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 completed the Link2Care baseline assessments (n = 324).

| **Characteristic** | **Statistics** |
| --- | --- |
| Age, mean (sd) | 39.8 (10.9) |
|  |  |
| Gender, n (percent) |  |
| Male | 275 (84.9) |
| Female | 44 (13.6) |
| Other | 5 (1.5) |
|  |  |
| Race/Ethnicity, n (percent) |  |
| White, non-Hispanic | 54 (16.7) |
| Black, non-Hispanic | 194 (59.9) |
| Hispanic, any race | 42 (13.0) |
| Other race, non-Hispanic | 34 (10.5) |
|  |  |
| High school grad or GED, n (percent) |  |
| No | 101 (31.2) |
| Yes | 223 (68.8) |
|  |  |
| Employment status, n (percent) |  |
| Employed | 27 (8.3) |
| Unemployed, looking for work | 176 (54.3) |
| Unemployed, not looking for work | 47 (14.5) |
| Unable to work or disabled | 59 (18.2) |
| Other | 15 (4.6) |
|  |  |
| Lifetime months homeless, mean (sd) | 49.0 (69.2) |
|  |  |
| Lifetime years in jail, mean (sd) | 5.6 (6.3) |
|  |  |
| General health, n (percent) |  |
| Excellent | 57 (17.6) |
| Very Good | 70 (21.6) |
| Good | 103 (31.8) |
| Fair | 70 (21.6) |
| Poor | 24 (7.4) |
|  |  |
| N days out of past 30 physical health not good, mean (sd) | 7.2 (9.9) |
|  |  |
| N days out of past 30 mental health not good, mean (sd) | 11.7 (11.1) |
|  |  |
| Mental health treatment, n (percent) |  |
| No | 136 (42.0) |
| Yes | 188 (58.0) |
|  |  |
| Have mobile phone, n (percent) |  |
| No | 232 (71.6) |
| Yes | 92 (28.4) |
|  |  |
| Mobile phone bill payer, n (percent) |  |
| Government | 10 (10.9) |
| Family or friend | 29 (31.5) |
| Someone else | 4 (4.3) |
| I pay for my cell phone service | 49 (53.3) |
|  |  |
| Talk minutes in mobile plan, n (percent) |  |
| 0-200 | 3 (3.3) |
| 201-400 | 4 (4.3) |
| 401-600 | 1 (1.1) |
| Unlimited | 80 (87.0) |
| I use 'pay as you go' or prepaid phone | 4 (4.3) |
|  |  |
| Is mobile phone a smart phone, n (percent) |  |
| No | 14 (15.2) |
| Yes - I have an android phone | 74 (80.4) |
| Yes - I have a Apple smartphone (iPhone) | 3 (3.3) |
| Yes - I have a Smartphone that is not Apple or Android based | 1 (1.1) |
|  |  |
| Have data plan, n (percent)1 |  |
| No | 4 (5.1) |
| Yes, but my data plan is limited | 22 (28.2) |
| Yes, my plan includes unlimited data | 52 (66.7) |
|  |  |
| N times mobile number has changed, n (percent) |  |
| 0 | 66 (24.4) |
| 1 | 62 (22.9) |
| 2 | 65 (24.0) |
| 3 | 29 (10.7) |
| 4 | 18 (6.6) |
| 5 or more | 31 (11.4) |
|  |  |
| Types of media used, n (percent)2 |  |
| Email | 250 (77.2) |
| Facebook | 227 (70.1) |
| Google Plus | 127 (39.2) |
| Twitter | 29 (9.0) |
| Blogs | 9 (2.8) |
| Instagram | 86 (26.5) |
| Snapchat | 42 (13.0) |
| LinkedIn | 25 (7.7) |
| None | 28 (8.6) |
|  |  |
| Frequency of internet access, n (percent) |  |
| Never | 25 (7.7) |
| About once a month | 12 (3.7) |
| About once per week | 16 (4.9) |
| 2-3 times per week | 31 (9.6) |
| 4 to 6 times per week | 18 (5.6) |
| About once per day | 31 (9.6) |
| About twice per day | 42 (13.0) |
| Every few hours or more | 149 (46.0) |
|  |  |
| Frequency of Facebook use, n (percent) |  |
| Never | 22 (10.0) |
| About once a month | 19 (8.6) |
| About once per week | 13 (5.9) |
| 2-3 times per week | 29 (13.2) |
| 4 to 6 times per week | 14 (6.4) |
| About once per day | 32 (14.5) |
| About twice per day | 31 (14.1) |
| Every few hours or more | 60 (27.3) |
|  |  |
| Believe smartphone app can help change actions or behaviors, n (percent) |  |
| No | 55 (17.2) |
| Yes | 265 (82.8) |
|  |  |
| used smartphone app to manage health-related issues, n (percent) |  |
| No | 242 (74.9) |
| Yes | 81 (25.1) |
|  |  |
| Type of issue managed with smartphone app, n (percent)3 |  |
| Food or calorie tracking | 41 (50.0) |
| Medication reminders | 40 (48.8) |
| Mood manager | 20 (24.4) |
| Physical activity | 42 (51.2) |
| Sleep tracker | 25 (30.5) |
| Smoking Cessation | 14 (17.1) |
| Stress reduction | 31 (37.8) |
| Weight loss tracking | 23 (28.0) |
| Other | 19 (23.2) |
| 1Have data plan was only asked of participants who reported having a mobile phone. | |
| 2Percentages sum to >100% because participants could select more than one response option. | |
| 3Percentages sum to >100% because participants could select more than one response option. | |

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>.

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