Table 2: Overview of Intervention Outcomes

| **Study Characteristics** | | | | **Cognitive Outcomes** | | | | | | | | | | | | | | **Behavioural Outcomes** | | | | | | **Product/ Service-based** | | | | | **Impact** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Author(s) | Research Design | Duration | Sample size | Knowledge about sexual and reproductive health & services | Knowledge about STI/HIV/HPV | Knowledge about contraceptives and condoms | Attitude towards condom use | STI vulnerability/risk/fear | HIV stigma/shame | Self-esteem | Self-efficacy to use condoms and protect from unwanted sex | Motivation or intention to engage in preventive behaviour | Intention to take STI/HIV test | Belief that sexual health services are important | Belief that participants could access sexual health services | Belief that services can be accessed free of charge | Belief that anyone of any age can access services | Abstinence or Monogamy | Multiple sex partners | Self-reported pregnancy | Unsafe sex | Self-care | Partner or peer communication | ART initiation | ART or PrEP adherence | Condom or contraceptive use | STI test or order test-kit online | Service Uptake (clinic visits) | HIV Viral Load (VL) |
| **Mobile Phone (calls or SMS)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Belzer et al. (2014) | RCT | 24 weeks | 37 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \*\*\* |  |  |  | \*\*\* |
| 1. Bull et al. (2017) | Cluster RCT | 26 weeks | 852 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \* |  |  |  |
| 1. Gold et al. (2011) | RCT | 4 months | 7606 | \* |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \* |  |  |  |  |  |  | ns | ns |  |  |
| 1. Hacking et al. (2019) | Mixed | 8 weeks | 40 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \*\*\* |  |  |  |  | \*\*\* |
| 1. John et al. (2016) | Pre/post | 6 months | 19 |  |  |  |  |  |  |  |  | \*\*\* |  |  |  |  |  |  |  |  |  | \*\*\* |  |  |  |  |  | ns |  |
| 1. Juzang et al. (2011) | Intervention\* | 12 weeks | 60 | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  | \*\* |  |  |  |  |  |  |  | ns |  |  |  |
| 1. Lim et al. (2012) | RCT | 12 months | 994 |  | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ns | \*\* |  |  |
| 1. Linnemayr et al. (2017) | RCT | 12 months | 332 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ns |  |  |  |  |
| 1. Liu et al. (2019) | RCT | 36 weeks | 121 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \* |  |  |  |  |
| 1. McCarthy et al. (2016) | Pilot RCT | 12 months | 200 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ns |  |  |
| 1. McCarthy et al. (2018) | RCT | 4 months | 640 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ns |  | ns |  |
| 1. Merrill et al. (2018) | Mixed method | 5 weeks | 394 |  | \* |  |  |  | \*\* | \*\* | \*\* |  |  |  |  |  |  |  |  |  |  |  | \*\* |  |  |  |  |  |  |
| 1. Rockicki et al. (2017) | Cluster RCT | 12 weeks | 756 | Ns |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Ns |  |  |  |  |  |  |  |  |  |
| 1. Stankievich et al. (2018) | Sequential prospective study | 32 weeks | 25 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \*\*\* |  |  |  |  |
| 1. Yao et al. (2018) | Pre/Post | 9 months | 408 |  |  | Ns | \*\* |  |  |  |  | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  | \*\* |  |  |  |
| 1. Ybarra et al. (2018) | RCT | 5 weeks | 273 |  | Ns |  |  |  |  |  |  | \* |  |  |  |  |  | Ns |  |  |  |  |  |  |  | Ns |  |  |  |
