Mobile apps and the informal caregiving of elders in Singapore

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The project is funded by Centre for Family and Population Research, NUS
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Outline

• Introduction: *Smart Nation and apps for caregivers*
• Caregiving of elders in Singapore and the study
• Caregiver app as the solutions approach
• Responses from the caregivers
• Reasons for the lack of interest in the app
• Implications and reflections
Why Smart Nation

Advances in digital technology have opened up new possibilities to enhance the way we live, work, play, and interact.

Singapore strives to become a Smart Nation to support better living, stronger communities, and create more opportunities, for all.

And “smartness” is not a measure of how advanced or complex the technology being adopted is, but how well a society uses technology to solve its problems and address existential challenges. Citizens are ultimately at the heart of our Smart Nation vision, not technology!
Assistive Technology for aging and health care

Telehub

National steps challenge

Telehealth
Assistive Technology, Analytics and Robotics for Aging and Healthcare

• **Enhance overall well-being**
  - Enable independent living for the growing ageing population
  - For the elderly and those with disabilities, developments in assistive technology and robotics can make a real difference to the way they are able to complete tasks and activities

• **Improve patient care**
  - Robotics technology can improve patient mobility as they rest
  - to avoid bed sores or trips to the toilet
  - Automated bathing machines and autonomous droids that can interact and monitor patient progress
  - Robots that can help recovering stroke patients exercise, or keep early stage dementia patients occupied and alert them to take their medicine

Common smartphone apps (used in Singapore)

- Information sharing (eg what’s app, wechat)
- Provides healthcare information (eg doc.sg)
- Health tracking apps (eg Health365)
- Scheduling of appointments (eg Health Buddy)
- Caregiver specific (eg CareHub4U, AiCarelink, JagaMe)
Create an account to book our service

Log In  Sign Up

✉️ yours@example.com

🔒 your password

Don't remember your password?

LOG IN >

Jaga

Healthcare services, products, resources, and more

Urgent Request? Call 8498 4598
Mobile Applications to support caregivers

• Care coordination (care as a team)
• Sharing of info
• Health tracking
• Scheduling of appointments
• Connecting supply and demand needs (uberized)
Caring for frail elders in the community: a solution-based approach

• To understand the caregiving arrangements and needs of families with elders who are experiencing cognitive and/or physical decline

• To explore and pilot new intervention (caregiver app) available to provide holistic support and care of frail elders in the community

== ties in with project on community care of frail elders in cross-cultural settings (Bei Wu, NYU)
Background context: Aging Population in Singapore

- Life Expectancy (2017)
  FEMALE: 85.2
  MALE: 80.7

- TFR: 1.16

- From 7% to 20% in aging population: 22 years

- Prevalence of dementia with longevity -
  Projected increase from 22,000 (2005) 53,000 (2020)
  (ADA Singapore)

- Average household size: 3.35

<table>
<thead>
<tr>
<th>Year</th>
<th>Proportion of age 65 and above in population</th>
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<tbody>
<tr>
<td>1970</td>
<td>3.4</td>
</tr>
<tr>
<td>2000</td>
<td>7.2</td>
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<tr>
<td>2006</td>
<td>8.4</td>
</tr>
<tr>
<td>2017</td>
<td>13.0</td>
</tr>
<tr>
<td>2030</td>
<td>24.0 (projected) (900,000)</td>
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</tbody>
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Source: singstat.gov.sg
“Ageing in place” adopted as key principle in age care policies since 1999 - promotes the care of seniors at home or in the community for as long as possible.

Family as the first line of support to their seniors and institutionalisation should be a last resort.

Various schemes: Live close to children (CPF Housing Grant Scheme, the Married Child Priority Scheme)

The Barrier-free accessibility programme, Lift Upgrading Programmes, Home Improvement Programme, Neighbourhood Renewal Programme and Main Upgrading Programme – for safer and accessible living environments for the seniors
• Tax relief like Parent / Handicapped Parent Relief and Grandparent Caregiver Relief
• Seniors’ Mobility and Enabling Fund (SMF)
• Caregivers training grant Social day care centres, day rehabilitation centres, home help services, home nursing services, home medical services, befriending, case management, counselling, seniors helpline, caregiver support services and respite care programmes (silverpages.sg)
SENIORS’ MOBILITY AND ENABLING FUND
This provides means-tested subsidies to defray the costs of assistive devices, home health items or transport. It is administered by the Agency For Integrated Care (AIC).

ENHANCEMENT FOR ACTIVE SENIORS PROGRAMME
This provides means-tested subsidies to make HDB flats elder-friendly. It is administered by the Housing and Development Board.

FOREIGN DOMESTIC WORKER (FDW) GRANT AND FDW LEVY
CONCESSION FOR PERSONS

WITH DISABILITIES
Administered by AIC, these help to defray the costs of informal care at home.

PIONEER GENERATION DISABILITY ASSISTANCE SCHEME
Severely disabled Pioneers can get a cash payout of $100 a month for life. It is administered by AIC.

SILVER SUPPORT SCHEME
This provides a quarterly cash supplement to the bottom 20 percent of elderly Singaporeans who had low incomes through life and have little or no family support. Those who qualify will receive the supplement automatically. There is no need to apply.

CAREGIVERS TRAINING GRANT
This offers an annual $200 subsidy to help defray the costs of attending caregiving courses. It is administered by AIC.

