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Title: Relationships Between Scores on the Kaufman Brief Intelligence Test and the Wechsler Adult Intelligence Scale: Third Edition

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This study investigated the concurrent validity of the Kaufman Brief Intelligence Test (K-BIT) as a test of adult intelligence. Participants were 20 undergraduate Psychology students of Emporia State University. Results indicated the Kaufman Brief Intelligence Test estimates IQ levels at an average of three points less than the Wechsler Adult Intelligence Scale, Third Edition (WAIS-III). All correlations between comparable scales were high according to Guilford correlation criteria (Sprinthall, 2000). The K-BIT appears to be valid as a test of adult intelligence within this population.

RELATIONSHIPS BETWEEN SCORES ON THE KAUFMAN BRIEF INTELLIGENCE TEST AND THE WECHSLER ADULT INTELLIGENCE SCALE: THIRD EDITION

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CHAPTER 1

INTRODUCTION

First published in 1990, the Kaufman Brief Intelligence Test (K-BIT) has become popular among school psychologists for its low cost, ease of administration, small physical size, and use as a screening instrument. The K-BIT uncovers learning problems of young students and determines whether longer tests of intelligence are needed. The upper age range of the instrument is not known thus compromising the versatility of the test. Studying whether the K-BIT is useful as an adult intelligence test may help expand the instrument's validity.

Adequate data have been accumulated about the K-BIT in comparison to a variety of tests of intelligence for children and adolescents. The research leads the present author to conclude that the only use for the K-BIT is with children and adolescents. More data is needed in regard to the K-BIT and the relationship between the scores yielded by it and the scores yielded by other tests of adult intelligence.

The K-BIT population age ranges from 4 to 90; however, it most often is used in school settings for individuals younger than 15. The K-BIT has been compared to the Wechsler Adult Intelligence Scales - Revised (WAIS-R) and

to the Stanford-Binet Intelligence Scales. Thus, the K-BIT has been compared to two adult psychometric measures. Work needs to be done to show the validity of the K-BIT as a test of adult intelligence.

To study the problem, this researcher employed correlational research techniques in order to determine the relationships among scores yielded by the K-BIT and the Wechsler Adult Intelligence Scales, Third Edition (WAIS-III). Thus, more intelligent use of the K-BIT in the adult intelligence testing area may be realized.

Review of the Literature

Kaufman Brief Intelligence Test

The K-BIT was developed by Alan S. and Nadeen L. Kaufman in conjunction with the Kaufman Adolescent and Adult Intelligence Test and the American Guidance Service Early Screening Profiles. The development of the K-BIT took place over several years, beginning with item writing and item tryouts in 1984-86, continuing with a national tryout in 1986-87, and culminating in a national standardization program in 1989. Norms, reported in the K-BIT manual, are based on a national sample of 2,022 subjects ranging in age from 4 through 92 (Kaufman & Kaufman, 1990).

The K-BIT is a brief measure of verbal and non-verbal intelligence, composed of Vocabulary and Matrices that are designed for circumstances in which a brief measure of intelligence will suffice, and trained professionals may be unavailable for the assessment. In contrast to the 2 hours to administer the WAIS, the K-BIT requires only 25 to 30 minutes to administer to an adult.

The Vocabulary subtest consists of two sections. For Expressive Vocabulary, examinees name pictures, and for Definitions, examinees provide the word that best fits two clues, a phrase description and a partial spelling of the word. In Definitions, knowledge of the precise spelling of each word is not necessary, although an appreciation of the basic word configuration facilitates problem solving (Wang & Kaufman, 1993). Expressive vocabulary, consisting of 45 items, is scored either as 1 or 0. Incorrect responses are recorded in the Response blank. Scores range from 0 to 45. Definitions consists of 37 items scored either as 1 or 0 in the same manner as Expressive Vocabulary. Incorrect responses and no response are noted in the Response blank. Scores range from 0 to 37 (Kaufman & Kaufman, 1990).

