**Additional file**

**Table A** *Model fit of factorial solutions suggested in previous studies including the BHS*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Author  | Model  | *χ2* | *df* | *CFI* | *TLI* | *RMSEA**[95% CI]* |
| Onefactorial  |  | 2205.127\*\*\* | 170 | 0.926 | 0.917 | 0.070[0.067,0.073] |
| Aish and Wasserman (2001)  |  | 45.863\*\*\* | 2 | 0.980 | 0.940 | 0.095[0.072, 0.119] |
| Two-factorial |  |  |  |  |  |  |
| Bouvard et al. (1992)  | capacity to imagine the future (1, 3, 6, 8, 10, 11, 12, 13, 14, 15, 18, 19) desire regarding the future (2, 4, 5, 9, 16, 17, 20)  | 1999.424\*\*\* | 151 | 0.923 | 0.913  | 0.071[0.068, 0.073] |
| Kao et al. (2012)  | negative expectation of the future (1, 2, 3, 4, 5, 6, 7, 13, 15, 18, 19) loss of motivation for the future (8, 9, 10, 11, 12,14, 16, 17, 20)  | 2025.849 \*\*\* | 169 | 0.932 | 0.924  | 0.067[0.064, 0.070] |
| Nissim et al. (2010)  | negative expectations (1, 2, 3, 5, 6, 7,13,15, 18, 19) loss of motivation (4, 8, 9, 10, 11, 12, 14, 16, 17, 20)  | 2002.155\*\*\*  | 169 | 0.933 | 0.925 | 0.067[0.064, 0.069] |
| Pompili et al. (2007)  | self-referent negative expectation of the future (11, 16, 17, 19, 20) generalized negative expectation (1, 7, 12, 14, 15, 18)  | 732.840\*\*\* | 43 | 0.965 | 0.955 | 0.081[0.076, 0.086] |
| Steer, Beck, and Brown (1997)  | pessimism (1, 10, 15, 18) resignation to the futility of changing the future (9, 16, 20)  | 120.860 \*\*\* | 13 | 0.983  | 0.972 | 0.058[0.049, 0.068] |
| Tanaka et al. (1998)  | doubt about a hopeful future (1, 4, 5, 6, 8, 12, 13, 14, 15, 18) belief about a hopeless future (2, 7, 9, 10, 11, 16, 19, 20)  | 1951.303 \*\*\* | 134 | 0.922  | 0.911  | 0.074[0.072, 0.077] |
| Three factorial |  |  |  |  |  |  |
| Aloba et al. (2015)  | negative expectations regarding the future ( 9, 10, 11, 12, 13, 15, 17, 18, 19, 20) positive expectations regarding the future (1, 3, 5, 6, 8) loss of motivation (2, 4, 7, 14, 16)  | 1963.737\*\*\* | 167 | 0.934 | 0.925  | 0.066[0.064, 0.069] |
| Beck et al. (1974)  | Feelings, about the future (1,5,6,13,15,19) Loss of motivation (2,3,9, 11,12,16,17,20) Future Expectations (4,7,8,10,14,18)  | 1499.105 \*\*\* | 167 | 0.951 | 0.945 | 0.057[0.054, 0.060] |
| Dyce (1996)  | expectation of success (1, 2, 3, 5, 6, 10, 13, 15, 19) expectation of failure (9, 11, 16, 17, 20) future uncertainty (4, 7, 8, 12, 14, 18)  | 1762.634 \*\*\* | 167 | 0.942 | 0.934  | 0.062[0.060, 0.065] |
| Hill, Gallagher, Thomp-son, and Ishida (1988)  | hope (1,3, 5, 6, 13, 15, 19) giving up (2, 8, 9, 11, 16, 17, 20) plans about the future (4, 7, 10, 12, 14, 18)  | 1621.650\*\*\* | 167 | 0.947  | 0.940 | 0.060[0.057, 0.062] |
| Rosenfeld et al. (2004)  | positive future orientation (1, 3, 5, 6, 8, 10, 13, 15, 19) tendency to not attempt to change ones situation (2, 9, 16, 17, 20) generally pessimistic outlook on the future (4, 7, 11, 12, 14, 18)  | 1001.225\*\*\* | 149 | 0.969  | 0.964  | 0.048[0.046, 0.051] |
| Steer, Iguchi, and Platt (1994)  | resignation (2, 9, 11, 16, 17, 20) rejection (1, 6, 8, 13, 15, 19) acceptance (4, 14)  | 681.484 \*\*\* | 74 | 0.963  | 0.955 | 0.058[0.054, 0.062] |
| Steer, Kumar, and Beck (1993)  | rejection (1, 2, 3, 6, 7, 8, 10, 13, 15, 19) acceptance (4, 12, 14, 17, 18) resignation (9, 11, 16, 20)  | 1593.562\*\*\* | 149 | 0.945 | 0.937 | 0.063[0.060, 0.066] |
| Niméus et al. (1997) | Loss of motivation (2, 7, 9, 11, 13, 14, 16, 20)Expectations of the future (1, 10, 12, 15, 17, 18, 19)Undefined (1, 2, 3, 6, 7, 11, 15, 19)Undefined (4) | did not converge |
| Bi-factor model |  |
| Szabó et al. (2016) | Content factor (all items)Negatively worded items (2,4,7,9,11,12, 16, 17, 18, 20)Positively worded items(1,3,5,6,8,10,13,15,19) | 27571.635\*\*\* | 190 | 0.985 | 0.981 | 0.034[0.031,0.036] |
| MTMM | Correlated traitsCorrelated methods |  |  |  |  |  |
| Boduszek & Dhingra (2016) | 3 trait factorsFeelings, about the future (1,5,6,13,15,19) Loss of motivation (2,3,9, 11,12,16,17,20) Future Expectations (4,7,8,10,14,18)2 method factors Negatively worded items (2,4,7,9,11,12, 16, 17, 18, 20)Positively worded items(1,3,5,6,8,10,13,15,19) | 474.106\*\*\* | 146 | 0.988 | 0.984 | 0.030 [0.027, 0.033] |

*Note.* CFI = Comparative Fit Index, RMSEA = Root Means Square Error of Approximation, TLI = Tucker Lewis Index; \*\*\*=*p*<.001.