

Supplementary file 3: Data extraction framework

Note: The table has been sorted to highlight the studies that directly and indirectly referenced a validity-testing framework - see Column 2

| Author | Reference to validity testing framework | Country | HL assessment/s under investigation | Comparator HL assessment/s | Reliability | Test content | Response processes | Internal structure | Relations to other variables | Validity and the consequences of testing |
|-----------------------|---|-----------|--|----------------------------|---|--------------|--------------------|--------------------|------------------------------|--|
| Dykhuis et al (2019) | Direct to Francis et al (2016) checklist [1] | USA | Test BMNT | REALM-R, REALM-SF | Cronbach's alpha | 1 | x | x | 2 | x |
| Elsworth et al (2016) | Direct to Messick 1992 In Alkin MC [2] | Australia | Test HLQ | x | Cronbach's alpha, Composite reliability | x | x | 2 | 2 | x |
| Hawkins et al (2017) | Direct ref to Standards 2014, Kane 1992, Messick 1993 [3-5] | Australia | Test HLQ | x | Inter-rater | 1 | 2 | x | x | x |
| Begoray (2012) | Indirect to Standards [6] | Canada | Develop and test health literacy assessment (no name) (9 s-r items, 2 Cloze) | REALM | Cronbach's alpha | 1 | x | x | 2 | x |

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| DeBello (2016) thesis | Indirect to Standards [7] | USA | Test HKACS | x | Cronbach's alpha; Test-retest | 2 | x | 1 | 4 | x |
| Elder et al (2012) | Indirect to Standards [8, 9] | Australia | Test REALM (13 items) | TOFHLA, NVS, Definition scores / AQOL | Cronbach's alpha; Inter-rater | 3 | x | x | 4 | 1 |
| Goodwin et al (2018) | Indirect to Standards [10, 11] | Australia | HLQ | x | Cronbach's alpha | x | x | 1 | 1 | x |
| Morris et al (2017) | Indirectly to Standards [12] | Australia | Test HLQ | x | Person separation index (PSI) in IRT | x | x | 3 | x | x |
| Osborne et al (2013) | Indirectly to Standards [10] | Australia | Develop and test HLQ | x | Composite reliability | 7 | 1 | 3 | 1 | x |

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|------------------------|---|-----------|--|--|---|--------------|--------------------|--------------------|------------------------------|--|
| Baker et al (1999) | x | USA | Develop and test S-TOFHLA | REALM | Cronbach's alpha | 1 | x | x | 1 | x |
| Bann et al (2012) | x | USA | Develop and test HSLI-SF | S-TOFHLA, self-report questions | Cronbach's alpha | 3 | x | 2 | 1 | x |
| Barber et al (2009) | x | Australia | Test REALM, TOFHLA, NVS | AQOL | x | x | x | x | 3 | x |
| Cavanaugh et al (2015) | x | USA | Test BHLS (3 items) | REALM, S-TOFHLA, MMSE / CHeKS, PiKS | Cronbach's alpha | x | x | x | 6 | x |
| Chesser et al (2014) | x | USA | Test S-TOFHLA | x | x | 1 | 1 | x | x | x |
| Chew et al 2004 | x | USA | Develop and test 3 screening questions | S-TOFHLA | x | 2 | x | x | 1 | x |
| Chew et al 2008 | x | USA | Test 3 screening questions | S-TOFHLA, REALM | x | x | x | x | 1 | x |
| Curtis et al (2015) | x | USA | Develop and test CHAS | S-TOFHLA, REALM, NVS, MMSE / self-reported health status, SF-36, PROMIS short form | Cronbach's alpha; IRT TIF; Omega analysis | 2 | x | 3 | 6 | x |

