

Harnessing technology to enhance social capital among low-income mothers

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Maternal Mental Health: Overview of the Epidemiology

- **20.6** million children live with an adult with a mental illness.^{1,2}
- Children of depressed as compared to non-depressed parents are more likely to develop psychiatric illnesses, and are at greater risk for social, cognitive, and medical difficulties.²



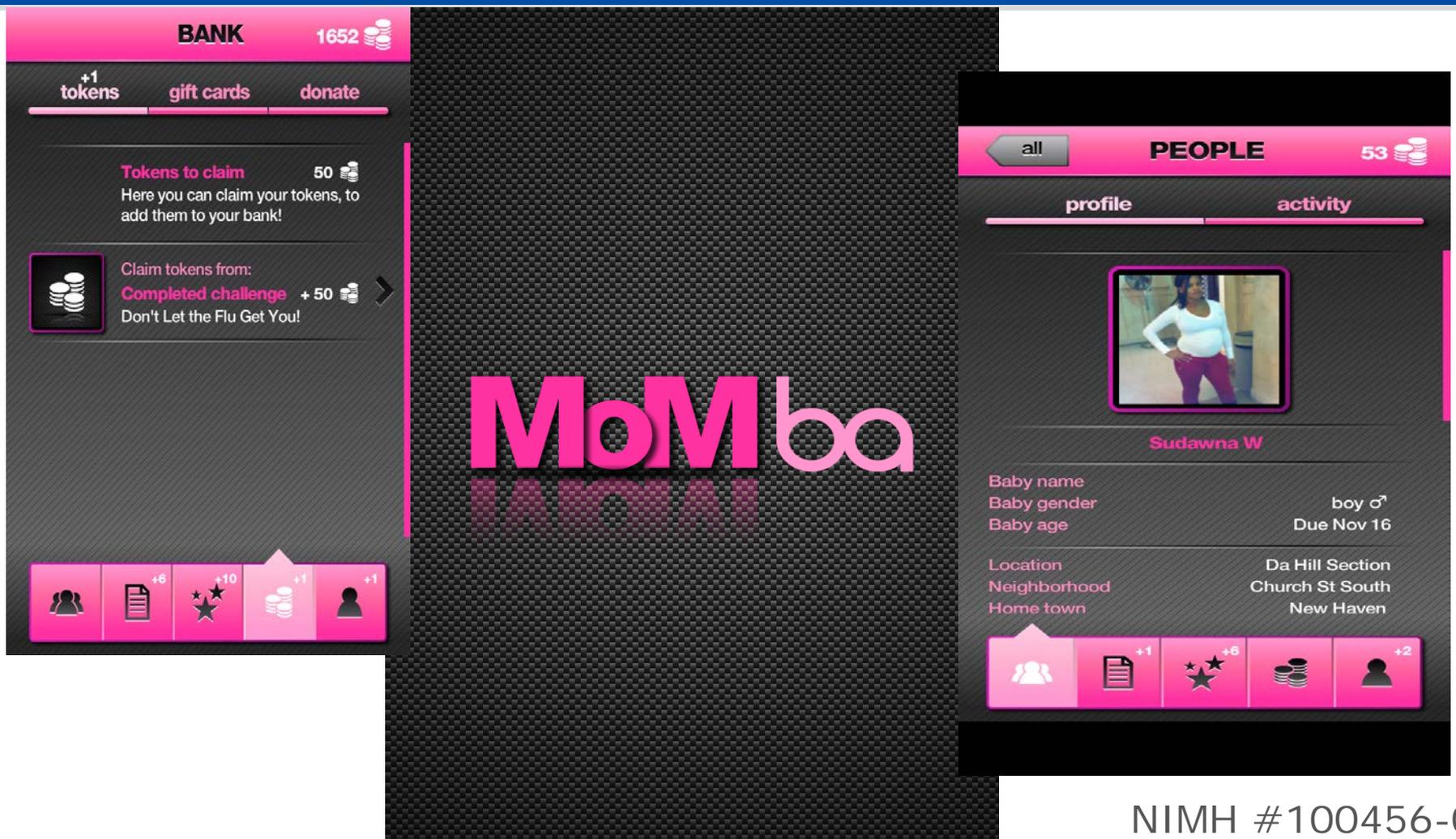
¹ Prince M. *Lancet* 370: 859-877, 2007. Kessler RC. 2005 JAMA

² *National Academies of Science*, 2010

Social Capital & Maternal Mental Health

- Positive social networks enhance mental health, perceived social support and parental self efficacy.
- Most programs focused on the promotion of mental health among mothers utilize home visiting strategies or screen in clinical settings with referrals to mental health treatment.
- Very few harness the power of positive social networks and increased trust and reciprocity to promote mental health, family wellbeing, economic security and child outcomes.