The Matrices subtest includes several item types, all of which involve understanding relationships among visual stimuli. The Matrices subtest consists of 48 items, scored

as 1 or 0. Scores range from 0 to 48. One task requires selecting the picture that goes best with a stimulus picture. Nine of the 48 items are of this type. The second category of questions are known as abstract analogies and require solving 2 x 2 or 3 x 3 analogies using abstract stimuli. The analogies are visual analogies, known as abstract matrices. They were popularized by Raven (1956, 1960) as a method of assessing the intelligence of children and adults that was more "culture fair" than the popular IQ tests used at that time (Kaufman & Kaufman, 1990). For each item, the examinee selects the correct response that completes the matrix from a selection of 5 to 8 stimuli. None of the items is timed. Most adults earn near-perfect scores on the sets of items that use pictures, so the abstract analogy items determine an individual's Matrices score (Wang & Kaufman, 1993).

Like the WAIS (Wechsler, 1997), McCarthy Scale (McCarthy, 1972), and the Kaufman Assessment Battery For Children (K-ABC) (Kaufman & Kaufman, 1983), the K-BIT includes measures of both verbal and non-verbal intellectual abilities. The K-BIT thus has an advantage over alternative screening procedures such as the Slosson Intelligence Test (Slosson, 1981), Peabody Picture Vocabulary Test-Revised (PPVT-R)(Dunn et al., 1981), and

Quick Test (Ammons & Ammons, 1962), which tap primarily verbal intellectual ability. It also has an advantage over Raven's Progressive Matrices (Raven & Lewis, 1956) and the Test of Non-verbal Intelligence (Brown, Sherbenon, & Dollar, 1982), which tap primarily non-verbal intellectual ability (Naugle, Chelune, & Tucker, 1993).

The K-BIT Vocabulary and Matrices subtests correspond to Wechsler's Verbal and Performance Split; McCarthy's Verbal and Perceptual Performance Scores; the Stanford Binet, Fourth Editon; and the K-ABC. The Sum of Subtest Standard Scores, derived from Vocabulary and Matrices raw scores, are located in the Composite Standard Score Table to obtain the K-BIT IQ Composite, also known as the Composite Standard Score. The average K-BIT IQ Composite score is about 6 points less than the WISC-R Full Scale IQ, 4 points or less than the WAIS-R IQs and similar to the mean K-ABC Mental Processing Composite and Achievement score (Parker, 1993).

Donovick, Burright, Burg, and Gronendyke (1996) administered the K-BIT to college students, adults with head injuries, children with learning disabilities, psychiatric patients, and neurological patients. In their study, the correlation between years of education and scores on tests of general intelligence (including the K-

BIT) for the age groups and education levels in question was approximately .63. The K-BIT was useful in estimating IQ in diverse populations. K-BIT performance was relatively uninfluenced by psychopathology or residual neurological consequences of mild to moderate traumatic brain injuries but was reflective of education (Donovick et al., 1996).

Standardization of the K-BIT permitted the investigation of the background variables to IQ across a wide age that spans preschool to old age. Because the K-BIT includes the same two subtests (Vocabulary and Matrices) for all ages, data from the standardization sample allowed the exploration of these relationships throughout the life span (Kaufman & Wang, 1992).

The K-BIT has a mean of 100 and a standard deviation of 15 for Vocabulary and Matrices subtests as well as for the combination of the two subtests called the IQ Composite. The composite standard score is referred to as an IQ standard score in deference to the popular usage of the term IQ in everyday life coupled with the fact that global intelligence scores are indeed standard scores and have not been quotients (i.e., mental age/chronological age) for more than a generation (Kaufman & Kaufman, 1990). Split-half reliability coefficients for adults aged 20 to

34, 35 to 54, and 55 to 90 averaged .97 for Vocabulary and .94 for Matrices. Test-retest coefficients (average interval = 3 weeks) for 69 adults aged 20 to 54 and 50 adults aged 55 to 89 averaged .96 for Vocabulary and .89 for Matrices (Wang & Kaufman, 1993).

