MyPhone : An App to Keep Everyone Connected

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Video Link: https://youtu.be/Wkn4wgf5Fbk
Product Website: MyPhone app.weebly.com

Purpose

MyPhone was designed with the geriatric population in mind. A 2014 study by Rona Dury stated "Older people are more vulnerable to loneliness and social isolation, and are more at risk of a range of health and social issues which can be directly linked to loneliness." (Dury, 2014 p. 125). In an increasingly digital world the geriatric population is quickly being left behind. There are a few tools developed to help older adults make simple phone calls, but that's where the aid stops. MyPhone provides a fully customizable way for the user to text and call up to nine individuals. Its simple design makes it possible to send a text by only pressing two buttons. MyPhone can be used outside of the geriatric population; individuals with cognitive conditions, intellectual disabilities, or developmental delays would also benefit from this simplified way to socialize.

Designed from the point of view of an Occupational Therapist, My Phone's goal is to augment the user's ability to participate socially. Social participation is vital for both physical and mental health, as well as cognition and productive aging. Social isolation can lead to an individual's health trajectory deteriorating faster than similar individuals with robust social engagements (Flowers, et. al, 2017). Occupational therapy is able to provide populations at risk for social isolation (i.e. the elderly, individuals with intellectual and developmental disabilities and individuals with decreased literacy) the tools they need to better engage socially. MyPhone is a simple, free solution to make social participation more achievable.

Basic Use

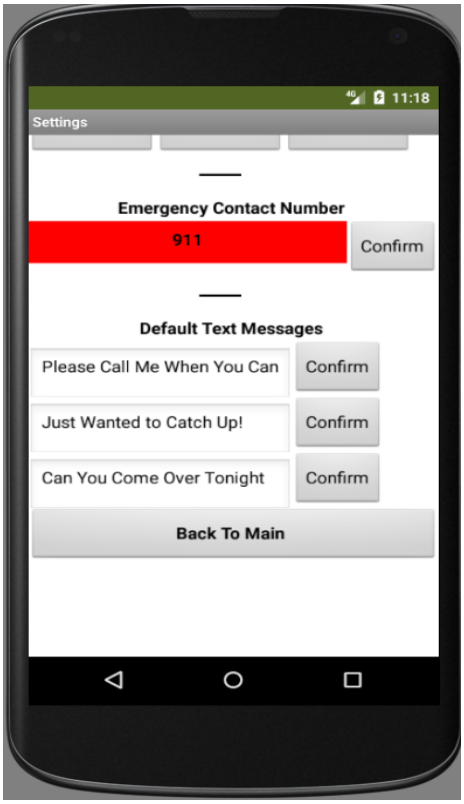
Set Up

The MyPhone application comes as a blank shell upon download. The preferences and contacts need to be set up by a caregiver. To do this the caregiver clicks "settings" and from there is able to set a wide range of preferences. MyPhone allows the caregiver to password protect the settings page. This tool is intended to limit unintentional adjustments of the settings by users who have cognitive impairments, or memory deficits.

Next, the caregiver enters up to nine contact photos and numbers which will appear on the main screen. These nine contacts will all have individual contact pages which the user can access. The caregiver then identifies an emergency contact number, which can be one of the nine individuals above or a seperate number (i.e. 911, home health aid). This number will appear in bolded red on the user's main screen to use in case

of emergencies. Finally the caregiver sets up to three default text messages. MyPhone comes pre-programmed with three commonly used default messages but the caregiver can choose to keep or change these to best fit the user's needs.

A. 

B. 

A.) MyPhone settings section one screen when first downloaded prior to inputting contacts

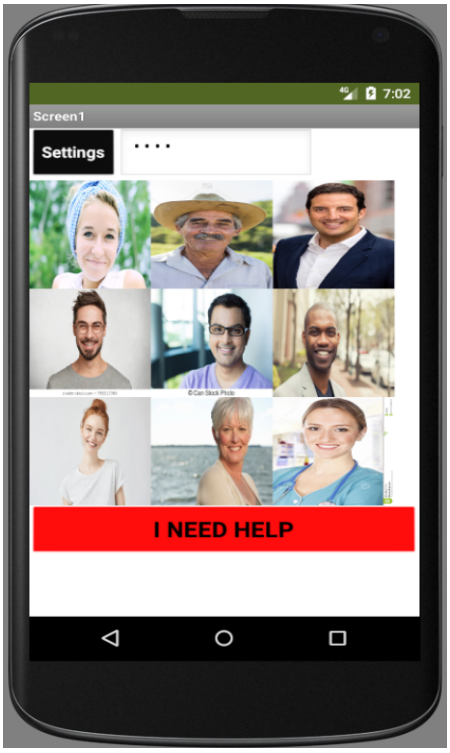
B.) MyPhone settings section two screen when first downloaded prior to inputting emergency contact, and default text messages

Communicating

To use MyPhone the user clicks on the photo of the person they would like to talk to and they are presented with a variety of options to communicate. A large call button at the top of the screen calls the preset phone number, hitting one of the preset message button texts the individual, and a text box allows the user to type a custom message.

The variety of texting options open text boxes, and default text buttons ensure that individuals with any level of cognitive deficit will be able to send the text message they would like. MyPhone also uses auditory cues to ensure the individual is clear on when they have sent a message.

