**Supplementary Table 2. Risk of bias assessed by Quality Assessment Tool (QATSDD)** (* indicates study was included in original 2016 review)

Note. [a] Percentage = the total score of a study / the full score 42 (14 items x 3 per item)

| Study ID (Author, Year) | Amato, 2015[26]* | Audrain-McGovern 2016[27] | Barnes 2017[28] | Berg, 2016[29]* | Bold 2016[30] | Brozek, 2017[31] | Buckell, 2018[32] | Camenga 2017[33] | Chen 2017[34] | Chen 2018[35] | Clarke, 2017[25] | Coleman 2017[36] | Cooper 2016[37] | Czoli, 2016[38]* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total score | 35 | 22 | 27 | 29 | 26 | 24 | 31 | 26 | 25 | 29 | 31 | 28 | 37 | 31 |
| **%[a]** | 83% | 52% | 64% | 69% | 62% | 57% | 74% | 62% | 60% | 69% | 74% | 67% | 88% | 74% |
| Explicit theoretical framework | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 3 |
| Statement of aims/objectives in main body of report | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Clear description of research setting | 3 | 1 | 1 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| Evidence of sample size considered in terms of analysis | 3 | 0 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |
| Representative sample of target group of a reasonable size | 3 | 1 | 1 | 2 | 2 | 2 | 3 | 1 | 3 | 3 | 1 | 3 | 2 | 2 |
| Description of procedure for data collection | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 1 | 3 | 2 | 3 | 3 | 3 |
| Rationale for choice of data collection tool(s) | 3 | 3 | 2 | 2 | 1 | 0 | 2 | 1 | 3 | 2 | 3 | 1 | 3 | 2 |
| Detailed recruitment data | 3 | 1 | 3 | 3 | 2 | 0 | 1 | 3 | 1 | 2 | 1 | 3 | 3 | 1 |
| Statistical assessment of reliability and validity of measurement tool(s) (Quantitative only) | 1 | 1 | 1 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 0 |
| Fit between stated research question and method of data collection (Quantitative) | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| Fit between stated research question and format and content of data collection tool e.g. interview schedule (Qualitative) | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Fit between research question and method of analysis | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Good justification for analytical method selected | 1 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| Assessment of reliability of analytical process (Qualitative only) | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

1

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Evidence of user involvement in design | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 3 |
| Strengths and limitations critically discussed | 3 | 0 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

| Study ID (Author, Year) | Dai 2016[39] | Elkami 2016[40] | Etter, 2010[41]* | Etter 2016[42] | Farsalinos, 2013[43]* | Farsalinos, 2014[44]* | Ford, 2016[45]* | Goldenson 2016[46] | Gubner 2018[47] | Harrell 2017a[48] | Harrell 2017b[49] | Kim 2016[50] | Kinouani 2017[51] | Kong, 2014[52]* | Krishman-Sarin, 2014[53]* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total score | 31 | 33 | 20 | 27 | 16 | 19 | 32 | 22 | 28 | 31 | 27 | 28 | 27 | 31 | 26 |
| % [a] | 74% | 79% | 48% | 64% | 38% | 45% | 76% | 52% | 67% | 74% | 64% | 67% | 64% | 74% | 62% |
| Explicit theoretical framework | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Statement of aims/objectives in main body of report | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Clear description of research setting | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Evidence of sample size considered in terms of analysis | 0 | 2 | 1 | 3 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| Representative sample of target group of a reasonable size | 3 | 1 | 2 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 2 | 1 | 1 | 3 | 3 |
| Description of procedure for data collection | 3 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 |
| Rationale for choice of data collection tool(s) | 2 | 3 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 0 |
| Detailed recruitment data | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 1 | 3 | 3 | 3 |
| Statistical assessment of reliability and validity of measurement tool(s) (Quantitative only) | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| Fit between stated research question and method of data collection (Quantitative) | 3 | 3 | 2 | 3 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 |
| Fit between stated research question and format and content of data collection tool e.g. interview schedule (Qualitative) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Fit between research question and method of analysis | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Good justification for analytical method selected | 3 | 2 | 1 | 3 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Assessment of reliability of analytical process (Qualitative only) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Evidence of user involvement in design | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 |
| Strengths and limitations critically discussed | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 0 | 2 | 3 | 3 | 3 | 3 | 2 | 2 |

