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## Impact of Maternal Health Literacy Training on the Knowledge of Women who have been Homeless

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# **THE IMPACT OF MATERNAL HEALTH LITERACY TRAINING ON THE KNOWLEDGE OF WOMEN WHO HAVE BEEN HOMELESS**

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**Capstone Defense**

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**Perry, MD, MPH**

**October 15, 2013**

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# INNOVATIVE SOLUTIONS FOR DISADVANTAGE AND DISABILITY (ISDD)



- ISDD is a non-profit organization dedicated to promoting health equity among children living in social and economic disadvantage with or at risk for disability.
  - Programs supported by ISDD:
    - Healthcare Without Walls (HWW)
      - Break the Cycle (BTC)
      - Project GRAAND

# SUMMARY OF OVERALL GOALS

- Improve collection and analysis skills
- Gain more experience working with underserved populations
- Receive additional training in evaluation and analysis techniques
- Better understand planning and implementation tools

# RESEARCH FOCUS

- Initial research focus:

- Short and long-term behavioral changes in mothers and children who have been homeless due to maternal health literacy training

- Revised research focus:

- Short term knowledge changes in mothers who have been homeless due to maternal health literacy training

# INTRODUCTION: HEALTH LITERACY

- There are numerous barriers to quality healthcare for minorities, especially those with little education and low SES
  - Critical Barrier: Low health literacy
    - Prevalence: approx. 90 million people in the United States which is 23% of the entire population
    - Economic Burden: estimated \$58 billion/year in USA

# LITERATURE REVIEW

- Good health literacy leads to:
  - Personal empowerment within the healthcare system
    - Better healthcare outcomes overall
    - Better attendance for doctor's appointments
  - More educated and appropriate personal health decisions
    - More preventative primary care visits
      - Fewer hospitalizations



# LITERATURE REVIEW: MATERNAL HEALTH LITERACY

- Maternal health literacy focuses on the health knowledge of mothers and how this knowledge directly affects her child's health outcomes
  - Confounding factors:
    - Minority Status
    - Socioeconomic Status
    - Educational Status
    - Age

# LITERATURE REVIEW: MATERNAL HEALTH LITERACY

- Important elements that often lapse with low maternal health literacy:
  - Appropriate and timely prenatal care
  - Important preventative measures into childhood, such as vaccines and regular pediatrician visits
    - Proper nutrition
  - The ability to identify dangerous environmental factors

# LITERATURE REVIEW: MATERNAL HEALTH LITERACY

- Negative health outcomes in children and mothers related to low maternal health literacy:
  - Low birth weight
    - Miscarriage
  - Physical and intellectual disabilities
    - Exposure to environmental toxins
    - Both chronic and acute diseases

# LITERATURE REVIEW: MATERNAL HEALTH LITERACY

- Positive outcomes in maternal health literacy interventions:
  - Prenatal intervention and assessment of women with low education levels living in a rural setting were able to increase maternal health literacy over time.
  - Prenatal interventions are optimal, but not the only opportunity for change
- Other settings such as residential rehabilitation centers where women reside for long periods of time with their children

# PURPOSE

**PURPOSE:** Build upon existing literature by implementing a 6-hour maternal health literacy training with a sample of previously homeless women who are residing at a rehabilitation center



# METHODS: RESEARCH QUESTION

## Research Question:

Will a 6-hour maternal health literacy training workshop impact the knowledge of mothers, who have been homeless, residing and seeking

treatment for substance abuse at a residential rehabilitation facility for women and children (Mary Hall Freedom House (MHFH))



# HYPOTHESIS

- **HYPOTHESIS:** Participants in the maternal health literacy training program will demonstrate positive improvements in their health knowledge
- Changes in knowledge have been positively linked to behavior change

# MARY HALL FREEDOM HOUSE (MHFH)

- A residential rehabilitation facility for women who have been homeless
  - Ancillary support services for mother and child
    - Daycare services
- Women receive benefits of Healthcare Without Walls (HWW)





# HEALTHCARE WITHOUT WALLS

- Run by ISDD and housed within MHFH
- Addresses the healthcare needs of the children who accompany their mothers to treatment
- Provides consistent access to medical care for the children
- Monthly clinics are held on campus at Children's Healthcare of Atlanta (CHOA)