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| | | | | emotional health | | | | | | |
| Dageforde et al (2015) | x | USA | Test SLS (3 items) | REALM, S-TOFHLA | Cronbach's alpha; Wilcoxon signed rank test | 1 | x | x | 2 | x |
| Davis et al (1991) | x | USA | Test REALM | PIAT-R, SORT | Test-retest; Inter-rater | 1 | x | x | 1 | x |
| Davis et al (1993) | x | USA | Develop and test REALM-SF | PIAT-R, SORT-R, WRAT-R | x | 1 | x | x | 1 | x |
| Driessnack et al (2014) | x | USA | Test NVS | N of children's books | Cronbach's alpha | x | x | x | 3 | x |
| Goodman et al (2015) | x | USA | Test BHLS (3 items) | REALM-R, NVS | x | x | x | x | 1 | x |
| Hadden (2012) thesis | x | USA | Test HLSI-SF | S-TOFHLA, Perceptions of Difficulty with Health Literacy Skills | x | x | x | x | 5 | x |
| Harper (2013) thesis | x | USA | Develop and test a new health literacy assessment [no name] | S-TOFHLA | Cronbach's alpha | 4 | x | 2 | 3 | x |

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| Haun (2012) | x | USA | Test S-TOFHLA, REALM, BRIEF (4 items) | x | Cronbach's alpha | x | x | 1 | 4 | x |
| Haun (2007) thesis | x | USA | Test BRIEF (4 items) | S-TOFHLA and REALM | Cronbach's alpha | x | x | x | 3 | x |
| Houston et al (2018) | x | USA | Test S-TOFHLA | SNS, GL (GL1, GL2, GL3) | x | x | x | x | 1 | x |
| Jordan et al (2013) | x | Australia | Develop and test HeLMS | x | Cronbach's alpha; Test-retest | 3 | 1 | 3 | 2 | x |
| Kirk et al (2012) | x | USA | Test REALM-SF, NVS | S-TOFHLA | x | x | x | x | 2 | x |
| Ko et al (2012) | x | Singapore | Develop and test HLTS | NVS | Cronbach's alpha | x | x | x | 4 | x |
| Kordovski et al (2017) | x | USA | Test NVS | REALM, SILS | Cronbach's alpha | x | x | x | 7 | x |
| McCormack et al (2010) | x | USA | Develop and test HLSI | S-TOFHLA, self-report questions | Cronbach's alpha | 3 | x | 2 | 3 | x |
| McNaughton et al (2011) | x | USA | Test SLS (3 items) and SNS (8 items) | S-TOFHLA, REALM, WRAT4 | Cronbach's alpha | x | x | x | 3 | x |
| Miller (2018) thesis | x | USA | Test HLSI (Cloze only), NVS, S-TOFHLA | x | Cronbach's alpha | x | x | 1 | 1 | x |

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|---------------------------|---|-------------|--|----------------------------|--|--------------|--------------------|--------------------|------------------------------|--|
| Morris et al (2006) | x | USA | Test SILS 1 | S-TOFHLA | x | x | x | x | 1 | x |
| Parker et al (1995) | x | USA | Develop and test TOFHLA | WRAT-R, REALM | Cronbach's alpha; Split halves coefficient | 1 | x | x | 1 | x |
| Quinlanos et al (2015) | x | USA | test SILS 1 and SILS 2 | REALM and S-TOFHLA | x | x | x | x | 1 | x |
| Rawson et al (2010) | x | USA | Develop and test METER | REALM | Cronbach's alpha | x | x | x | 2 | x |
| Sand-Jecklin et al (2014) | x | USA | Develop and test BHLS (5 items) | S-TOFHLA | Cronbach's alpha | x | x | 2 | 4 | x |
| Shaw et al (2014) | x | USA | Develop and test remote admin health literacy assessment | S-TOFHLA | x | 1 | x | x | 1 | x |
| Soelberg (2015) | x | USA | Test NVS | S-TOFHLA | Cronbach's alpha | x | x | x | 2 | x |
| Sørensen et al (2013) | x | Netherlands | Develop and test HLS-EU-Q | x | Cronbach's alpha | 7 | 1 | 1 | x | x |
| Wallace et al (2006) | x | USA | Test 3 screening questions | REALM | x | x | x | x | 2 | x |
| Wallston et al (2014) | x | USA | Test BHLS (3 items) | S-TOFHLA | Cronbach's alpha; Inter-rater | x | x | x | 4 | x |

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| Weiss et al (2005) | x | USA | Develop and test NVS | TOFHLA | Cronbach's alpha | 3 | x | x | 3 | x |
| Zhang et al (2009) | x | Singapore | Develop and test FHLT (21 items) | REALM | Cronbach's alpha; Test-retest | 3 | 1 | 1 | 5 | x |
| Totals | | | | | | 52 | 7 | 28 | 107 | 1 |

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