Using Technology to Enhance Social Capital



NIMH #100456-01

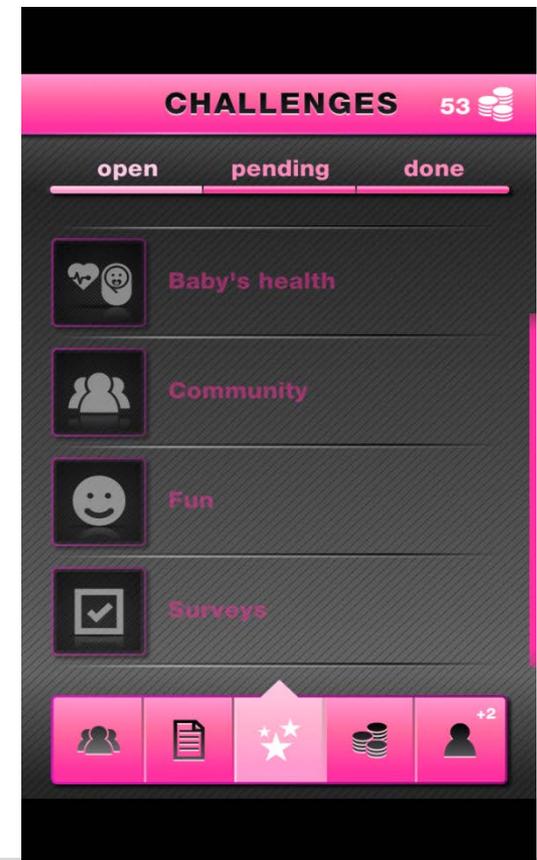
MOMBA's Goals

- Connect new mothers to:
 - Other mothers
 - Infants (attachment)
 - Local resources/health services
- Incentivize positive social networks and enhance social capital and skill building



How Momba Achieves These Goals

- Incentivized “challenges” that are pushed throughout the Momba community and focused on three key areas:
 - Promotion of social support and capital
 - Promotion of maternal-infant attachment
 - Promotion of skill building related to parenting and executive functions
- Community Mental Health Ambassadors



BANK

53 

tokens

gift cards

donate

Total donations 2025 

Donate your hard earned tokens to a Momba mom or the community.