Validity support for the K-BIT is based on 20 correlational studies, 4 of which involved adult samples (Kaufman & Kaufman, 1990). For these adult samples, the Vocabulary and Matrices each correlated .61 with WAIS-R Full Scale IQ for 64 normal individuals aged 16 to 47 years and about .40 with Slosson IQ for 53 people in the 18 to 47 year old range. The two K-BIT subtests correlated in the .30s and .40s with Wide Range Achievement Test - Revised (WRAT-R) variables for a sample of normal 19 to 24 year olds and .42 to .82 with WRAT-R variables for a sample of 18 to 49 year high school dropouts (Wang & Kaufman, 1993).

Wechsler Adult Intelligence Scale - Revised

The Wechsler Adult Intelligence Scale - Revised (WAIS-R) was developed by David Wechsler in 1981 as a follow up to the Wechsler Adult Intelligence Scale (WAIS). Development of the WAIS-R took four years and involved the efforts of senior psychologists working as field supervisors of local examiners at 115 testing centers in 39 states plus the District of Columbia. The WAIS-R was a

completely updated, re-normed and partly revised test which examiners found to be superior to the test it replaced. No other test in 1981 was as reliable, valid, or clinically useful for assessing the measurable aspects of adult intelligence as the revised edition of the Wechsler Scales.

The WAIS-R is a test designated for use with adults aged 16 to 74 to assess a variety of aspects of intelligence including Verbal Comprehension, Perceptual Organization, Working Memory, and Processing Speed. Wechsler believed intelligence was not a particular ability but a multifaceted and multi-determined overall competency or global capacity which in one way or another enables a perceptive individual to comprehend the world and to deal effectively with its challenges. Since 1939 two generations of clinical psychologists have used either the Wechsler-Bellevue or the WAIS, and most will attest that Wechsler's tests elicit or yield considerably more information about the individual being assessed than a measure of IQ alone such as information regarding neurological and psychiatric disorders affecting mental functioning. At the time of revision to becoming the WAIS-R, the instrument was probably the best standardized test designed for individual administration which the science and profession of psychology had produced (Mitchell, 1985).

Corrected split-half reliability coefficients and their corresponding standard errors of measurements are presented for all subtests and IQs, and the results are generally impressive. Coefficients for Verbal IQ (.95 to .97) and Full Scale IQ (.96 to .98), and their respective standard errors of about 2 points, are truly outstanding. The reliability of performance IQ is excellent, averaging .93 (Mitchell, 1985).

Validity data are conspicuously lacking in the WAIS-R Manual. The validity of the WAIS-R is said to rely on the impressive bulk of validity data obtained for the 1955 WAIS. Although the revision in the battery is not great in amount, the norms are certainly quite different, and it is unreasonable to have all validity claims be tied to an outdated test (Mitchell, 1985).

K-BIT and WAIS-R Relationship

The K-BIT yields IQ estimates that are, on average, comparable to their WAIS-R counterparts. The K-BIT appears to be a valid screening measure of intellectual function that yields IQ estimates that are generally similar to those of the WAIS-R. The K-BIT appears to hold some promise as a measure of intelligence when time constraints, patient stamina, or physical disability, or cost efficiency preclude administration of the WAIS (Naugle et al., 1993).

The measure of verbal intelligence provided by the K-BIT does not appear to be equivalent to the measure of verbal intelligence provided by the WAIS-R in a neurological sample. Clinicians should be cautious when viewing the K-BIT Verbal IQ as a direct and pure reflection of verbal intelligence as conceptualized in the WAIS-R. Given the substantial visual-spatial component of the Vocabulary subtest of the K-BIT, the K-BIT Verbal IQ may give a low estimate of verbal intelligence and consequently may accentuate performance discrepancies between K-BIT Verbal and Matrices IQs. This cautionary, interpretative note does not necessarily imply that the K-BIT is not a useful measure of intelligence. It may be too much to expect that a brief measure of intelligence can be used to differentiate verbal and performance based skills. It may be sufficient that it provides a stable measure of general intellectual functioning (Burton et al., 1995).

The K-BIT estimates global IQ as measured by WAIS-R short forms in comparison to the K-BIT. In other words, some skills that are not tapped by the WAIS-R short forms are measured by the K-BIT. The K-BIT provides not only an independent measure of crystallized intelligence in the verbal IQ, but also a separate, motor free measure of fluid intelligence in the Matrices subtest (Eisenstein &

Englehart, 1997). Crystallized intelligence is educational and cultural, reflecting the effects of education and acculturation. Fluid intelligence is biological and reflects one's biological capacity to acquire knowledge.

