TEA-Ch2

Overview

The TEA-Ch2 is an individually administered assessment that measures separable aspects of attention for children ages 5–15.

Measuring attention is important for understanding why a child may be challenged with everyday activities. This second edition is a unique combination of paper-based and digital tests which address key aspects of attention: selective, sustained, and switching.

Comic-based tasks, certificates, and stickers keep children engaged. The new digital program helps with administration and scoring. Digital subtests are scored automatically while raw scores can be input from the paper-based tests. The program then provides scaled scores, indexes, and percentile ranks, then automatically generates a PDF report.

Age:
Children and adolescents 5–15

Qualification Level:
B

Administration:
5–7 years: 35–40 minutes;
8–15 years: 40–55 minutes

Publication year:
2016

Test Structure

TEA-Ch2ᴶ is for children ages 5–7

Selective Attention	Sustained Attention
Balloon Hunt	Barking
Balloons 5	SART
Hide and Seek Visual	Simple RT
	Hide and Seek Auditory

TEA-Ch2ᴬ is for children ages 8–15

Selective Attention	Sustained Attention	Switching Attention
Hector Cancellation	Vigil	Reds & Blues, Bags & Shoes
Hector-B Cancellation	SART	
Hecuba Visual Search	Simple RT	
Troy Dual Task	Cerberus	

Updates from the TEA–Ch

Age range:

Following feedback from clinicians the age range has been extended down to 5 years of age. In order to be relevant to the wider age range, two versions were developed, the TEA-Ch2^J (Junior) for children ages 5–7 and the TEA-Ch2^A (Adolescent) for children ages 8–15. Some tests are common to both and some are conceptually similar with age-appropriate themes and challenges.

Test format:

Professionals now administer the assessment using a comic-based format that promotes better engagement with the child and encourages a more collaborative assessment experience between the child and examiner.

Digital testing:

The TEA-Ch2 is designed to be administered as a whole, using both computer-based and comic (paper-based) parts. Digital assessments offer a number of advantages including highly standardized presentation of stimuli, including auditory stimuli, accurate test timing, and automated scoring.

Subtest names:

To reduce possible confusion between forms J and A, different names are used for tests that are conceptually similar but differ in detail. In TEA-Ch2^J, the names reflect the activities performed, often making links with fun and familiar activities. In TEA-Ch2^A, the names of the subtests are neutral names from Greek mythology.

Test Scores:

The TEA-Ch2 provides both scaled scores and index scores. At the subtest level you will get a scaled score and percentile rank. You can also get composite scores (mean 100 SD 15) and percentile ranks for three indexes:

• Sustained Attention Index;
• Selective Attention Index;
• and Everyday Attention Index.

Tasks:

This table shows the original TEA-Ch subtests and their TEA-Ch2 equivalents.

Domain	TEA-Ch subtests	TEA-Ch2^J Equivalents	TEA-Ch2^A Equivalents
Selective Attention	Sky Search	Balloon Hunt	Hector Cancellation
	Sky Search DT	n/a	Troy Dual Task
	Map Mission	Hide & Seek Visual	Hecuba Visual Search
Sustained Attention	Score	Barking	Vigil
	Score DT	SART	SART
	Walk Don't Walk	Simple RT	Simple RT
	Code Transmission	Hide & Seek Auditory	Cerberus
Switching Attention	Creature Counting	n/a	Reds & Blues, Bags & Shoes
	Opposite Worlds	n/a	n/a

Subtests

Balloon Hunt/Hector Cancellation (J and A)

In version J, the goal of this subtest is to see how many balloon targets an examinee can find and mark within a series of 15-second trials. There are four trials, two with balloon-only targets (Balloon Hunt 1 and 3) and two with both balloons and distractors (Balloon Hunt 2 and 4). In version A, the goal of this subtest is to record how many targets an examinee can find and mark within a series of 10-second trials. There are three levels of difficulty in which the frequency of distractors is varied.

Balloons 5 (J only)

The examinee is asked to complete one additional page of the Balloon Hunt task but without an imposed time limit. A stopwatch is required to record completion time.

Hector B Cancellation (A only)

The examinee is asked to complete one additional page of the Hector Cancellation task without an imposed time limit. A stopwatch is required to record completion time.

Hide and Seek Visual/Hecuba Visual Search (J and A)

This is a visual search task that does not require a motor response. The examinee is asked to inspect a series of panels and report whether a target is present or absent. This provides a measure of an examinee's ability to detect a visual target amongst distractors within a limited time.

Barking/Vigil (J and A)

This is a measure of an examinee's ability to maintain their attention on a slow, dull task. In each trial there is an opening, ascending sound indicating that the trial has begun, a series of repeated sounds that are to be counted, then a closing, descending sound, indicating that the trial is complete. Due to the long gaps between the sounds that the examinee has to count, the task does not 'grab' the examinee's attention. This measures the examinee's ability to sustain their attention.

Hide and Seek Auditory/Cerberus (J and A)

This is an auditory target-detection task in which the examinee is asked to listen to short sound clips and press the spacebar as quickly as possible if a bark occurs. Distractor sounds can also be heard, but examinees are required to ignore these sounds.

