Paper examining prevalence and perceived utility of mHealth tech among RIHA

Descriptive analysis

Brad Cannell

Updated: date

|  |  |  |
| --- | --- | --- |
| **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 have and have not ever used a smartphone app to manage one or more health-related issues (n = 302). Results from the Link2Care study baseline surveys.

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **Never Use App**  (n = 224) | **Use App**  (n = 78) |
| Age, mean (95% CI) | 41 (39 - 42) | 37 (35 - 40) |
| Gender, percent (95% CI)  Male  Female  Other | 88 (82 - 91)  12 (8 - 17)  1 (0 - 4) | 78 (68 - 86)  18 (11 - 28)  4 (1 - 11) |
| Race/Ethnicity, percent (95% CI)  White, non-Hispanic  Black, non-Hispanic  Hispanic, any race  Other race, non-Hispanic | 16 (11 - 21)  61 (54 - 67)  12 (9 - 18)  11 (8 - 16) | 21 (13 - 31)  58 (46 - 68)  14 (8 - 24)  8 (3 - 16) |
| High school grad or GED, percent (95% CI) | 64 (58 - 70) | 77 (66 - 85) |
| Employment status, percent (95% CI)  Employed  Unemployed, looking for work  Unemployed, not looking for work  Unable to work or disabled  Other | 7 (4 - 11)  60 (54 - 67)  13 (9 - 18)  16 (12 - 22)  4 (2 - 7) | 10 (5 - 19)  42 (32 - 54)  21 (13 - 31)  22 (14 - 32)  5 (2 - 13) |
| General health, percent (95% CI)  Excellent  Very Good  Good  Fair  Poor | 17 (13 - 22)  21 (16 - 26)  32 (26 - 38)  23 (18 - 29)  8 (5 - 12) | 18 (11 - 28)  23 (15 - 34)  29 (20 - 41)  21 (13 - 31)  9 (4 - 18) |
| Mental health treatment, percent (95% CI) | 54 (48 - 61) | 68 (57 - 77) |
| Lifetime months homeless | 46 (38 - 55) | 59 (39 - 78) |
| Lifetime years in jail | 6 (5 - 7) | 5 (4 - 6) |
| Have mobile phone, percent (95% CI) | 28 (23 - 34) | 27 (18 - 38) |
| Have data plan1, percent (95% CI) | 4 (1 - 15)  29 (18 - 43)  67 (53 - 79) | 11 (2 - 35)  32 (14 - 56)  58 (35 - 78) |
| 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 = 302). Results from the Link2Care study baseline surveys.

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **Never Use App**  (n =) | **Use App**  (n =) |
| Age, mean (95% CI) |  |  |
| Gender, percent (95% CI)  Male  Female  Other |  |  |
| Race/Ethnicity, percent (95% CI)  White, non-Hispanic  Black, non-Hispanic  Hispanic, any race  Other race, non-Hispanic |  |  |
| High school grad or GED, percent (95% CI) |  |  |
| Employment status, percent (95% CI)  Employed  Unemployed, looking for work  Unemployed, not looking for work  Unable to work or disabled  Other |  |  |
| General health, percent (95% CI)  Excellent  Very Good  Good  Fair  Poor |  |  |
| Mental health treatment, percent (95% CI) |  |  |
| Lifetime months homeless |  |  |
| Lifetime years in jail |  |  |
| Have mobile phone, percent (95% CI) |  |  |
| Have data plan1, percent (95% CI) |  |  |
| 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>.