Wechsler Adult Intelligence Scale - Third Edition

The WAIS-III consists of 14 subtests that yield two sets of summary scores. There are the traditional Verbal, Performance, and Full Scale scores. Also, there are four index scales, based on more refined areas of cognitive functioning, which are labeled Verbal Comprehension, Perceptual Organization, Working Memory, and Processing Speed. The four index scales indicate abilities in each of the four areas. The Verbal Performance is more likely to be used in educational settings, and the four index scales are more likely to be used in clinical settings (Plake & Impara, 1999).

As an instrument for assessing intellectual ability, the WAIS-III is appropriate for a number of purposes. It can be used as a psychoeducational test for secondary and postsecondary school planning and placement and is often a core test for assessing learning disabilities, mental retardation, and giftedness. Tests of intellectual function have been used extensively in school settings to predict future academic achievement. When tests are used

for decisions of special education placement, retesting of the adolescent is sometimes necessary. Federal and state regulations mandate children or adolescents receiving special services must be reevaluated periodically (Wechsler, 1997).

The WAIS-III is also useful for the differential diagnosis of neurological and psychiatric disorders affecting mental functioning. Intellectual testing is frequently conducted under the context of a broader assessment that includes clinical interview, other cognitive and neuropsychological tests, and self-report measures of psychopathology and personality. The WAIS-III is sometimes used for intellectual assessment as part of managerial selection and training and development programs (Wechsler, 1997).

The WAIS-III was developed for use with individuals aged 16 through 89. Test items, materials, and administration directions were selected for suitability with individuals in this broad age range. The standardization data were obtained on English-speaking individuals. People who are older than 89 may be tested but with caution because the normative sample for this age has not been collected (Wechsler, 1997).

The WAIS-III normative sample represents a cross section of the U.S. population with people of all levels of intellectual ability included. Most people obtain scores close to the average range of functioning. In many settings, testing is performed much more frequently with individuals whose ability is outside the normal range of functioning, such as adults with severe and profound mental retardation. The floor of the WAIS-III Full Scale IQ scores was lowered to 45, a lower level than the WAIS-R, or approximately 3.67 SDs below the average level of functioning, to make it useful for these populations. The ceiling of the WAIS-III IQ scores was raised to 155 for testing the functioning of individuals at the high end of the normal distribution (Wechsler, 1997).

New subtests have been added to the WAIS-III, including Matrix Reasoning and factor-based index scores are provided in addition to traditional IQs. The WAIS-III includes the extensive psychometric information included in the accompanying test manuals which makes the results clearer to interpret (Lobello, Thompson, & Evans, 1998). These improvements have occurred since the WAIS was last compared to the K-BIT.

The standardization sample for the WAIS-III (N = 2,450) was selected according to 1995 U.S. census data, and

was stratified according to age, sex, race or ethnicity, geographic region, and education level. Thirteen age groups were created from a large sample of adolescents and adults, with 100 to 200 participants in each group between the ages of 16 to 17 and 85 to 89.

The average split-half reliability for the IQs across the 13 age groups was strong, ranging from .94 to .98. The factor indexes had average reliability coefficients ranging from .88 for Processing Speed, consisting of the subtests Digit Symbol, Coding, and Symbol Search, to .96 for Verbal Comprehension, consisting of the subtests Vocabulary, Similarities, and Information. Individual subtest reliabilities ranged from an average of .93 on Vocabulary, a series of orally presented pairs of words the examinee orally defines, to .70 on Object Assembly, a set of puzzles of common objects, each presented in a standardized configuration, that the examinee assembles to form a meaningful whole. Median values were .88 for the seven Verbal subtests and .83 for the seven Performance subtests.

A subset of the standardization sample provided test-retest data, with an average of 5 weeks between testings. The results of the test-retest study showed that for the four sub-samples (19 to 29, 30 to 54, 55 to 74, and 75 to 89 years), reliability coefficients ranged from .94 to .97

for Verbal IQ, .88 to .92 for Performance IQ, and .95 to .97 for Full Scale IQ (Kaufman & Lichtenberger, 1999).

