

Community Wellness Informatics: Designing Technology for Health Equity

Farnaz Irannejad¹ Herman Saksono¹ Elizabeth Stowell^{1,2} Andrea G. Parker^{1,2}

¹ College of Computer and Information Science
² Bouvé College of Health Sciences



We present case studies of technology-driven social change through health promotion. These case studies explore how social, mobile, and civic technology can help low-SES communities to both cope with barriers to wellness and address these barriers directly. Using findings from this research, we will articulate opportunities and challenges for a community wellness informatics agenda within HCI.



Figure 1. Mobile Applications in our studies: Family physical activity app (left), Prototype of the exergame for Alzheimer's caregivers app (center), Youth activism app (right).

Questions

1. How can technology transform personal health data in ways that are engaging and useful for communities facing significant stressors and barriers to wellness?
2. How can technology be designed to help communities confront the social determinants of health, which are both resistant to change and a hindrance to wellness?

Wearable Sensing App for Family Physical Activity

- Physical activity (PA) intervention technologies should be targeted for low-SES families where obesity is severe and resources are scarce
- While wearable PA sensors can increase health awareness, but PA is also influenced by internal, interpersonal, and environmental factors (e.g., Trost et al., 2002).

Therefore, PA sensing systems need to support users to engage in reflection—the process of making sense of the objectively measured data and subjectively remembered past.

Exergame for Caregiver of people with Alzheimer's

- The number of informal caregivers who are caring for family members with Alzheimer's Disease is increasing dramatically
- Caregivers have numerous mental and physical health problems associated with the burden of care (e.g., diabetes, obesity, social isolation)
- We are developing an Exergame to promote physical activity and increase social connectedness among caregivers

Social Networking Apps for Youth Activism

- Youth-led activism can be effective in addressing challenges existing in local communities and affecting social change.
- Social media have been touted as promising platforms for activism: they provide a platform by which voices can be heard and collective action mobilized.
- We want to create an app to help youth activists to more purposefully use their social media in order to create social change.