Donate to:
A Momba Mom



Donate to:
National Diaper Bank Network



chat

SOCIAL

53 

people

chat

(reply to **Mahogany P**) Aww she turn the Big 1 how time fly

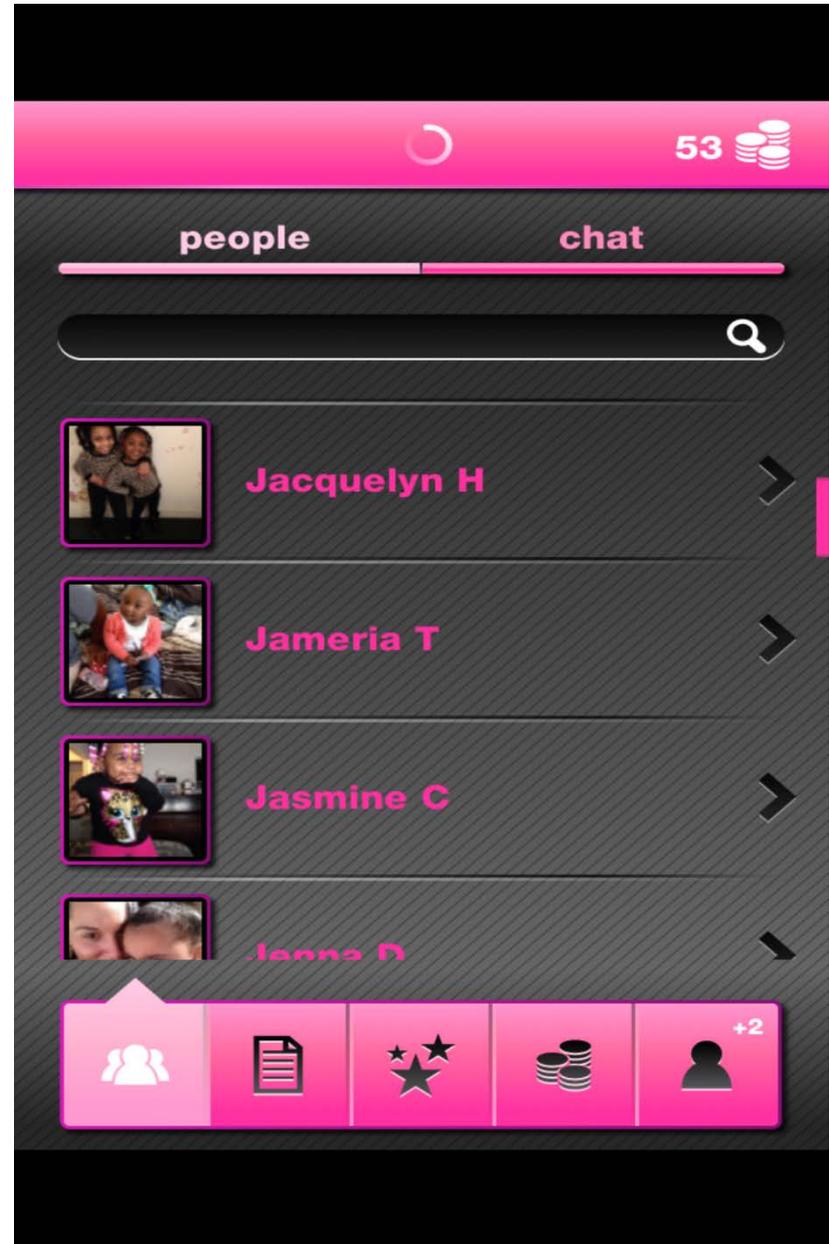
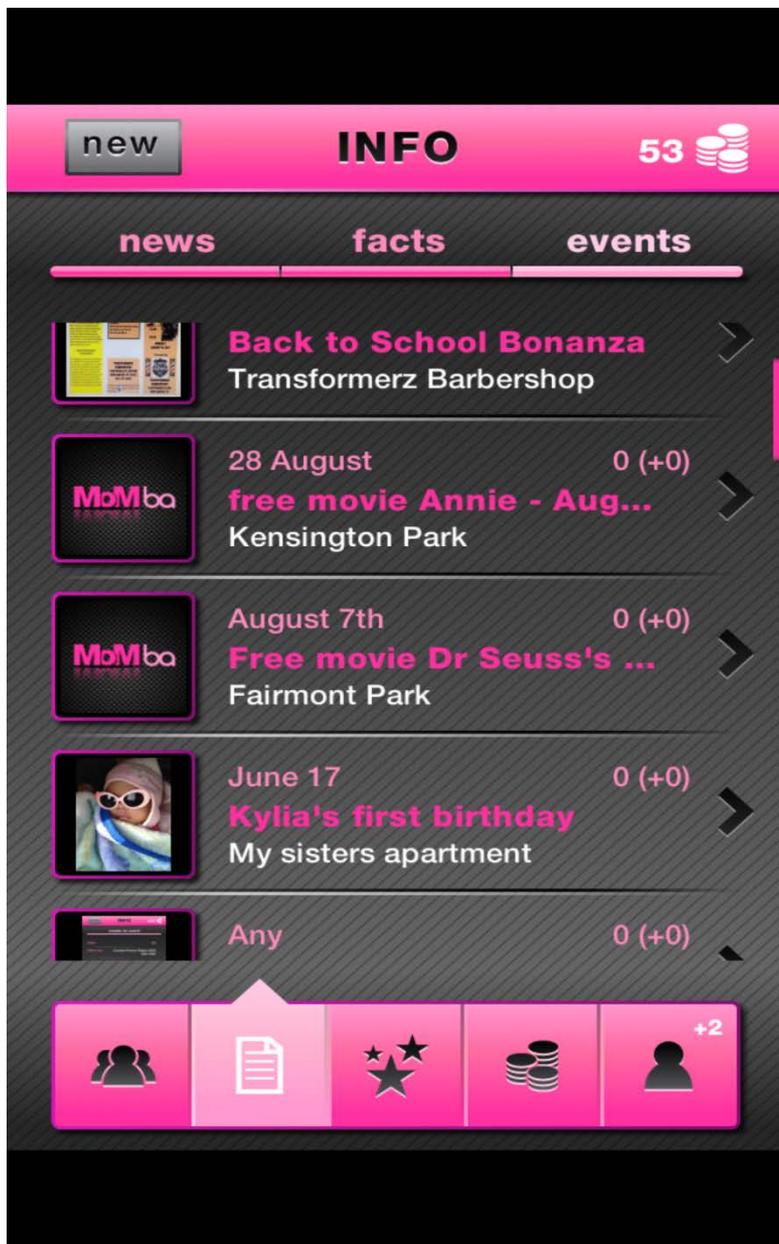
Jul 24 **Mahogany P** → reply
(reply to **Tina A**) Yes only a few more weeks