INTERIM DISABILITY ASSISTANCE PROGRAMME FOR THE ELDERLY
Severely disabled seniors who did not qualify for ElderShield when it was launched in 2002, as they were too old or had existing disabilities then, can tap this to pay for their medical bills, nursing costs or domestic help. Administered by AIC, it provides means-tested cash payouts of $150 or $250 a month for up to six years.
Informal caregiving for dependent elders

• Informal caregiving → caregiving by the family which covers both full time caregiving at home, as well as supplementary caregiving for elders who access day care, dementia care, and care by Foreign Domestic Workers (helpers)

• Impact of caregiving on well-being of caregivers
  --- Stress (financial, physical, psychological stress) faced by family caregivers is immeasurable and often underestimated by others
National Survey of Informal Caregivers in Singapore (1190 CG-CR dyads) (Chan, Østbye, Malhotra, & Hu, 2013)

- Majority tend to reside with their care recipients
- Tend to be females, females more stressed than male caregivers
- Dual role (conflicting demands of work and caregiving)
- 49% hired helpers

Usage of services by caregivers is generally low (Chan, Østbye, Malhotra, & Hu, 2012; Hong Rozario, & Ho, 2013)
- Dementia day care is a relatively less attractive option than hiring a FDW due to its “high cost, limited, nursing home as a last resort” employing FDWs as a more viable option.

- Caregivers who can afford to be full time caregivers or employ a FDW will be more likely to continue the care for their seniors at home (Tew et al, 2010).
Respondents: Caregivers (N=30)

- Mostly female (80%)
- Mostly in their 50s and 60s: one-third of respondents in their 50s, 27% (8) in their sixties
- Educational level: mostly secondary/high school: 70%(21)
- 13 working full time, 2 flexi hours work
- Care recipients: mostly in their 80s 83% (25) with dementia/Alzheimer's disease
- Most respondents live in the same house: 80% (24)
- All respondents live in HDB apartments
- Most employed a helper 77% (23)
Respondent’s relationship to Care Recipient

- Mostlly daughter or son (22/30)
- Daughter: 17
- Son: 2
- Wife: 3
- Husband: 2
- Helper: 5
- Daughter-in-law: 1
- Son-in-law: 2
Caregiver Companion app pilot

Development team: app developer and registered nurse

Funding: NUS Enterprise, un-aging workshop, raiSE LeapForGood workshop

Initial Purpose: to develop apps for caregivers of seniors suffering from dementia. Target to look beyond immediate family members (and helpers), and to explore also the role of extended family, neighbors, other community members (such as shop keepers, GPs etc)
Caregiver app

In This Study, we will ask you to:

- Consent to participate and register with email address
- Daily entry of care tasks
- Share your care with your family and the study team

Collaborate with family and friends, for life's caregiving journey

GET STARTED

ALREADY A MEMBER?

Relationship to Care Recipient

- My Parent
- My Spouse
- Others
Steps

• Key in daily interventions done for care recipients by simply tapping the review buttons.

• Share care tasks within the family by selecting the delegate button
Are you the Main Caregiver?

Yes ☐
No ☐

Name of Care Recipient

Name

Care Requirements?

Dementia ☐
Stroke ☐
Diabetes ☐
Heart Disease ☐
Others ☐
Caregiver app

This app helps you share care tasks and participate in a research to understand caregiver burden.

In This Study you will be required to:

Enter daily entry of care tasks
Share care with family and study team

Log in to continue

Log in with phone number
Log in with Facebook
Response to the application trial run

YES (3) - daughter, son, helper

• Interest to learn something new
• Desire to help in local caregiving landscape

“I am glad you shared this (about the app), I do not know about this.. I like this, I only have her medication, BP, I don’t have this.. and for me, with so many details to record, the app is very useful”

(TP005 - daughter taking care of mother with dementia, no helper)
Reasons for lack of interest with the app

• CG/Helper is illiterate or can’t read English
• CG/Helper is busy with care recipient
• CG seemed overwhelmed or depressed and didn’t want to do more
• CG/Helper not comfortable with smartphones
• Did not find such app to be useful
• No data plan at home (costly to subscribe)

“make more sense to focus on feeding than to key in”
“main thing is what is done in reality, not the application”

==app seen as disruptive to their lives
Implications and Reflections

Besides the need for CG/helper to carve out time in their busy schedule to engage with the app...

1) Reality of digital divide (patchy, uneven)
   • ‘I am so old’

   What is the comfort level for older generation (CG) to use app?
• Less educated → less IT savvy
• Time consuming to learn and navigate the different feature of the app
• Get little help in learning
• Always forget how to use and inconvenient to keep asking their friends or relatives for help (people may not have patience for them)

Polymedia- access and availability, affordability, media literacy (Madianou and Miller, 2013)
2) Caregiving as an isolated endeavor: Who to connect with?

- other siblings are not interested
- I can communicate with my only other sister, no other people need to know
- other siblings not interested in the details

- Two main types of caregiving strategies on a spectrum: Integrated-Diffused (ID) and Isolated-Focused (IF) (Thang and Suen, 2016)
- Presence of helpers may lead to further isolation

App as a way of “digital kinning” (Baldassar and Wilding), derived from the concept of “kinning” (Howell, 2003) - allowing for distant kins to become part of the network

-useful only if there is a network to tap on.
3) The complex issue of helpers as caregivers

- is app inclusion an indication of the “kinning” of helpers?

“I consider him my own father, so I give all my love. So that I don’t feel like he is other person to me, then I can do work easily for him.” (TP003)

- language/media literacy and capability
- busy
- trust (helper may feel that there is a lack of trust from employer)
  - subtle employer’s distrust of helpers’ use of mobile phones
- Other ways of new media usage: video to employers
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