Maternal-Child Malnutrition and Social Networking on Mfangano Island, Kenya:

APPLICATIONS FOR AN ARIZONA PROGRAM

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Objectives

- Identify the key qualitative aspects of developing a social networking nutrition program aimed at improving maternal child nutrition and health outcomes in rural and remote settings.
- Examine key areas of replication for a social networking nutrition program.
- Compare the population of Kenya and Northern Arizona for similarities and differences that will affect program development.
- Explore the data analysis of the qualitative data obtained to date.
My background

- BS Nutrition
- BS Nursing
- MSN Nursing Education
- 3rd year PhD, CONHI
- RN for 11 years
- Maternal-Child health focus
My work on with this project was to evaluate a nutrition intervention that uses a novel micro-clinic approach to treat whole social networks affected by maternal and child malnutrition.

The key approach aims to foster social support for improved food security and nutrition-promoting behaviors by galvanizing support for these goals among not only mothers, but fathers, friends, and grandparents.
Location

65 KM² OR 40 MILES²

TO GIVE PERSPECTIVE:
FLAGSTAFF, AZ IS 69.3 MI²
DUBLIN, IRELAND IS 44.4 MI²
Maternal-child nutrition and the social setting

• Background and significance (KNBS, 2010):
  – 35% of children in Kenya are stunted
  – 7% of children in Kenya are wasted
  – 16% of children in Kenya are underweight
  – 6% of all Kenyans have HIV
    • 36% of the population of Mfangano Island have HIV/AIDS
  – Food for sex industry pervasive among single or widowed women
Female Focus Group Participants

- Average age: 29.5
- Average number of people in the household: 6
- Average age of children in household: 8
- Large households with many young children
305,388 babies were born to girls 15-19 years of age in 2012 (CDC, 2014).

Estimated cost is $9.4 billion in taxpayer funds (CDC, 2014).

Only about 50% of teen mothers receiving a diploma by 22 years of age (CDC, 2014).

Children of teens are more likely to have increased healthcare needs, require foster care, have an increased chance of incarceration, and lower educational attainment (CDC, 2014).

Teen pregnancy has been associated with increased medical complications, prematurity, and perinatal mortality (Salihu, Duan, Nabukera, Mbah, & Alio, 2011).
Maternal-Child Demographics in the US and Arizona

• Non-Hispanic black, Hispanic, Native American, and socio-economically disparate youth are the populations experiencing the highest numbers of births (CDC, 2014).

• Hispanic teen birth rates were more than twice as high as the birth rates of white teens (CDC, 2014).

• Morales (2011) reported that rates of teen pregnancy are still high in the Southwestern states of New Mexico, Arizona, Nevada, and Utah.
Navajo and Hopi Nations
27,425 Square miles
Program Curriculum

Curriculum (Map)

1. The Family Plan

2. Prenatal Nutrition and safe delivery

3. Breastfeeding

4. Complementary Feeding

5. Malnutrition and feeding during illness

6. Family Food Security
12 Weeks of Curriculum:
- Introduction
- Family Planning and Pregnancy
- Nutrition During Pregnancy
- Labor Signs and Safe Delivery
- Breastfeeding I
- Breastfeeding II
- Complementary Feeding I
- Complementary Feeding II
- Feeding during Illness
- Recognizing Malnutrition
- Family Food Security
- Conclusion and Way Forward
Data Collection

- Focus groups conducted weekly
- Sessions guided by a focus group guideline
- Sessions were recorded
- Recordings were translated into English and transcribed into written format for analysis
- Diagrams and memos will be used as needed to further interpret the setting and sessions
- All data is stored at the EK Center and in a secure online file storage system
Qualitative Data

• Perception of ‘good nutrition’
  – Balanced diet
    • Strength
    • Disease prevention
    • Energy

• Perception of ‘support’
  • Food
  • Childcare
  • Monetary
  • Education
• Perception of ‘Kanyakla’
  – Change
  – Health
  – Education
  – Knowledge sharing/stigma reduction
  – Courage
  – Friendship
  – Freedom
  – Confidence
Original Themes

- **Nutritional balance**: new knowledge of “balanced diet,” diversity of foods, and kitchen gardens
- **Multi-dimensional support**: community, social network, family, support; reduced incidence of disease; knowledge sharing; increased involvement of partner in choosing food and childcare
- **Community collaboration**: increased business opportunities for women, increased food trading, and improved childcare
Socio-Ecological Model

Whereas the social networking model can transect all levels.

The Micro-Clinic Model primarily transects the Individual and Interpersonal levels, but has the opportunity to impact all SEM levels.
• Premise: Household nutrition among groups of family members and neighbors can influence
  – Interpersonal Level: Family practices and behaviors
  – Community Level: Norms and behaviors regarding breastfeeding, complementary nutrition, and family planning
  – Systems Level: Food production and sustainability, freshwater environmental system, fishing practices and management

• See handout for SEM Level Analysis
Qualitative Data

• Weaknesses:
  – Support waned after completion
  – Lack of financial support
  – (perceived) Lack of support from EK center
  – Failure of KIVA loan program within Kanyaklas
  – Confidence
    • Nutrition knowledge but no finances
    • Breastfeeding knowledge but concerns about storage
  – Laziness
    • Decreased attendance
    • Lack of participation in planning/implementation activities
    • Discouraged
Similarities

- Food insecurity – 24%
- Food desert
- Inadequate nutrition
- Social support
- Family units are multigenerational
- History of dependence on the land
Food Deserts

ORANGE INDICATES A FOOD DESERT

BROWN INDICATES OVERLAP WITH A NATIVE AMERICAN TERRITORY
Scaling out

- Modifying curriculum
- Cultural considerations
- Take home features:
  - Community support must be continued past program presence
    - How?
  - Planning must be implemented
    - Follow up
    - Follow through
Our future...
The team