3

| Study ID (Author, Year) | Lee 2017a[54] | Lee 2017b[55] | Litt 2016[56] | Maglalang 2016[57] | Morean 2018[58] | Nonnemaker, 2016[59]* | Patel 2017[60] | Pepper, 2013[61]* | Pepper, 2014[62]* | Pepper 2016[63] | Pesko 2016[64] | Russell 2018[65] | Rutten 2015[66] | Shang 2017[67] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total score | 32 | 28 | 27 | 27 | 26 | 24 | 34 | 35 | 34 | 28 | 29 | 24 | 32 | 27 |
| % [a] | 76% | 67% | 64% | 64% | 62% | 57% | 81% | 83% | 81% | 67% | 69% | 57% | 76% | 64% |
| Explicit theoretical framework | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 0 |
| Statement of aims/objectives in main body of report | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Clear description of research setting | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 1 |
| Evidence of sample size considered in terms of analysis | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 3 |
| Representative sample of target group of a reasonable size | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 2 | 3 | 3 | 2 | 1 | 3 | 3 |
| Description of procedure for data collection | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 |
| Rationale for choice of data collection tool(s) | 3 | 3 | 2 | 1 | 1 | 0 | 3 | 2 | 3 | 1 | 2 | 0 | 2 | 3 |
| Detailed recruitment data | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 1 |
| Statistical assessment of reliability and validity of measurement tool(s) (Quantitative only) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 0 |
| Fit between stated research question and method of data collection (Quantitative) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Fit between stated research question and format and content of data collection tool e.g. interview schedule (Qualitative) | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Fit between research question and method of analysis | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Good justification for analytical method selected | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 |
| Assessment of reliability of analytical process (Qualitative only) | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Evidence of user involvement in design | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| Strengths and limitations critically discussed | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |

4

| Study ID (Author, Year) | Shiffman, 2015[68]* | Shiplo, 2015[69]* | Spears 2018[70] | Tackett, 2015[71]* | Tsai 2018[72] | Vasiljevic, 2016[73]* | Weaver 2018[74] | Yingst, 2015[75]* |
|---|---|---|---|---|---|---|---|---|
| Total score | 26 | 27 | 29 | 26 | 22 | 33 | 30 | 21 |
| % [a] | 62% | 64% | 69% | 62% | 52% | 79% | 71% | 50% |
| Explicit theoretical framework | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Statement of aims/objectives in main body of report | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 |
| Clear description of research setting | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| Evidence of sample size considered in terms of analysis | 2 | 3 | 0 | 3 | 1 | 3 | 1 | 0 |
| Representative sample of target group of a reasonable size | 1 | 2 | 3 | 1 | 3 | 2 | 3 | 2 |
| Description of procedure for data collection | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 2 |
| Rationale for choice of data collection tool(s) | 2 | 0 | 2 | 2 | 0 | 3 | 2 | 1 |
| Detailed recruitment data | 3 | 3 | 3 | 2 | 0 | 1 | 3 | 3 |
| Statistical assessment of reliability and validity of measurement tool(s) (Quantitative only) | 1 | 0 | 1 | 0 | 0 | 3 | 0 | 0 |
| Fit between stated research question and method of data collection (Quantitative) | 1 | 2 | 3 | 3 | 3 | 2 | 3 | 3 |
| Fit between stated research question and format and content of data collection tool e.g. interview schedule (Qualitative) | - | - | - | - | - | - | - | - |
| Fit between research question and method of analysis | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| Good justification for analytical method selected | 1 | 2 | 3 | 2 | 2 | 1 | 3 | 1 |
| Assessment of reliability of analytical process (Qualitative only) | - | - | - | - | - | - | - | - |
| Evidence of user involvement in design | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Strengths and limitations critically discussed | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 |

5