Integrating Mobile Health Technology in Community Based Doula Programs

Extending Childcare Related Support to Single Adolescent Mothers

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Adolescent Motherhood

Unique characteristics of adolescent motherhood:
- Lower socio-economic status including educational attainment
- Lower rates of breastfeeding
- Higher parenting and work related stress
- Lower levels of self-perceived social support and self-efficacy to adapt to motherhood
- Lower empathy and awareness of children's developmental trajectories
- Less desirable parenting styles
- Higher levels of parent-child separation
- Higher prevalence of postpartum depression
- Increased risk of child maltreatment
- Higher risk of developmental delays in offsprings

Why Doulas?

- Familial support has greater positive influence on adolescent mothers compared to adult mothers

- Outside of family, doulas are the backbone of maternal & child well-being in under-resourced communities
  - However, mostly serve adult parent populations
  - Only seen as an alternative to medical professionals

MHealth Community based Doula Program

Design

- *Digital extension of doula care*
  - Wearable device & mobile application for doulas
  - Collect, track, monitor health related data
  - Disseminate interactive pamphlets & information toolkits
  - Urgent in-person care

- *Mobile Mediated Social Support Groups (MMSSG)*
  - Connect mothers across neighborhoods and zipcodes through
    - Private message exchanges
    - Interactive teleconferencing
    - Common broadcasting system
  - Replicates virtual membership of first level of intervention
  - Allocates unique identification code and password to each participant and doula

MHealth Community based Doula Program

Approach
- *Pre-implementation*
  - Needs assessment survey
  - Devise ways to maintain contact among participating mothers post program completion
- *Implementation*
  - Partnership with community based maternal and child direct service organizations, research and evaluation organizations, advocacy groups, secondary and post-secondary institutes of education
  - Recruitment of doulas with different specialization
  - Recruitment of adolescent single mothers from diverse neighborhoods
  - Consent form w/ open to translate

Program evaluation: Strengths & Limitations

Strengths
- o Data tracking & monitoring - reduce loss to participant follow up
- o Pre-intervention needs assessment survey & community partnerships - external validity
- o Appropriate alternative in the event of interpersonal disruptions
- o Digital nature - utilizes target population's strengths

Limitations
- o Data sensitive nature - requires substantial funding, reliable network connectivity, doula & participant training, device maintenance efforts
- o Limited evidence among atypical, hard to reach populations such as adolescent single mothers in foster care, incarcerated mothers, mothers with developmental disabilities, and unhoused mothers

Conclusion

Next Steps & Recommendations
- Extensive training of recruited doulas
- Culturally sensitive nature of health education products
- Devise mechanisms to maintain connections between participation mothers post intervention
- Hire evaluation specialists at intervention baseline
- Build participant capacity for community based participatory research & evaluation

Q&A

For remaining questions and comments, please reach out to me at marisha.kashyap@columbia.edu