## **METHODS: STUDY POPULATION**

- **91 participants between February 2012 - August 2013**
- **Represents over 60% of all HWW participants since 2010**
  - **All women were low-income**
- **Approx 65% African American, 35% White**

# METHODS: INTERVENTION DETAILS

- 5 maternal health literacy training sessions quarterly between February 2012 and August 2013
  - Each comprehensive training was a continuous 6-hours
    - Content, training materials and facilitation: Collaboration between HWW, MHFH, and ChildKind, Inc. (CK)
      - Location: MHFH
- Inclusion Criteria: Women residing at MHFH who were pregnant or already has a child(ren)

# METHODS: INTERVENTION DETAILS

- Used a Pre-Test/Post-Test Design to measure immediate knowledge gains
  - 91 total women took the pre-test
  - 82 total women took the post-test
    - 6<sup>th</sup> grade reading levels
    - Anonymous
- Qualitative Follow-up Questionnaire Post 2-4 months
  - 10 total women took this survey
  - 11% of women who took the pre-test

# OVERVIEW OF TOPICS COVERED

- Healthcare issues such as the importance of vaccines and protocols for fevers and injuries
- The importance of establishing a medical home
- Helpful and necessary programs
- Actions to avoid prenatally and after the child is born.



# TRAINING MANUAL

- Each woman received an exhaustive 300-page training manual during the training and to keep for reference afterwards
- Includes all of the agenda's main topics and many practical resources, for example:
  - Easiest ways to access Medicaid and other needs-based programs in GA
  - Networks for parents of children with disabilities
    - Medical assessment tools

# TESTING MEASURES

- **Quantitative Measures: Pre/Post Test**
  - 32 multiple choice questions for each test
  - Questions were taken directly from the manual given to the women
- **Qualitative Measures: Questionnaire 2-4 months post-workshop**
  - 13 question survey allowed women to answer in her own words
  - Assessed knowledge retained and strengths/weaknesses in training module

# RESULTS: QUANTITATIVE

## Pre/Post Test Results

	Pre-Test's Completed	Post-Test's Completed	Pre-Test % Correct	Post-Test % Correct	Significance
Training #1 Results	22	20	83.61%	90.18%	p= .015
Training #2 Results	23	18	85.46%	91.67%	p= .0008
Training #3 Results	15	12	84.8%	89.58%	p= .105
Training #4 Results	11	11	80.96%	92.61%	p= .036
Training #5 Results	20	18	87.03%	91.32%	p= .064
Overall Results	91	79*			p= .0001

**\*This is the amount after the 3 outliers were removed**



# RESULTS: QUALITATIVE

- 10 women (11% of women who initially took the pre-test) completed the post-questionnaire:
- A few consistent themes listed as important and recalled by the women:
  - Information about Department of Family and Children Services (DFCS)
    - Milestones toward healthy development
    - Understanding the accessibility of Medicaid
  - Improved hygiene practices to reduce risk of illness

# DISCUSSION

- Results supported initial hypotheses
- Trends in behavioral change indicated in those who participated in the qualitative follow-up
  - Consistent with previous research
- First steps in further understanding how maternal health literacy can improve overall maternal child health

