FREQUENTLY ASKED QUESTIONS

Test Framework and Revisions

How is the WAIS–IV FSIQ different than the WAIS–III FSIQ?

Compared to the WAIS–III, the WAIS–IV FSIQ de-emphasizes crystallized knowledge (Comprehension is supplemental), and emphasizes the contribution of Processing Speed (both Coding and Symbol Search are core). The WAIS–IV FSIQ is composed of all 10 subtests that comprise the four index scores, including the Working Memory and Processing Speed subtests. The WAIS–III subtests used to derive the FSIQ included only one subtest from the Processing Speed scale and one additional subtest each from the Verbal Comprehension and Perceptual Organization scales.

The VCI and the PRI are derived from three subtests. Are these as reliable as the WAIS–III VIQ and PIQ were?

Yes. Although the WAIS–IV VCI and the PRI are derived from fewer subtests (three) than the WAIS–III VIQ and PIQ (six and five subtests, respectively), the reliabilities are comparable to or higher than the reliabilities of the WAIS–III VIQ and PIQ. Some WAIS–III subtests that demonstrated relatively lower reliability were dropped from the battery or no longer contribute to the composite scores. The reliability of the retained WAIS–IV subtests is improved relative to the WAIS–III and the new subtests that were added are more reliable than those that were dropped from the WAIS–III.

Can I substitute the supplemental subtests for a core subtest?

Yes, you can substitute one supplemental subtest per index. However, you can only substitute a maximum of two subtests total to retain the validity of the FSIQ.

Can I give all the core and supplemental subtests and choose to use the highest subtest scaled scores when computing composite scores?

No. When deriving composite scores, you can only substitute supplemental subtests substituted for core subtests that are spoiled or invalidated. Supplemental subtests are also used to provide
additional information on cognitive functioning. However, you should decide before you administer the subtests which one to use to derive composite scores. If you need to use a supplemental subtest in place of a core subtest for clinical reasons, decide this before you administer the subtest—not after you have derived scaled scores. For example, an individual with motor impairment may be administered Figure Weights as a substitute for Block Design. Supplemental subtests are also useful when the scores within an index are widely discrepant. The additional information from the supplemental subtest can help tease out factors contributing to disparate results.

Was the WAIS–IV designed to line up with CHC theory?

The development of the WAIS–IV was significantly influenced by current research in neurocognitive information processing models. The creation of new subtests was equally guided by clinical research and factorial data. The Wechsler four-factor structure was first introduced as an option within the WISC–III (1991) and the WAIS–III (1997). The WAIS–IV (2008) strengthens the Wechsler four-factor model, and removes its status as optional. The WAIS–IV subtests measure constructs that could be described using common CHC terms, such as fluid reasoning (SI, MR, FW), quantitative knowledge (AR), crystallized knowledge (VC, IN, CO), short term memory (DS, AR, LN), visual perception (BD, VP, PCm), long-term storage and retrieval (VC, IN), and processing speed (SS, CD, CA).

Why was Picture Arrangement dropped?

Picture Arrangement was dropped for a variety of reasons. It was lengthy to administer, the subtest manipulatives were heavy and contained multiple pieces that could be lost or damaged, or administered inconsistently. Ultimately, some difficult choices were made to make room for new subtests. The WAIS–III version of Picture Arrangement can still be used, with an understanding of the possible effects of using outdated norms.

Why was Object Assembly dropped?

Object Assembly was also dropped for a variety of reasons. There was an emphasis on decreasing dependence on time bonus points. Object Assembly was also lengthy to administer. Subtest performance was dependent on motor performance. In terms of user friendliness, the subtest manipulatives were heavy and contained multiple pieces that could be lost or damaged, or administered inconsistently. Some difficult choices were made in order to make room for the new subtests. The WAIS–III version of Object Assembly can still be used, with an understanding of the possible effects of using outdated norms.

Why was Information chosen as a core subtest over Comprehension?

A number of factors were considered when making this decision. Information psychometric properties such as reliability, subtest floor, gradient, and ceiling, were considered and the correlation between WISC–IV and WAIS–IV composites had an edge over Comprehension. User-friendliness factors, such as administration time and ease of recording and scoring, clearly supported Information. The performance of different demographic groups was examined statistically, and results indicated smaller differences between racial/ethnic group performance and smaller differences based on level of education on Information, rather than Comprehension. At the subtest level, Comprehension was more sensitive than Information for a number of clinical
groups; however, selecting Comprehension as a core subtest did not improve the clinical sensitivity of the VCI or the FSIQ for those groups. With respect to construct coverage, the specificity (unique contribution to the battery) of Information was higher than that of Comprehension, and the g-loadings were almost identical, and there was no clear pattern of differential correlations with reasoning tasks with Information compared with Comprehension. Consideration was additionally given to customer preference, in the form of market research surveys specifically addressing this choice and that captured customers’ desire for decreased administration time.