Overlap between the items on the WAIS-R and the WAIS-III is considerable. The WAIS-III artwork contains more color and better reflections of diversity of gender and ethnic minorities, and its wording of the items reflects current adult language patterns. Both easy and hard items were added to obtain more accurate measures at these extremes of intelligence. The Object Assembly test was made optional and replaced by a new Matrix Reasoning test that places more emphasis on fluid reasoning, the ability to determine an answer without prior exposure and abstract mental operations such as interpretation of proverbs or the completion of a conceptual series (Plake & Impara, 1999).

The WAIS-III retained some 68% of the WAIS-R items in their original or slightly modified form but revamped the others based on datedness, clinical utility, content relevance, and psychometric considerations. The timed nature of some subtests was de-emphasized so processing speed would not confound other attributes measured by the subtests (Plake & Impara, 1999).

K-BIT and WAIS-III Relationship

The WAIS-III and the K-BIT have not been compared. The present study is designed to this and answer the

following five research questions.

Research Questions

1. Is the Vocabulary Subtest score of the K-BIT highly correlated with the Verbal score of the WAIS-III?
2. Is the Matrices Subtest score of the K-BIT highly correlated with the Performance score of the WAIS-III?
3. Is the Composite score of the K-BIT correlated highly with the Full Scale score of the WAIS-III?
4. Is the Vocabulary Subtest score of the K-BIT highly correlated with the Performance score of the WAIS-III?
5. Is the Matrices Subtest score of the K-BIT highly correlated with the Matrix Reasoning Subtest score of the WAIS-III?

CHAPTER 2

METHOD

Participants

Twenty participants, 10 women and 10 men (*M* age = 23.15, *SD* = 9.59), volunteers from undergraduate Psychology courses at a mid-sized, mid-western university took part in the study. They earned research points for participating in the study.

Design

The current study was correlational. The Vocabulary, Matrices, and Composite scores of the K-BIT and the Verbal, Performance, Full Scale, Vocabulary subtest, and Matrix Reasoning subtest scores of the WAIS-III were the dependent variables. In addition, pairs of similar tests between K-BIT and WAIS-III were compared using paired *t* tests.

In the current study, some possible events could bias results. For example, the order the two tests are given could have biased the results. If the WAIS-III was always given first to each participant, the scores gained from it could be higher due to a fresh participant having always taken the WAIS-III first. A way to counteract this effect would be to alternate which test is given first to the participants. Thus, the researcher counterbalanced order of test administration.

Procedure

A testing room on the third floor of Visser Hall on the campus of Emporia State University was utilized to carry out the testing of the participants. The same room was used to test all examinees. Care was taken to provide the same testing environment for all examinees. A five-minute break was taken between the tests administered to each participant. Steven O. Walters administered the tests. When a participant did not come for testing as scheduled, another participant was selected.

The norms of the K-BIT and the WAIS-III were established on the basis of standard administration and scoring procedures under uniform testing conditions. So that an individual's test results are interpretable according to the national norms, the K-BIT and the WAIS-III were administered according to the administration and scoring procedures and using the recommended testing conditions. No deviations from the standard procedures of the K-BIT and WAIS-III, such as changes in phrasing or presentation of a test item or modification of time limits, occurred as deviations from standard procedures could have reduced the validity and reliability of test results. The combined administration time of the K-BIT and WAIS-III was

2.5 hours. Tests were individually administered to the participants at appointed times.

CHAPTER 3

RESULTS

For the 20 participants, the experimenter collected age, the three scores from the K-BIT, and the three scores from the WAIS-III. Descriptive statistics are presented on Table 1.