Simple Reaction Time (J and A)

The aim of this test is to obtain a reliable estimate of simple reaction time by measuring responses to the onset of a visual target. They must press the spacebar as soon as a blue blob appears on the screen.

Sustained Attention Response Test (J and A)

This is a test of the examinee's ability to maintain attention on a task and not allow their responses to be 'driven' absentmindedly by the task. In the SART, a set of shapes is presented in the center of the monitor. The shapes are presented at a regular pace that is independent of the examinee's response. The examinee's task is to respond to each of the shapes by hitting a response key in time with an on-screen cue, but to withhold the response to one of the shapes.

Troy Dual Task (A only)

This subtest examines slowing in a Hector Cancellation-like task, resulting from simultaneous performance of a Vigil-like auditory counting task. A series of to-be-counted sounds is played as the examinee marks given targets.

On each trial, the cymbal crash at the end of a countdown drum sequence indicates when the examinee should start cancelling yellow lozenge targets (as in Hector Cancellation task). The next cymbal crash indicates when the examinee must stop cancelling targets and report how many sounds were presented (as in Vigil task).

Reds and Blues, Bags and Shoes (A only)

This is a test of mental flexibility that involves switching between two relatively simple tasks. Examinees are asked to practice sorting four repeating stimuli according to color (red on one side of the screen, blue on the other) and whether they are held in the hand or worn on the foot.

Normative Data

The TEA-Ch2 UK standardization was coordinated by the development team at Pearson Clinical UK from March, 2012 through December, 2015. Participants were targeted to closely match the distribution of males and females in the UK, calculated according to the 2011 Census. The same approach was taken to include equal numbers of participants in each school year between ages 5–15. A standardization sample was matched to the 2011 census data for age, sex, SES, and ethnicity to ensure a diverse population is represented. The TEA-Ch2[A] standardization sample consisted of 621 children, ranging in age from 8 to 16 years. The TEA-Ch2[J] standardization sample consisted of 394 children, ranging in age from 5 to 8 years.

Reliability

The TEA-Ch2 has a strong reliability. Internal Consistency coefficients for the TEA-Ch2[J] range from moderate (>.5) to good (>.8), with most subtests in the good range. For the TEA-Ch2[A], Internal Consistency coefficients ranged from moderate (>.5) to excellent (>.9) with most subtests in the good or excellent range. Test-retest stability coefficients for the TEA-Ch2[J] range from lower (>.3) to acceptable (>.7), with most subtests in the adequate (>.6) range. For the TEA-Ch2[A], stability coefficients ranged from lower (>.4) to good (>.8) with most subtests in the acceptable range.

Validity

The TEA- Ch2 has strong validity, proven in three main ways: using special group studies (criterion validity), reviewing relationships with other measures (concurrent validity), and reviewing the test's internal structure (construct validity).

- Relationship with other measures: The TEA-Ch2 was administered alongside the Strengths & Difficulties Questionnaire (SDQ). The results show that TEA-Ch2 subtests and indices were correlated with a number of SDQ scores, particularly the Hyperactivity/Inattention, Conduct Problems, and Peer Problems subscales. Accordingly, TEA-Ch2 subtests and indices were correlated with the SDQ External Problems dimension.
- Internal Structure: Structural Equation Modeling (SEM) of the TEA-Ch2 data confirmed that the individual subtests contributed unique variance, so each address different abilities:
  1. that two common underlying factors emerged, supporting the construct validity of the Selective Attention and Sustained Attention indexes, and
  2. that the two attention factors were correlated, endorsing the overall Everyday Attention Index.

FAQ's

Q: What are the digital components to TEA-Ch2?

A: The TEA-Ch2 kit includes a USB drive which contains the digital portion of the TEA-Ch2 program. The user places this in the USB slot and downloads an .exe file onto their PC/Mac®. Running this file will extract the program onto the PC and initiate the password and login processes. The program will remain on the PC/Mac, just like any app, program, or game. It will open when selected from the program/application list, or if the icon is selected.

Q: What are the technical requirements of the TEA-Ch2?

A: The digital subtests of the TEA-Ch2 will run on devices that meet minimum specification as follows:

Hardware:
• a minimum of 500mb of free disk space
• a minimum of 2GB of physical memory (RAM)
• must support Hardware-accelerated OpenGL or OpenGL ES

Software:
• Windows® operating system (OS) Vista, Windows 7, Windows 8, Windows 8.1, Windows 10 or later
• Mac operating system (OS) 10.8 or later.

The TEA-Ch2 is a 32-bit application and will run on both 32-bit and 64-bit operating systems. Please note that the TEA-Ch2 program is not supported on tablets or mobile devices.

Materials

The TEA-Ch2 complete kit includes:

• USB memory stick with program application
• Administration, scoring, and technical manual
• TEA-Ch2^J comics
• TEA-Ch2^A comics
• Star stickers
• Scoring acetates
• Red pen
• Powered external speakers
• Stopwatch

Visit **PearsonClinical.com/TEACH2** for more information

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