| **Mobile Applications** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Brayboy et al. (2017) | 2-phase prospective study | 2 weeks | 20 | Ns |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Dehghani et al. (2016) | Quasi-experiment | 2 weeks | 200 | \* |  |  | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Jeong et al. (2017) | Non-equivalent control group | 5 weeks | 88 |  | \*\*\* |  |  | \*\*\* |  |  | \*\*\* | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Manlove et al. (2020) | RCT | 6 weeks | 1304 |  |  | \*\*\* |  |  |  |  | \* |  |  |  |  |  |  |  |  |  | \*\*\* |  |  |  |  |  |  |  |  |
| 1. Mesheriakova et al. (2017) | Prospective study | 6 months | 120 | \*\*\* |  |  |  |  |  |  |  | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Nielsen et al. (2019) | RCT | 6 months | 433 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Ns | Ns |  |  |  |  |  | Ns | Ns |  |  |
| 1. Jones et al. (2013) | RCT | 3 months |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \*\*\* |  |  |  |  |  |  |  |  |
| **Web- and Online-based** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Bailey et al. (2013) | RCT | 5 months |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \*\* |  |  |
| 1. Ballester-Arnal et al. (2015) | Experiments | 1 month | 239 |  | \*\*\* |  |  | Ns |  |  |  |  |  |  |  |  |  |  |  |  | \*\* |  |  |  |  | \* |  |  |  |
| 1. Brown et al. (2016) | Pre/post | 6 weeks | 148 |  |  |  |  |  |  |  |  |  |  | \*\* | \* | \* | \*\* |  |  |  |  |  |  |  |  |  |  | \* |  |
| 1. Danielson et al. (2014) | Mixed method | 1 month | 41 |  | \*\*\* |  |  |  |  | Ns | \* |  |  |  |  |  |  |  |  |  |  |  | Ns |  |  |  |  |  |  |
| 1. Doubova et al. (2017) | RCT | 4 weeks | 456 |  | \*\*\* |  | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Gottvall et al. (2010) | Mixed method | 1 day | 274 |  | \*\*\* |  | Ns |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Horvath et al. (2017) | RCT | 1 month | 130 |  | \*\* |  |  | \*\* |  |  |  |  | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Lustria et al. (2016) | RCT | Not specified | 1065 |  |  |  |  | \*\*\* |  |  |  |  | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  | \*\* |  |  |
| 1. Massey et al. (2013) | Quasi-experiment | 2 years | 2176 | \*\*\* |  |  |  | \*\*\* |  |  |  |  | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Mevissen et al. (2011) | RCT | 3 months | 171 |  |  |  | Ns | Ns |  |  | Ns | \*\* | Ns |  |  |  |  |  |  |  |  |  |  |  |  | \* | Ns |  |  |
| 1. Mortimer et al. (2015) | Non-blinded parallel-group RCT | 5 months | 747 |  |  |  |  |  |  |  |  | \* | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  | \* | \*\* |  |
| 1. Naar-King et al. (2013) | RCT | 12 weeks | 76 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \*\* |  |  |  | \*\* |
| 1. Rosser et al. (2010) | RCT | 3 weeks | 650 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \* |  |  |  |  |  |  |  |  |
| 1. Spielberg et al. (2014) | Intervention | 3 months | 217 |  |  |  |  | \*\*\* | \*\* |  |  |  |  |  |  |  |  |  | \* |  | \*\*\* |  |  |  |  | \* |  |  |  |
| 1. Starling et al. (2014) | Pre/Post | 2 days | 173 |  |  |  | Ns |  |  |  | \*\*\* | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  | Ns |  |  |  |
| 1. Villegas et al. (2015) | Pre/Post | 1 month | 40 |  | \*\*\* |  | \* |  |  |  | \* |  |  |  |  |  |  |  |  |  | \*\* |  |  |  |  |  |  |  |  |
