The Re-Validation of the Kay Pictures paediatric visual acuity test

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The Kay Picture (KP) VA test is one of the UK's leading tests for pre-literate children in clinical practice. The test has since been redesigned to modernise the optotypes. Phase-1: Resolution acuity for 25 pictures, 8 Landolt C's and 5 ETDRS letters were assessed in adults. Phase-2: Recognition phase assessed children (<30 months). Phase-3: Resolution acuity of a reduced number of pictures and the Landolt C. Phase-4: Comparison of the KP test with LEA symbols and the ETDRS. Phase-5: Collection of age related norms. Mean (±SD) acuity with 25 pictures: -0.12±0.12 to -0.31±0.11 LogMAR, Landolt C's: -0.06±0.12 and -0.13±0.10 for the ETDRS. Three pictures were removed at this point. Picture recognition was assessed in 420 children (<30 months). A further 10 pictures were removed based on recognition. Resolution acuity was assessed in 42 adults with the remaining 12 pictures. Based on individual recognition thresholds, the picture selection was reduced to six. A further 113 adults were assessed with the new KP test, the ETDRS and LEA symbol. The mean bias indicated similar results between tests. Phase-4 evaluated the repeatability of the KP test and the ETDRS in 100 adults, no significant difference was found between either test (p=0.1). Phase-5: Mean (±SD) acuity in children (<30 months): 0.10±0.07 LogMAR. The redesigned KP test has been shown to be highly comparable with current gold standard VA assessments. The new single crowded optotype enables clinicians to assess younger patients (<2 years), which potentially could detect amblyopia earlier than previously possible.

Biography

Ashli Milling is a Lecturer in Orthoptics at The University of Liverpool, UK. She has graduated from the University of Liverpool in 2009 with a first class Honors. She has worked as a Clinical Orthoptist in Stepping Hill Hospital, Stockport, UK for five years.

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