The association between breastfeeding duration and social network

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Background

- WHO recommends newborn babies should be exclusively breast fed for at least 6 months in order to have comprehensive health protection. However, the duration of exclusive breastfeeding around the globe is suboptimal.
- Breast engorgement is commonly found in breastfeeding mothers, which can lead to infection and inflammation of breast tissues called mastitis. Mastitis is one of the breastfeeding problems that results in short duration of breastfeeding.
- We will use a newly developed mobile app that will facilitate early detection of breast engorgement and offer advice of managing breast engorgement to mothers.

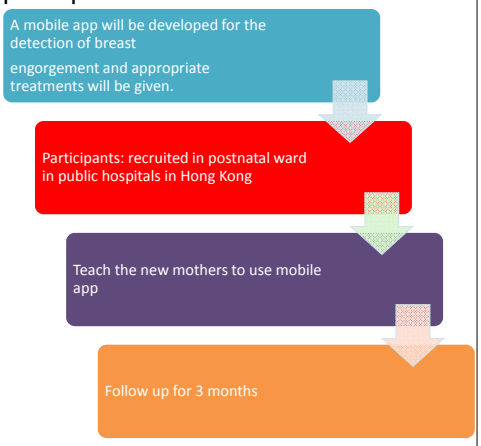
Study Aim

- We aim to study the association between density of social network using the mobile app and breastfeeding duration in new mothers who intend to breastfeed.

Method

Study design

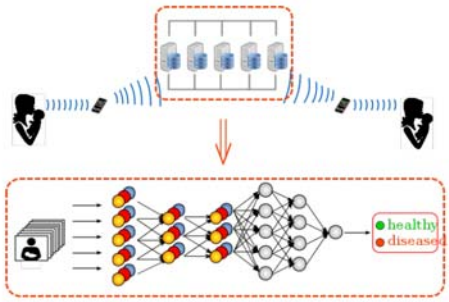
Cohort study will be conducted with 1000 participants will be recruited



Participants will be followed up of the following areas:

1. Severity of breast engorgement
2. Continuation of breastfeeding
3. Frequency of using the mobile app
4. Social network & did she recommend the apps to other female acquaintance

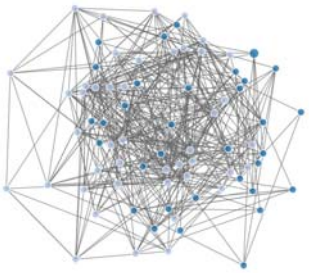
Development of mobile app



This is the whole structure of the diagnose system. Users send the images taken by their mobile phones to the server, and then the server feed the received image to the learned neural network and calculate the categories (healthy or disease). The kernel of the neural network is a trained hierarchical deep network which learned high-level features to do the classification. The output is binary, telling the users whether they are healthy or diseased. The binary result will send back to the corresponding user's mobile phone. So the entire procedure ensure the privacy of users.

Simulation of the social network of the participants

a) Distribution at the first time stamp



b) Distribution at next time stamp

- Mothers who breastfed for more than 3 months
- Mothers who breastfed for less than 3 months

Discussion and Conclusion

- The study findings will demonstrate that network phenomenon relating to breast engorgement may be relevant to behavioral outcome of breastfeeding.
- The study findings will imply the need of incorporating social network in public health interventions.