**Why was a third task—Digit Span Sequencing—added to the Digit Span subtest?**

Digit Span Sequencing was added to increase the working memory demands of the Digit Span subtest relative to the previous version, in response to research indicating different cognitive demands for the Digit Span Forward and Digit Span Backward tasks. The total raw score for Digit Span is now based on Digit Span Forward, Digit Span Backward, and Digit Span Sequencing. Digit Span Forward must be administered, as pilot study data indicated the omission of this task results in lower Digit Span Backward scores for some examinees (possibly due to the loss of instructional progression). Retaining Digit Span Forward also ensures sufficient floor items for examinees with intellectual disability or general intellectual deficiency. The separate process scores for each of the three tasks allow practitioners to evaluate differential performance across the tasks.

**Why was Arithmetic chosen as a core subtest over Letter–Number Sequencing?**

Arithmetic was chosen over Letter–Number Sequencing reasons similar to those for choosing Information over Comprehension. In addition, substantial revisions were made to the Arithmetic subtest to reduce the arithmetic knowledge necessary to complete items successfully and to eliminate superfluous irrelevant information. Research indicates that tasks involving cognitive arithmetic are sensitive to dementia.

**General Administration and Scoring**

Do we have to wait for General Ability Index (GAI) tables to be generated by outside researchers? Which tables are endorsed by Pearson?

You don’t have to wait for outside researchers to generate GAI tables. The WAIS–IV includes the GAI as an optional index score. See Appendix C of the WAIS–IV Technical and Interpretive Manual for the norms table and other pertinent analyses relevant to using the GAI.

**Why are some 0-point or 1-point responses on the verbal subtests not queried?**

It was determined during standardization that querying certain responses did not result in any additional information. You have the option to query these responses if, based on your clinical judgment, the examinee's performance on surrounding items, and other test behavior observations, you believe the examinee may be able to improve upon the initial response. However, clearly wrong responses should not be queried. In addition, the responses marked with a (Q) in the manual must be queried.
Why were the discontinue rules shortened from the WAIS–III?

The shortened discontinue rules reduced the overall testing time. Standardization discontinue rules were set generously to enable the examinee to attempt all passable items, yet limit the number of items presented. Final adjustments to the discontinue rule for each subtest were made based on empirical studies of the standardization data. The percentile ranks of examinees within an age group were compared before and after application of the reduced discontinue rule. The discontinue rule was set at the lowest number of consecutive scores of 0 that resulted in a rank-order correlation of .98 or higher. For example, the Similarities discontinue rule was five consecutive scores of 0 for standardization and was reduced to three consecutive scores of 0 for the final version of the scale. Following the reduction, 99% of the examinees' Similarities total raw scores remained at the same relative position within their age group.

What is the rule of thumb for clinical significance in base rates?

In general, you should use the rule of 10%. Once you get a base rate that is less than 10%, you should begin to do additional hypothesis testing to confirm or disprove your conclusions. However, if there are medical reasons to expect certain discrepancies, such as a previous traumatic brain injury, then even 15% or higher could be meaningful.

What scores do I use if I want to do a discrepancy analysis?

The VCI is the functional equivalent of the VIQ. Similarly, the PRI is the functional equivalent of the PIQ. You should use the VCI and PRI as you would use the VIQ and PIQ. A number of other discrepancy analyses can be conducted between the index scores (e.g., VCI versus WMI or PSI; PRI versus WMI or PSI, WMI versus PSI).

The process-level discrepancy comparisons reflect the differences between scores for a subtest and the corresponding process score (i.e., Block Design [BD] and Block Design No Time Bonus [BDN]), or differences between two process scores for a single subtest (e.g., Digit Span Forward [DSF] and Digit Span Backward [DSB]). These process-level discrepancy comparisons may be of particular clinical interest. For example, additional information on the contribution of speed to an examinee's Block Design performance may be obtained from comparing the BD and BDN scaled scores. Prior to interpretation, the practitioner should know whether such a difference is statistically significant and how frequently it occurs in the normative sample.

Clinical and Special Group Performance

Why are the clinical studies in WAIS–IV different than those in WAIS–III?

We did extensive market research with customers, using unaided questions, to determine the need for new clinical studies. New clinical groups were chosen based on these responses, including Gifted Intellectual Functioning, Borderline Intellectual Functioning, Asperger's Disorder, Autistic Disorder, Major Depressive Disorder, and Mild Cognitive Impairment.

If you are interested in conducting clinical studies with other groups, you may request permission via the following website: https://pearsonassess.com/hai/ContactUs.aspx. Pearson may provide support for such studies by providing test materials and matched control groups for comparison.