Correlations for Research Questions

Pearson product moment correlations were performed on the test scores. The Vocabulary Subtest score of the K-BIT correlated with the Verbal score of the WAIS-III *r* .77. The correlation of the Matrices Subtest score of the K-BIT and the Performance score of the WAIS-III was *r* .87. A correlation of *r* .88 was found between the Composite score of the K-BIT and the Full Scale score of the WAIS-III. The Vocabulary subtest score of the K-BIT correlated *r* .82 with the Vocabulary subtest score of the WAIS-III. The Matrices subtest score of the K-BIT and the Matrix Reasoning subtest score of the WAIS-III were found to correlate at a level of *r* .77. Finally, age did not correlate with any of the scores (see Table 2).

t Tests, Means, Standard Deviations

The paired samples *t* test comparing the Composite score of the K-BIT (*M* = 103.25, *SD* = 12.13) and the Full Scale score of the WAIS-III (*M* = 106.35, *SD* = 13.32) was

Table 1

Summary of Means and Standard Deviations

Group	M	SD
Vocabulary Standard	101.90	10.98
Matrices Standard	103.95	13.82
Composite Standard	103.25	12.13
Verbal IQ	104.85	12.82
Performance IQ	107.35	14.64
Full Scale IQ	106.35	13.33

Table 2

Pearson Correlations of Age with K-BIT and WAIS-III Scores

Score	Age
Vocabulary Standard	-.25
Matrices Standard	-.14
Composite Standard	-.22
Verbal IQ	-.15
Performance IQ	-.21
Full Scale IQ	-.15

*p < .05

significant, $t(19) = -2.19$, $p < .05$. The t test for the K-BIT Vocabulary Subtest score ($M = 101.90$, $SD = 10.98$) and the Verbal score of the WAIS-III ($M = 104.85$, $SD = 12.82$) showed no significance, $t(19) = -1.59$, $p > .05$. The Matrices Subtest score of the K-BIT ($M = 103.95$, $SD = 13.82$) and the Performance score of the WAIS-III ($M = 107.35$, $SD = 14.64$) t test result was not significant, $t(19) = -2.06$, $p > .05$.

The Matrix Reasoning and Vocabulary subtests of the WAIS-III have a different metric ($M = 10$, $SD = 3$) than the Matrices and Vocabulary subtests of the K-BIT ($M = 100$, $SD = 15$), so scores involving comparisons of these subtests had to be converted to z scores. The Matrices Subtest of the K-BIT, ($M = .26$, $SD = .92$) and the Matrix Reasoning subtest of the WAIS-III ($M = .57$, $SD = .89$) were significantly different, t test result was $t(19) = 2.18$, $p < .05$. The Vocabulary subtest of the K-BIT ($M = .13$, $SD = .73$) and the Vocabulary subtest of the WAIS-III ($M = .47$, $SD = .91$)also significantly differed, $t(19) = 2.90$, $p < .01$.

CHAPTER 4

DISCUSSION

Research Questions

Guilford (as cited by Sprinthall, 2000) suggested the following interpretations for r values. A value of less than .20 indicates a slight; almost negligible relationship. Low correlation; definite but small relationship is indicated by a value between .20 and .40. A correlation between .40 and .70 indicates moderate correlation; substantial relationship. High correlation; marked relationship is indicated by an r value between .70 and .90. An r value of .90 to 1.00 indicates a very high correlation; a very dependable relationship (Sprinthall, 2000).

Thus, all correlations reported in the study are classified as high, indicating a marked relationship between the K-BIT and its scores and the WAIS-III and its scores. To validate a test is to have it correlated highly with a test whose validity is already established. In the present study, the Vocabulary Subtest score, Matrices subtest score, and Composite score of the K-BIT were correlated with the Verbal score, Performance score, Full Scale score, Matrix Reasoning Subtest score, and Vocabulary Subtest score of the WAIS-III, the criterion.

In regard to Research Question 1, the Vocabulary Subtest score of the K-BIT is highly correlated with the Verbal score of the WAIS-III. From Research Question 2, the Matrices Subtest score of the K-BIT is highly correlated with the Performance score of the WAIS-III. The Composite score of the K-BIT is highly correlated with the Full Scale score of the WAIS-III, answering Research Question 3. From Research Question 4, the Vocabulary Subtest score of the K-BIT is highly correlated with the Vocabulary Subtest score of the WAIS-III. Lastly, the answer to Research Question 5 is that the Matrices Subtest score of the K-BIT is highly correlated with the Matrix Reasoning subtest score of the WAIS-III. Hence, all Research Questions from Chapter 1 are answered in the affirmative.