| **Online Education Program** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Carvalho et al. (2016) | RCT | 6 weeks | 159 |  |  |  |  |  |  |  |  | I1: \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  | I1: \*\*\*  I2: \* |  |  |  |
| 1. Castillo-Arcos et al. (2016) | Quasi-experiment | Not specified | 193 |  |  |  |  |  |  |  | Ns |  |  |  |  |  |  |  |  |  | Ns |  |  |  |  |  |  |  |  |
| 1. Chong et al. (2020) | RCT | 6 months | 4599 |  | \*\*\* | \*\*\* | \* |  |  |  |  |  |  |  |  |  |  |  | Ns | Ns | Ns |  |  |  |  | \* |  |  |  |
| 1. Kaufman et al. (2018) | Cluster RCT | Not specified | 167 |  |  |  |  | \*\*\* |  |  | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Klein et al. (2017) | RCT | 2 years | 321 |  | Ns |  | Ns |  |  |  |  |  |  |  |  |  |  |  |  |  | Ns |  | \* |  |  |  |  |  |  |
| 1. Marsch et al. (2015) | RCT | 6 weeks | 141 |  | \*\*\* |  |  |  |  |  | \* | Ns |  |  |  |  |  |  |  |  | \* |  |  |  |  | \*\*\* |  |  |  |
| 1. Scull et al. (2018) | RCT | 8 months | 184 | \*\* |  |  | \* |  |  |  |  | \* |  |  |  |  |  |  |  |  | \*\* |  | \* |  |  |  |  |  |  |
| 1. Shafii et al. (2019) | RCT | 3 months | 242 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Ns | Ns | \* |  |  |  |  | \*\* |  |  |  |
| 1. Widman et al. (2018) | RCT | 6 weeks | 222 |  | \*\*\* |  | \*\*\* |  |  |  | \*\*\* | Ns |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Markham et al. (2020) | Intervention | 5 years | 4531 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \*\* |  |  |  |  |  |  |
| 1. Peskin et al. (2019) | RCT | 2 years | 1543 |  | \*\*\* | \*\*\* |  |  |  |  | \*\*\* | \* |  |  |  |  |  |  | Ns |  | Ns |  |  |  |  | Ns |  |  |  |
| 1. Rohrbach et al. (2019) | Quasi-experiment | 2 years | 50, 766 |  |  | \*\*\* |  |  |  |  | \* |  |  |  |  |  |  |  |  |  | Ns |  |  |  |  | Ns |  |  |  |
| **Social Media** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Bull et al. (2012) | Cluster RCT | 2 months | 652 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \* |  |  |  |  | \* |  |  |  |
| 1. Dulli et al. (2020) | RCT | 22 weeks | 349 |  | \*\* |  |  |  | Ns |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Ns |  |  |  |  |
| **Games** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Chu et al. (2015) | Pre/post | 1 hour | 1176 |  |  | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Christensen et al. (2013) | RCT | 3 months | 921 |  |  |  |  |  | \* |  |  |  |  |  |  |  |  |  |  |  | Ns |  |  |  |  |  |  |  |  |
| 1. Haruna et al. (2018) | RCT | 5 weeks | 120 | \*\*\* |  |  | \*\*\* |  |  |  |  | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Whitely et al. (2018) | RCT | 16 weeks | 61 |  | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \* |  |  |  | \* |
| 1. Fiellin et al. (2017) | RCT | 6 weeks | 333 | \*\*\* |  |  | \* |  |  |  |  |  |  |  |  |  |  |  |  |  | Ns |  |  |  |  |  |  |  |  |
| **Multi-media** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Ezegbe et al. (2018) | RCT | 8 weeks | 80 |  | \*\*\* |  |  | \*\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Solorio et al. (2016) | Intervention | 16 weeks | 50 |  |  |  | \* |  |  |  | \*\* |  | \*\* |  |  |  |  |  |  |  |  |  |  |  |  | Ns | \*\* |  |  |
| 1. Sznitman et al. (2010) | RCT | 16 months | 1657 |  |  |  |  |  |  |  | \*\* |  |  |  |  |  |  |  | Ns |  | \*\* |  |  |  |  |  |  |  |  |

Note: \*\*\*p≤0.001; \*\*p≤0.01; \*p≤0.05; ns= non-significant