Why is reliability lower for the intellectually gifted and the intellectually disabled (formerly referred to as mental retardation) special group samples than for the normative sample?
It is a consistent finding that the restriction in the range of scores obtained by these groups frequently results in lower reliabilities.

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**Are there profiles typical of clinical disorders?**

Generally, the answer is no. However, ongoing research may identify certain characteristics of cognitive functioning for specific clinical disorders. While specific profiles are not diagnostic of particular disorders, working memory and processing speed are implicated in a variety of psychoeducational and neuropsychological disorders.

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**Do examinees with neuropsychological or learning issues score lower on WMI and PSI?**

Consistent with current research, studies reported in the *WAIS–IV Technical and Interpretive Manual* suggest that examinees with various neuropsychological and learning issues tend to perform lower on working memory and processing speed tasks.

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**I retested a gifted examinee using the WAIS–IV and the scores were lower than previously reported on the WAIS–III. Why is this?**

This is due to the difference in the core subtests between WAIS–III and WAIS–IV; core subtests in the WAIS–IV reflect the increased emphasis on fluid reasoning, working memory, and processing speed in more recent conceptualizations of intelligence. Compared to the WAIS–III, the WAIS–IV FSIQ de-emphasizes crystallized knowledge (Comprehension is supplemental), and increases the contribution of Processing Speed (both Coding and Symbol Search are core). The WAIS–IV FSIQ is comprised of all 10 subtests that comprise the four index scores, including the Working Memory and Processing Speed subtests. The WAIS–III subtests used to derive the FSIQ included only one subtest from the Processing Speed scale, and one additional subtest each from the Verbal Comprehension and Perceptual Organization scales. Gifted examinees tend to score lower on Processing Speed subtests relative to subtests from other scales, perhaps due to a problem solving approach that stresses accuracy over speed.

In addition to the difference in the core subtests on WAIS–III and WAIS–IV, the norms for the newer test are slightly harder due to the Flynn effect. Although some examinees exhibit scores that regress to the mean upon retesting, analyses of the normative data from the WAIS–III and WAIS–IV indicate that the same percentage of examinees, approximately 2%, is identified as gifted based on the FSIQ. However, the same examinees may not be identified due to the shift in the conceptualization of intelligence reflected in the core subtests that contribute to the WAIS–IV FSIQ.

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**To meet my state's cognitive requirements for a diagnosis of intellectual disability (formerly referred to as mental retardation), the VIQ, PIQ, and FSIQ scores must all be below 70 points. How do I do this with WAIS–IV, which no longer has the VIQ and PIQ composite scores?**

States and other regulatory bodies may update their terminology in the near future. In the meantime, there is a statement on page 5 of the WAIS–IV Administration and Scoring Manual that was designed to address this situation: "The terms VCI and PRI should be substituted for the terms VIQ and PIQ in clinical decision-making and other situations where VIQ and PIQ were previously used."
I work in an area where many different languages are spoken. What do I do if an examinee has recently immigrated to the United States and needs to be assessed in a language other than English?

The WAIS–III has been adapted and standardized in 16 different countries. For examinees whose families have recently immigrated, these are the most current, valid tests available in their first language. Adaptations for Canada, United Kingdom, France and French-speaking Belgium, The Netherlands and Flemish-speaking Belgium, Germany, Austria and Switzerland, Sweden, Lithuania, Slovenia, Greece, Japan, South Korea, Taiwan, and Puerto Rico can be obtained by contacting Pearson. Use of these adaptations requires an examiner or experienced professional who is fluent in the examinee's language.

The WAIS–IV for Canada is currently in development. Standardization projects are underway for English language versions in Australia and England; a French version is also under development for use in French-speaking Canada.

Is there a special group study for the Deaf and Hard of Hearing population?

A special group study with profoundly deaf individuals will be published in a free technical report that will be posted to the Pearson website. Data collection was still in progress at the time of publication.

Subtest Administration and Scoring

Why are Letter–Number Sequencing, Figure Weights, and Cancellation not administered to ages 70–90?

These particular subtests were omitted from the test protocol for ages 70–90 for various reasons. These subtests were not administered to ages 70–90 due to concerns with fatigue in older adults. Standardization editions include more items, involve using longer discontinue rules, and require additional recording procedures relative to final editions of tests. These factors increase testing time. In standardization, examinees typically are administered both the main test being standardized (e.g., WAIS–IV) and various other tests required to establish validity (e.g., WMS–IV, WAIS–III).

The introduction of Digit Span Sequencing decreased the unique information that Letter–Number Sequencing contributes to the battery. Figure Weights and Cancellation were new subtests, with unproven utility for older adults. All of these subtests were likely to be selected as supplemental subtests. Ultimately, the decision was made to omit these subtests for these ages.

Why was Block Design selected as the first subtest for WAIS–IV?