As reported in Chapter 1, Wang and Kaufman (1993) found the Vocabulary and Matrices subtests of the K-BIT each correlated .61 with WAIS-R Full Scale IQ for 64 normal individuals aged 16 to 47 years. In the current study, the K-BIT Vocabulary subtests correlated .67 with the WAIS-III Full Scale IQ and the K-BIT Matrices subtests correlated .85 with WAIS-III Full Scale IQ for 20 college students aged 18 to 51 years, contributing to K-BIT validity.

In this study, age did not correlate with any category in the correlation table. Age had no effect on the tests in part or whole, adding to the concurrent validity of the K-BIT.

t Tests

Statistically significant differences were found between K-BIT Composite and WAIS-III Full Scale, K-BIT Matrices and WAIS-III Matrix Reasoning, and K-BIT Vocabulary and WAIS-III Vocabulary.

Although these differences were statistically significant, they were not of practical significance. As the pairs of means fall within the average range (90 to 110 K-BIT, WAIS-III) of both the K-BIT and the WAIS-III. The Standard Error of Measurement is + or - 4 points, thus the difference between means is within SEM tolerance. A clinician would not write a different report due to the difference between means found in this study. This lack of practical significance strengthens the validity of the K-BIT as a measure of intelligence.

Relationships with Other Studies

According to the K-BIT manual, Parker (1993) reported the average K-BIT Composite score is 4 points or less than average WAIS-R IQ scores. In the current study, the average K-BIT Composite score was found to be 3 points less than

the average WAIS-III IQ scores. Parker's difference in average IQ scores is substantiated by the current study.

Burton et al. (1995) reported the K-BIT yields estimates that are on average comparable to their WAIS-R counterparts and the K-BIT appears to be a valid screening measure of intellectual function that yields estimates that are generally similar to those of the WAIS-R. The findings of the current study are in agreement with those of Burton et al. (1995).

Burton et al. (1995) also reported it may be too much to expect that a brief measure of intelligence can be used to differentiate between verbal and performance skills, also it may be sufficient that it provides a stable measure of general intellectual functioning. From the current study, the Vocabulary score of the K-BIT is correlated highly with the Verbal score of the WAIS-III, and the Matrices score of the K-BIT is correlated highly with the Performance score of the WAIS-III. Thus, in this study, it follows the K-BIT can differentiate between verbal and performance based skills and also provides a stable measure of general intellectual functioning due to the high correlation between the Composite standard score of the K-BIT and the Full Scale IQ of the WAIS-III. The K-BIT is a

valid test of adult intelligence in the population of this study.

Recommendations for Future Research

The scope of the current study is limited to a population of college students. It is the hope of this author that more research will be done regarding the validity of the K-BIT as a measure of adult intelligence using groups containing older participants and containing participants experiencing psychopathology. In this way findings can be better generalized to a public of differing ages, socio-economic backgrounds, languages, and educational levels.

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APPENDIX A

Informed Consent Letter

Informed Consent Document

The Department Of Psychology at Emporia State University supports the practice of protection for human subjects participating in research and related activities. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time, and that if you do withdraw from the study, you will not be subjected to any other form of reproach.

You will be asked to complete two intelligence tests. It will take approximately two and one half hours. Your scores will be kept confidential.

"I have read the above statement and have been fully advised of the procedures to be used in this project. I have been given sufficient opportunity to ask any questions I had concerning the procedures and possible risks involved. I understand the risks involved and I assume them voluntarily. I likewise understand that I can withdraw from the study at any time without being subjected to reproach."

_____ _____

Participant Date

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I, Steven O. Walters, hereby submit this thesis to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author.

Steven O. Walters
Signature of Author

August 6, 2001
Date

Relationships Between Scores on the Kaufman Brief Intelligence Test and the Wechsler Adult Intelligence Scale - Third Edition
Title of Thesis

Ray Cooper
Signature of Graduate Office Member

August 6, 2001
Date Received