Paper examining prevalence and perceived utility of mHealth tech among RIHA

Descriptive analysis

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Updated: date

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| **Variable type** | **Variable** | **Survey item or notes if unclear from variable** |
| Predictors | Age |  |
|  | Gender |  |
|  | Hispanic Ethnicity |  |
|  | Race | What’s best way to do this? Dichotomize as AA vs other? Or Dummy code with AA vs non-White and AA vs White? Presumably AA should be referent condition. |
|  | Have GED or HS diploma |  |
|  | Employment status |  |
|  | Lifetime total time homeless (months) |  |
|  | Lifetime total time in jail or prison (years) |  |
|  | Current mental health treatment | “Currently receiving treatment for mental health problems” |
|  | General health |  |
|  | Have a cell phone |  |
|  | Data plan | “Does your phone service include a data plan?” |
| Outcome 1 | Prevalence | “Ever used smartphone app to manage one or more health-related issues” |
| Outcome 2 | Perceived utility | “Smartphone app can help you to change your actions or behavior” |

In the current study, we did not seek to test a specific hypothesis. Rather, we were interested in descriptively exploring the relationships between using a smartphone app to manage health-related uses and each of the following: sociodemographic background, lifetime homelessness, lifetime incarceration, physical and mental health, and access to a mobile phone and data plan. We similarly explored the relationships between the various participant characteristics listed above and the participant’s beliefs about whether a smartphone app can help them change their actions and behaviors.

We calculated descriptive point estimates (i.e., means and frequencies) and interval estimates (i.e., 95% confidence intervals) for each of the relationships listed above. Statistical analyses were conducted using R version 4.1.0 (R Core Team, 2021) in RStudio version 1.4.1717 (RStudio Team, 2021) with the following packages: tidyverse (Wickham et al., 2019), freqtables (Cannell, 2020), meantables (Cannell, 2020).

**Table 1**. Characteristics of participants who do and do not ever believe that a smartphone app can help them to change their actions or behaviors (n = 320). Results from the Link2Care study baseline surveys.

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **No**  (n = 55) | **Yes**  (n = 265) |
| Age, mean (95% CI) | 39 (36 - 42) | 40 (39 - 41) |
| Gender, percent (95% CI)  Male  Female  Other | 78 (65 - 87)  22 (13 - 35)  0 (NaN - NaN) | 86 (82 - 90)  12 (8 - 16)  2 (1 - 4) |
| Race/Ethnicity, percent (95% CI)  White, non-Hispanic  Black, non-Hispanic  Hispanic, any race  Other race, non-Hispanic | 18 (10 - 31)  55 (41 - 67)  11 (5 - 22)  16 (9 - 29) | 17 (13 - 22)  62 (55 - 67)  12 (9 - 17)  9 (6 - 14) |
| High school grad or GED, percent (95% CI) | 69 (56 - 80) | 69 (63 - 74) |
| Employment status, percent (95% CI)  Employed  Unemployed, looking for work  Unemployed, not looking for work  Unable to work or disabled  Other | 7 (3 - 18)  65 (52 - 77)  7 (3 - 18)  11 (5 - 22)  9 (4 - 20) | 9 (6 - 13)  52 (46 - 58)  16 (12 - 21)  20 (16 - 25)  3 (2 - 6) |
| General health, percent (95% CI)  Excellent  Very Good  Good  Fair  Poor | 13 (6 - 25)  27 (17 - 41)  36 (25 - 50)  18 (10 - 31)  5 (2 - 16) | 19 (15 - 24)  20 (16 - 25)  31 (26 - 37)  22 (18 - 28)  8 (5 - 12) |
| Mental health treatment, percent (95% CI) | 56 (43 - 69) | 58 (52 - 64) |
| Lifetime months homeless, mean (95% CI) | 50 (34 - 66) | 49 (41 - 58) |
| Lifetime years in jail, mean (95% CI) | 5 (3 - 6) | 6 (5 - 7) |
| Have mobile phone, percent (95% CI) | 44 (31 - 57) | 25 (20 - 31) |
| Have data plan1, percent (95% CI)  No  Yes, limited  Yes, unlimited | 0 (NaN - NaN)  21 (8 - 46)  79 (54 - 92) | 7 (3 - 17)  31 (20 - 44)  62 (49 - 74) |
| 1. Only asked of participants who reported having a mobile phone. | | |

**Table 2**. Characteristics of participants who have and have not ever used a smartphone app to manage one or more health-related issues (n = 323). Results from the Link2Care study baseline surveys.

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **Never Use App**  (n = 242) | **Use App**  (n = 81) |
| Age, mean (95% CI) | 41 (39 - 42) | 38 (35 - 40) |
| Gender, percent (95% CI)  Male  Female  Other | 88 (83 - 91)  12 (8 - 16)  1 (0 - 3) | 78 (67 - 86)  19 (11 - 29)  4 (1 - 11) |
| Race/Ethnicity, percent (95% CI)  White, non-Hispanic  Black, non-Hispanic  Hispanic, any race  Other race, non-Hispanic | 16 (12 - 21)  61 (54 - 67)  12 (9 - 17)  11 (8 - 16) | 20 (12 - 30)  58 (47 - 68)  14 (8 - 23)  9 (4 - 17) |
| High school grad or GED, percent (95% CI) | 66 (59 - 71) | 78 (67 - 86) |
| Employment status, percent (95% CI)  Employed  Unemployed, looking for work  Unemployed, not looking for work  Unable to work or disabled  Other | 8 (5 - 12)  58 (52 - 64)  13 (9 - 18)  17 (13 - 22)  4 (2 - 8) | 10 (5 - 19)  43 (33 - 54)  20 (12 - 30)  22 (14 - 33)  5 (2 - 13) |
| General health, percent (95% CI)  Excellent  Very Good  Good  Fair  Poor | 17 (13 - 23)  21 (16 - 26)  33 (27 - 39)  22 (17 - 28)  7 (4 - 11) | 19 (11 - 29)  23 (15 - 34)  30 (21 - 41)  20 (12 - 30)  9 (4 - 17) |
| Mental health treatment, percent (95% CI) | 54 (48 - 60) | 69 (58 - 78) |
| Lifetime months homeless, mean (95% CI) | 46 (38 - 54) | 57 (39 - 76) |
| Lifetime years in jail, mean (95% CI) | 6 (5 - 7) | 5 (4 - 6) |
| Have mobile phone, percent (95% CI) | 29 (24 - 35) | 27 (19 - 38) |
| Have data plan1, percent (95% CI)  No  Yes, limited  Yes, unlimited | 3 (1 - 13)  28 (17 - 41)  69 (56 - 80) | 10 (2 - 34)  30 (14 - 54)  60 (37 - 79) |
| 1. Only asked of participants who reported having a mobile phone. | | |

References:

R Core Team (2021). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. <https://www.R-project.org/>.

RStudio Team (2021). RStudio: Integrated Development Environment for R. RStudio, PBC, Boston, MA. <http://www.rstudio.com/>.

Brad Cannell (2020). freqtables: Make Quick Descriptive Tables for Categorical Variables. R package version 0.1.0. <https://CRAN.R-project.org/package=freqtables>.

Brad Cannell (2020). meantables: Make Quick Descriptive Tables for Continuous Variables. R package version 0.1.0. <https://CRAN.R-project.org/package=meantables>.