# DISCUSSION

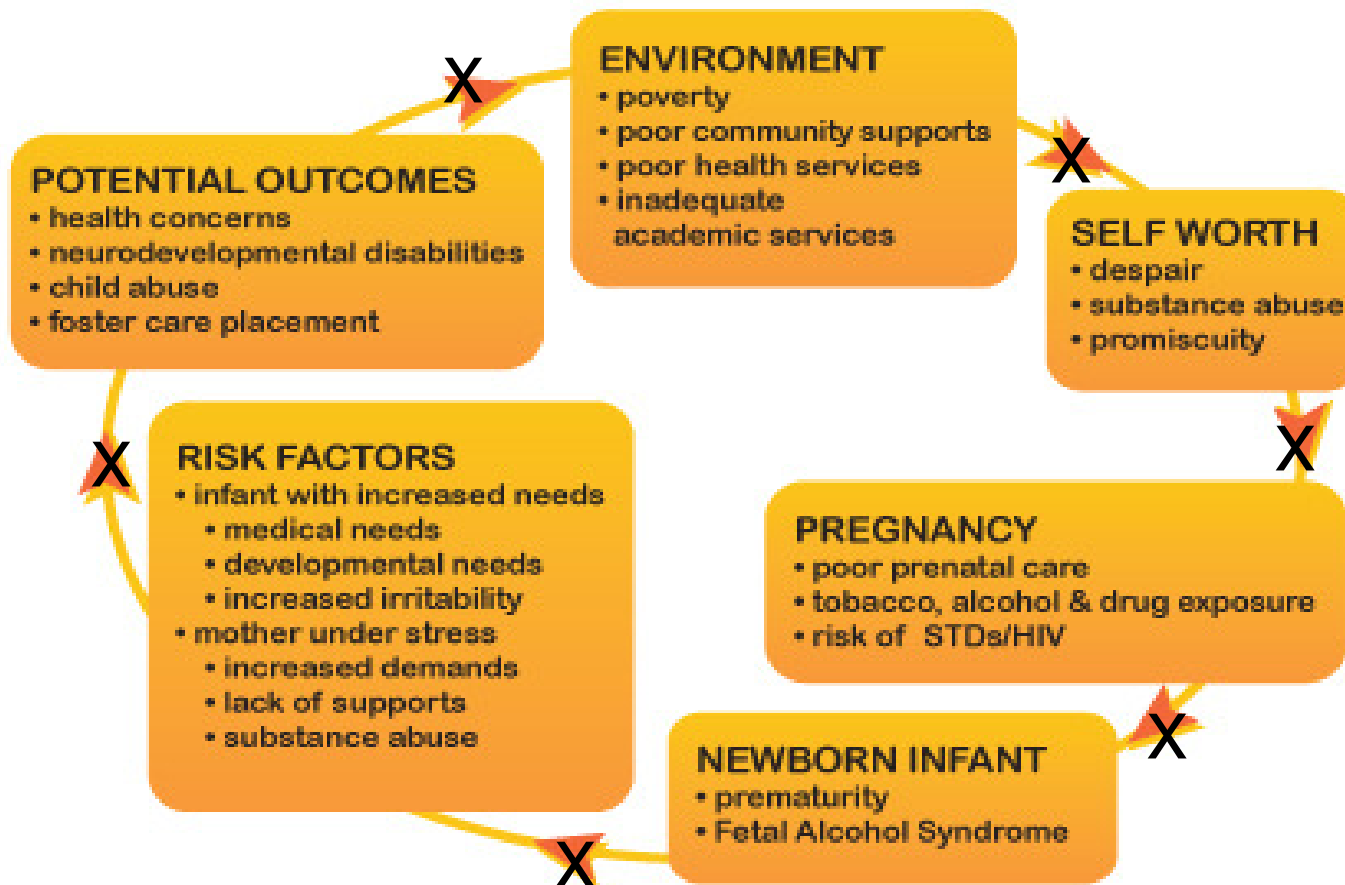
- This was a unique study
  - Majority of prior research examined the link between low maternal health literacy and specific health outcomes
  - Health literacy generates a large amount of attention
- With various modifications, improvement in this study is probable

# DISCUSSION

- **Goals throughout this project and beyond:**
  - **Understand more about the effectiveness of this specific training tool toward knowledge change**
  - **The exploration of the relationship between knowledge change and behavioral change**
  - **Examine what intervention changes are necessary to evoke short and long-term knowledge and behavior changes in the women**
  - **Break the Cycle of Disadvantage and Disability in these women's lives**

# BREAK THE CYCLE

## CYCLE OF DISADVANTAGE AND DISABILITY



# CYCLE OF CHANGE



# SHORTCOMINGS AND ADAPTATION

## ■ Obstacles and Limitations:

- Not all women who took pre-test were able to stay for post-test
- Small sample size
- High turnover rate
- Transient nature of population
- Difficult to assess behavior changes



## How we adapted:

- Implementation of a post-training questionnaire

# RECOMMENDATIONS

- Use of validated tools
  - Use longitudinal, randomized design study
- Measure additional outcomes prior to training
- Balance preventative and prenatal elements with current health factors of mother and child
  - Follow up with the women more often



# OVERALL LEARNING EXPERIENCE

- Important information and tools learned:
  - Adaptation and flexibility essential
  - A small sample size can create a significant research precedent
- Qualitative data can revive a project and is often undervalued
  - Community partnerships are invaluable
- The important balance between the health of the individual and the community's wellbeing

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