Block Design was chosen as the first subtest because it is an engaging task that gives the examiner more opportunity to establish rapport. This is consistent with a recent revision of another Wechsler product, the WISC–IV, where Block Design as the initial subtest has been well-received by examiners. When testing examinees with motor impairment, examiners may decide to begin with a different subtest in the interest of rapport.

If you wanted to reduce the effects of speeded performance, why not eliminate time bonus points from Block Design altogether?
In general, higher ability examinees tend to perform the task faster. Without time bonus points, Block Design does not provide fine discrimination at higher ability levels.

**Why do Visual Puzzles and Figure Weights have strict time limits, and Matrix Reasoning only has a 30 second guideline?**

Similar to Block Design, higher ability examinees tend to perform Visual Puzzles and Figure Weights items more quickly. Given enough time, low ability examinees can eventually respond to items correctly. This is not the case with Matrix Reasoning. The 30 second guideline was established because completion time data indicated that the vast majority of examinees who will respond correctly do so within 30 seconds, but giving additional time to low ability examinees did not result in correct scores. A strict time limit is therefore unnecessary: Grant additional time if the examinee has established a pattern of providing delayed but correct responses as the item difficulty increases.

**Why is Digit Span placed so early in the subtest order?**

To avoid interference effects between Digit Span and Letter–Number Sequencing, these subtests were widely separated in the order of administration.

**In the Letter–Number Sequencing subtest, the examinee is instructed to repeat the numbers in ascending order first, and then the letters in alphabetical order. For Items 3–10, why is credit awarded if the examinee repeats the letters first in order and then the numbers in order?**

There is a distinction between reordering and sequencing: Reordering involves placing the numbers as a group prior to the letters as a group, and sequencing involves placing the numbers in numerical order and the letters in alphabetical order—regardless of which grouping comes first. The reason for instructing examinees to reorder the numbers before the letters is to provide a structured way of approaching the task, which is especially helpful for examinees that are anxious or have difficulty structuring their own work.

The WAIS–IV version of Letter–Number Sequencing introduces a new graduated teaching strategy. Using Sample Item A, the examinee is taught to reorder the number before the letter for the two-character trials. If the examinee does not reorder correctly as instructed, no credit is awarded for a given trial on Items 1–2. Sample Item B is used to teach the examinee to sequence the numbers and letters, while maintaining the previous reordering instruction. For Items 3–10, credit is awarded for sequencing alone: Regardless of how the examinee reorders the numbers and letters, he or she is using working memory to sequence the numbers and sequence the letters. Although the incorrect reordering approach has always been infrequently observed, the graduated teaching strategy introduced for WAIS–IV has reduced the frequency of incorrect reordering even further. In addition, prior data analysis results have indicated that these items are equally difficult when either numbers or letters are given first.

**What should I do if an examinee writes too faintly to be seen through the Cancellation scoring template?**

You don't need the scoring template to score the subtest. If necessary, remove the template and simply count each correct shape with a mark through it and each incorrect shape with a mark through it. You should make sure to double-check your work.
Is color-blindness a factor on the WAIS–IV?

Individuals with color-perception differences are a group that encompasses greater than 10% of the general population. These issues are much more common in males. We have made every effort to ensure our items, including those on the WAIS–IV, WISC–IV, WPPSI–III, and WASI, are free of bias against these individuals. Items are reviewed by color-perception differences experts, as well as individuals with color-perception differences, during the early stages of the test-development process. In addition, acetate overlays have been utilized so that the test developers can understand the appearance of the stimuli to individuals with various color-perception differences. Items are also copied in black and white to check appearance to those with monochromatic color perception. All items are also subjected to an electronic “color-blindness” simulator, to check item appearance with every type of color-perception difference and ensure that the intensity and saturation of colors are not confused or resulting in different responses.

Related Instruments

Was the WAIS–IV co-normed with the WMS–IV, as it has been with previous editions?

Like their predecessors, the WAIS–IV and the forthcoming Wechsler Memory Scale–Fourth Edition (WMS–IV; Wechsler, in press) research programs overlapped during the standardization stages to allow co-norming. The linkage provides a more complete picture of cognitive functioning in the areas of intellectual ability and memory, and enables a direct comparison of intelligence and memory through normative information. The linkage additionally enables prediction of memory scores on the basis of intellectual ability scores and interpretation of memory scores in the context of intellectual ability scores. Information regarding the co-normative sample, correlations between measures, and analyses relevant to concurrent use of the two scales (e.g., ability-memory discrepancy comparisons and ability-memory contrast scores) will be reported in the WMS–IV Technical and Interpretive Manual (Wechsler, in press).

When will the WMS–IV be available?

January 2009.

Will scoring and reporting software be available for use with the WAIS–IV and WMS–IV?

Scoring assistants and interpretive writers are available for use with both the WAIS–IV and the WMS–IV, and for the joint applications of the two tests.