activities or resources that are missing that you wish were provided or included in Mamatoto Village programs/services?
 - d. Did some of the activities and programs that you participated in work better than others?

ⁱ * Questions marked with the asterisk would be present in pre- and post-test surveys.