**Multiple choice questions**

# Visual motor integration delay in preschool children infected with HIV

**Correct answers in red**

1. South African National Department of Health ART guidelines in 2013 and 2015 specify that
2. children between the ages of 5-10 years should commence on ART when their CD4 < 500 cells/ųl
3. children between the ages of 5-10 years should commence on ART when their CD4 > 500 cells/ųl
4. infants exposed at birth should be started on ART at birth.
5. children younger than 5 years should receive ART regardless of their CD4 cell count
6. infants exposed at birth should be started on ART at 4-6 weeks of age.
7. Developmental milestones and developmental delay in children with HIV should be monitored
8. although deficits may not be expected
9. for neurocognitive decline consistent with diffuse atrophy and bifrontal white matter abnormalities
10. abilities required for formal education
11. those on ART wilkl have no deficits
12. vulnerabilities including low socioeconomic status, poor nutrition, limited access to services and neglect
13. Treatment for HIV with ART
    1. is determined by the quantity of CD4 cells and the viral load
    2. resolves all deficits in visual perception and language scores in children over the 3 years of age,
    3. should be initiated in infancy
    4. has no effect on cognitive function in children with CD4 cell counts >350 cells/mm3
    5. determines the degree of cognitive impairment
14. Specific deficits in neurodevelopment in children with HIV include
15. gross motor delay
16. processing speed, visual motor integration, sustained attention, motor speed and coordination,
17. poor socialisation with peers
18. functions associated with the frontal cortex and the parietal lobe.
19. deficits related to the Lateral Occipital Complex (LOC) network
20. The Beery-Buktenica Developmental Test of Visual-Motor Integration
21. has high reliability and validity when compared with other assessment measures of perceptual-motor skills
22. has no relationship to a child’s academic achievement
23. has been found to be culture and has been shown to be valid for the assessment of children in South Africa
24. has a statistically significant relationship with mathematical achievement test scores.
25. needs to interpreted with caution when used with children in South Africa
26. The sample of the participants in the study
    1. lived far away from the hospital
    2. were mostly male
    3. came from a middle or low socioeconomic background.
    4. has been receiving ART for an average of 3.5 years
    5. had an average CD4% of 62.21%

1. The results for the Beery-Buktenica Developmental Test of Visual-Motor Integration for the sample
2. had z scores for visual motor integration and visual perception fell in the “at risk” category
3. showed best ability on the visual perceptual supplemental test
4. had motor co-ordination z scores fell in the average range
5. showed no significant difference from the normal distribution of scores
6. showed 20.5 % of the sample presented with deficits at -2 SD for visual perception
7. The Beery-Buktenica Developmental Test of Visual-Motor Integration scores for the study sample
8. the scores were significantly lower than scores reported for studies on South African pre-schoolers
9. confirmed developmental delay
10. indicated a deficit of 11 months on the mean VMI raw scores
11. indicated visual perception had a moderate positive significant correlation with the CD4 count and CD4(%)
12. Had no relationship with any demographic or socioeconomic factors
13. Developmental delay in children with HIV in this study
14. was confirmed for visual perception and visual motor integration
15. indicates the presences of neurological deficits in the LOC and parental lobes
16. was most severe for motor coordination
17. confirms that fine motor function in 5 year old children with HIV is relatively intact
18. placed all aspects assessed by the Beery-Buktenica Developmental Test of Visual-Motor Integration in the at risk catagory
19. The importance of addressing the delays in visual perception in children with HIV
20. should be considered as part of an occupational therapy programme
21. should only be considered once the children start school
22. must be accompanied by compliance with ART
23. is necessary for these children gain mastery in educational activities.
24. would assist in the development of prewriting and handwriting skills