Paper examining prevalence and perceived utility of mHealth tech among RIHA

Descriptive analysis

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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 (sd) | 39 (11) | 40 (11) |
|  |  |  |
| Gender, n (row percent) |  |  |
| Male | 43 (78) | 229 (86) |
| Female | 12 (22) | 31 (12) |
| Other | 0 (0) | 5 (2) |
|  |  |  |
| Race/Ethnicity, n (row percent) |  |  |
| White, non-Hispanic | 10 (18) | 44 (17) |
| Black, non-Hispanic | 30 (55) | 163 (62) |
| Hispanic, any race | 6 (11) | 33 (12) |
| Other race, non-Hispanic | 9 (16) | 25 (9) |
|  |  |  |
| High school grad or GED, n (row percent) |  |  |
| No | 17 (31) | 83 (31) |
| Yes | 38 (69) | 182 (69) |
|  |  |  |
| Employment status, n (row percent) |  |  |
| Employed | 4 (7) | 23 (9) |
| Unemployed, looking for work | 36 (65) | 137 (52) |
| Unemployed, not looking for work | 4 (7) | 43 (16) |
| Unable to work or disabled | 6 (11) | 53 (20) |
| Other | 5 (9) | 9 (3) |
|  |  |  |
| General health, n (row percent) |  |  |
| Excellent | 7 (13) | 50 (19) |
| Very Good | 15 (27) | 53 (20) |
| Good | 20 (36) | 82 (31) |
| Fair | 10 (18) | 59 (22) |
| Poor | 3 (5) | 21 (8) |
|  |  |  |
| Mental health treatment, n (row percent) |  |  |
| No | 24 (44) | 110 (42) |
| Yes | 31 (56) | 155 (58) |
|  |  |  |
| Lifetime months homeless, mean (sd) | 50 (59) | 49 (71) |
|  |  |  |
| Lifetime years in jail, mean (sd) | 5 (5) | 6 (7) |
|  |  |  |
| Have mobile phone, n (row percent) |  |  |
| No | 31 (56) | 198 (75) |
| Yes | 24 (44) | 67 (25) |
|  |  |  |
| Have data plan1, n (row percent) |  |  |
| No | 0 (0) | 4 (7) |
| Yes, limited | 4 (21) | 18 (31) |
| Yes, unlimited | 15 (79) | 36 (62) |

1. Have data plan was 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** | **No (n=242)** | **Yes (n=81)** |
| --- | --- | --- |
| Age, mean (sd) | 41 (11) | 38 (10) |
|  |  |  |
| Gender, n (row percent) |  |  |
| Male | 212 (88) | 63 (78) |
| Female | 28 (12) | 15 (19) |
| Other | 2 (1) | 3 (4) |
|  |  |  |
| Race/Ethnicity, n (row percent) |  |  |
| White, non-Hispanic | 38 (16) | 16 (20) |
| Black, non-Hispanic | 147 (61) | 47 (58) |
| Hispanic, any race | 30 (12) | 11 (14) |
| Other race, non-Hispanic | 27 (11) | 7 (9) |
|  |  |  |
| High school grad or GED, n (row percent) |  |  |
| No | 83 (34) | 18 (22) |
| Yes | 159 (66) | 63 (78) |
|  |  |  |
| Employment status, n (row percent) |  |  |
| Employed | 19 (8) | 8 (10) |
| Unemployed, looking for work | 141 (58) | 35 (43) |
| Unemployed, not looking for work | 31 (13) | 16 (20) |
| Unable to work or disabled | 41 (17) | 18 (22) |
| Other | 10 (4) | 4 (5) |
|  |  |  |
| General health, n (row percent) |  |  |
| Excellent | 42 (17) | 15 (19) |
| Very Good | 50 (21) | 19 (23) |
| Good | 79 (33) | 24 (30) |
| Fair | 54 (22) | 16 (20) |
| Poor | 17 (7) | 7 (9) |
|  |  |  |
| Mental health treatment, n (row percent) |  |  |
| No | 111 (46) | 25 (31) |
| Yes | 131 (54) | 56 (69) |
|  |  |  |
| Lifetime months homeless, mean (sd) | 46 (63) | 57 (85) |
|  |  |  |
| Lifetime years in jail, mean (sd) | 6 (6) | 5 (6) |
|  |  |  |
| Have mobile phone, n (row percent) |  |  |
| No | 172 (71) | 59 (73) |
| Yes | 70 (29) | 22 (27) |
|  |  |  |
| Have data plan1, n (row percent) |  |  |
| No | 2 (3) | 2 (10) |
| Yes, limited | 16 (28) | 6 (30) |
| Yes, unlimited | 40 (69) | 12 (60) |

1. Have data plan was 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>.