On the main page there is also a bolded red “I need help button” which calls an emergency contact with only one touch. A final accessibility consideration made was the design of the app thumbnail, which is bright red, has high contrast, and has minimal items to distract or clutter the view.

A. 

B. 

A.) MyPhone Home screen fully programmed with nine contacts
B.) A MyPhone contact page with three default text messages programed

Features

My Phone's features were designed to address a variety of deficits often seen in aging individuals. The main age-related declines focused on were cognitive, visual, and memory.

Focusing on age-related *cognitive decline*, MyPhone has several key characteristics: consistency, simplicity, and multimodal cues. With consistency in mind, all contact pages are formatted exactly the same. By presenting consistent organization the app becomes more accessible for individuals with age-related cognitive decline (Bitterman, Shaley, 2004). The individual user will know that tapping the upper left portion of the screen will call the contact no matter which screen they are on.

Similarly the text messaging portion always presents in the same order. Default messages can be presented in whatever order makes the most sense for the user. The three default buttons will always appear the same unless adjusted in settings.

The default messages also serve as a simplification measure for text messaging. For individuals with age related cognitive declines formulating and typing a text message may be a challenge. MyPhone allows the user to select from one of three preset messages that best suit their needs. MyPhone also simplifies the process by breaking down a phone call into two steps. The decrease in steps limits barriers which could prevent users from making the phone call they want. Similarly text messaging ranges from two to three steps from the home page.

MyPhone also utilizes multimodal cueing. Auditory, pictorial, and written cues are available throughout the app to guide the user. For example, while texting the user receives an auditory cue "message sent" whenever they have sent a message. This clearly informs the user that their message has gone through and they do not need to send it again. Pictorial cues are also found throughout. For example, to have the application read back messages the user selects the picture of the ear next to the messages.

To address age related *visual deficits* MyPhone utilizes bolded text and contrasting backgrounds to account for some of the common limitations older adults face. Bolded lettering, on high contrast backgrounds, supports individuals with age-related vision loss and those with visual-perceptual disorders. A 2004 study found that computer and technology interfaces were actively excluding seniors from participating in meaningful activities (Bitterman & Shaley, 2004). The study determined interfaces using at least 12 point font, sans serif lettering, and high contrast backgrounds improved the participants' ability to access and utilize technology interfaces (Bitterman & Shaley, 2004). Because of this study all buttons have a minimum of 14 point San Serif font on a high contrast background.

Age-related *memory deficits* can become a large barrier to effective technology usage. MyPhone allows for personalized photos to combat typical issues seen with memory loss. The user does not need to recall names or phone numbers of the people they would like to talk to, only their face. Also, by providing default messages MyPhone prompts the user to recall what they were texting/calling for.

Comparable Products

One of the only apps similar to MyPhone that is commercially available is "Senior Safety Phone"(Contacts By Company, Inc., 2018). This app has several similar functions to MyPhone but requires additional steps due to its complexity. "Senior Safety Phone"

has been designed to take over all apps on the user's phone but this broad usage can create challenges for individuals with cognitive deficits, literacy problems, or memory decline. To call a contact using “Senior Safety Phone” requires four steps from the home screen whereas MyPhone takes two steps. For individuals solely using this application as an alternative for motor control problems (i.e. decreased fine motor, requiring larger buttons) the extra two steps are not significant. For individuals with cognitive or memory difficulties these two additional steps could prevent them from making a necessary phone call.

“Senior Safety Phone” is also not focused on communication, the application also allows the user to pair other applications. MyPhone does not include the ability to pair applications to ensure that the individual is able to efficiently locate the individual with whom they are trying to communicate without distractions. Limiting distractors makes MyPhone more accessible for individuals with cognitive, literacy and visual-perceptual disorders. Finally, MyPhone includes a few features “Senior Safety Phone” does not, such as default text message buttons which can be updated to the individuals needs, auditory feedback of what the user types, and a simple settings tab which can be locked if desired.

Another similar product line comes from Jitterbug Direct (Jitterbug, 2019). Jitterbug sells a variety of large button phones that function on the Jitterbug Network. The Jitterbug phones have limited features when compared to a traditional smartphone. This may be beneficial for some but limiting for others. Apple and Android have a variety of cognitive aids, games, and social supports that would not be compatible with Jitterbug phones. Similar to MyPhone , Jitterbug utilizes high contrast backgrounds to make phone calls and the user experience easier. A Jitterbug cell phone cost ranges from $49.99-149.99 if the user already has a standard phone MyPhone provides a cost-free way to adapt their phone rather than incurring a new cost. Jitterbug also requires a Jitterbug Direct phone plan. These plans are inexpensive but could add another monthly bill if the user is on a family plan or utilizes a separate phone plan.

Resources

Bitterman, N., & Shaley, I. (2004). The silver surfer: Making the internet usable for seniors. *SAGE Journals, 12*(1), 24-28. https://doi.org/10.1177/106480460401200107

Contacts By Company, Inc. (2018). Senior safety phone (version 1.1) [Mobile application software].

Dury, R. (2014). Social isolation and loneliness in the elderly: An exploration of some of the issues. *British Journal of Community Nursing 19*(3), 125-128. doi: 10.12968/bjcn.2014.19.3.125

Flower, L., Shaw, J., Farid, M. (2017). Medicare spends more on socially isolated older adults. *AARP*

Jitterbug Direct. (2019). *Jitterbug phones for seniors.* https://www.jitterbugdirect.com/