Aug 4 **Mahogany P** → reply
My baby will b 1 in 4 days n she still isn't walking independently ugh

Aug 4 **Meghan C** → reply
(reply to **Mahogany P**) Kyla isn't either, don't worry, she will when she ready!!

Aug 7 **Mahogany P** → reply
(reply to **Meghan C**) Thanx

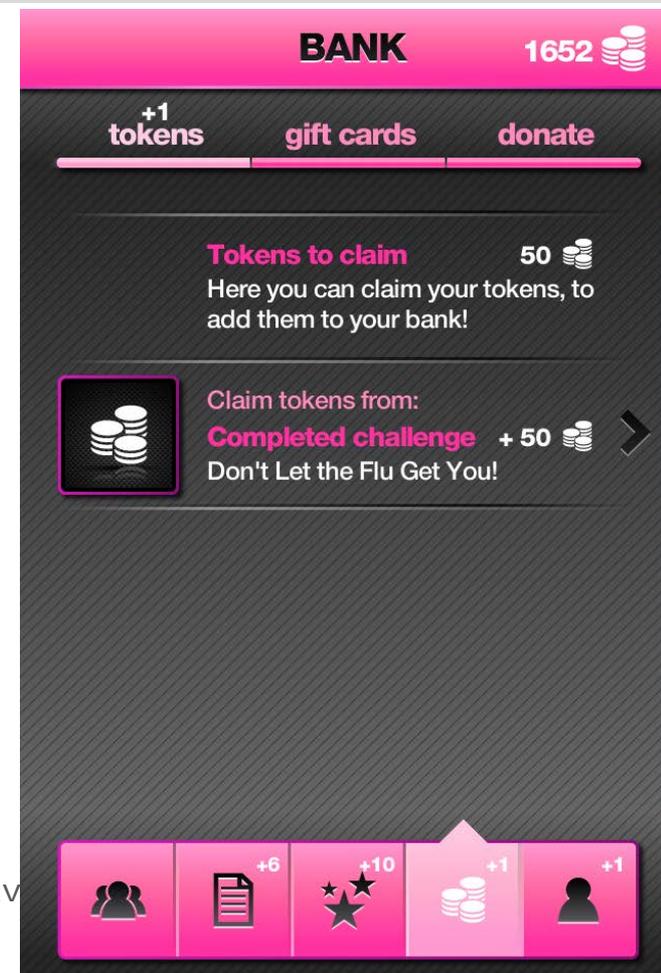




MoMba's Theoretical Constructs

1. Models of behavior change
2. Social epidemiology
 - Social support
 - Social network
 - Social capital
3. Attachment theory
4. Behavioral economics

Fishbein, M., & Ajzen, I. (1975). Belief, Attitude, Intention, and Behavior
Berkman LF, & Kawachi I. (2000) Social Epidemiology
Bowlby J (1958). *International Journal of Psychoanalysis*
Volpp, L, Troxel (2008) *JAMA*
Tversky & Kahneman (1974) *Science*

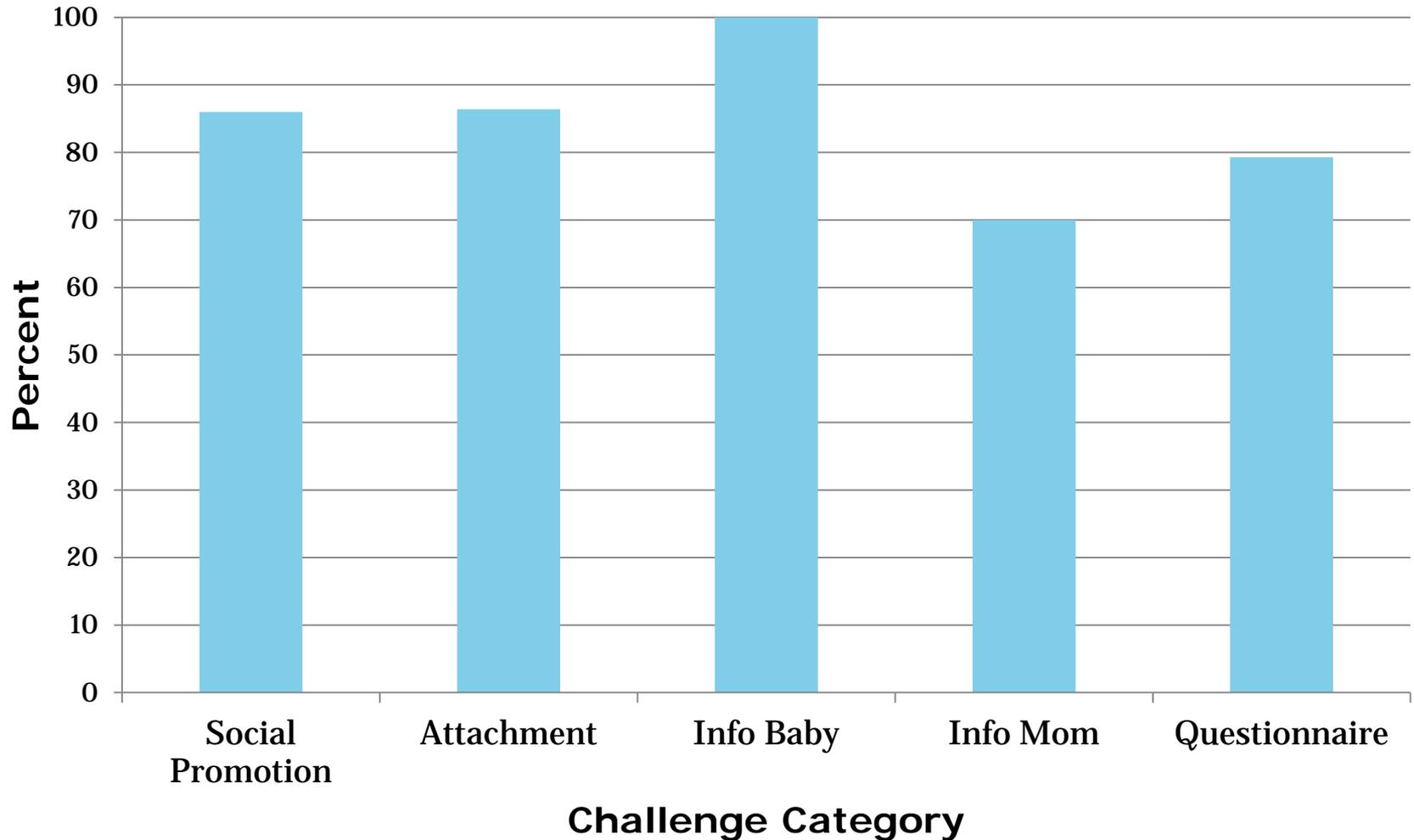


Qualitative Findings on the Promotion of Social Capital

- Results of four focus groups suggested mothers (n=40):
 - derived intended benefits from Momba such as:
elevated mood and increased **self-efficacy**
 - **exchange of resources** (information, jobs, and basic needs exchange (clothing, baby food and diapers))
 - Unexpected benefits including reductions in **perceived stigma and self stigma.**
 - Momba became mutually reinforcing where users created beneficial social relationships that then motivated them to seek further social integration.

Smith, MV. Women's experience with a smartphone application to reduce postpartum depressive symptoms, *Am J Public Health*, In press

Percent of challenges completed by category, Momba Pilot, N=40



Momba Impacts

(control vs. intervention group, randomized)

- Statistically significant (and clinically significant) reduction in depressive symptoms (as measured by the PHQ-9)
- Clinically significant reductions in parenting stress
- Statistically significant increases in some dimensions of social capital and social support...

Examples of Social Capital Questions

“How often do you and other people in the neighborhood ask each other for advice about personal things such as childrearing or job openings?”

“If a group of neighborhood children were skipping school and hanging out on a street corner, how likely is it that your neighbors would do something about it?”

“People around here are willing to help their neighbors”

“People in this neighborhood can be trusted”

Quantitative Results: Social Capital, Cohesion, Control (N=38)

Dimension	Momba	Control	P Value
Community resources in neighborhood	1.82	1.67	.005
Social Cohesion	15.2 (3.4)	13.5 (2.4)	0.05
Emotional Support	33.9 (6.6)	29.7 (7.4)	.001
Collective Efficacy	23.2 (2.5)	26.1 (8.2)	.60

