International Journal of Scientific Research in Science and Technology
Print ISSN: 2395-6011 | Online ISSN: 2395-602X (www.ijsrst.com)

Criterion Validity of WISC-III In Indian Children

Dr. Anjali Kumari
Assistant Professor, Department of Psychology, BSK College, Maithon, Dhanbad, Jharkhand, India
Dr. Amool R. Singh
Professor & Head, Department of Clinical Psychology, Ranchi Institute of Neuro-Psychiatry and Allied Sciences Kanke, Ranchi, Jharkhand, India

Article Info
Page Number : 809-818

Publication Issue :
Volume VII, Issue II
March-April 2013

Article History
Accepted: 10 March 2013
Published:30 March 2013

Abstract - The article discusses the history and development of intelligence testing and aims to assess the criterion validity of the Wechsler Intelligence Scale for Children (WISC-III) on Indian school-going children using the Indian Adaptation of the Stanford-Binet Test for Intelligence. The study was conducted using a stratified random sampling technique and included children from different age groups and schools in Ranchi. The sample size was 180 children, with 30 boys and 30 girls in each age group. The inclusion criteria were children from urban and semi-urban backgrounds, aged 6-16 years, with average IQs assessed by the Stanford Binet Scale, and who gave consent to participate. The exclusion criteria were children with vision or hearing impairments, a recent history of major physical illness, and a history of psychiatric disorders. The tools used were the Socio-Demographic data sheet, WISC-III, and Stanford Binet Test (Hindi Adaptation by S.K. Kulshrestha, 1971). Statistical analysis included t-test and Pearson correlation analysis. The results showed that the WISC-III had criterion validity on Indian school-going children, and the scores obtained were comparable to those obtained using the Stanford Binet Test. The study highlights the need to validate intelligence tests on diverse populations and the importance of using culturally appropriate tools in assessment.

Keywords – WISC, Means, Standard Deviations, Standard Error, Stanford Binet Test

Introduction: The outstanding success of scientific measurement of individual differences in behavior has been that of the general mental test. Despite the over-enthusiasm and occasional errors that have attended its development, the general mental test stands today as the most important single contribution of psychology to the practical guidance of human affairs. The assessment of intelligence has a long yet controversial history. Although there are many different definitions of and theories about cognition and intelligence (Sternberg. & Kanfman, 1998). Almost all of them are concerned with the existence of multiple component processes. According to Webster's Ninth New Collegiate Dictionary, Intelligence is " (1) the ability to learn or understand or to deal with new or trying situations... the skilled use of reasons; (2) the ability to apply knowledge to

manipulate one's environment or to think abstractly as measured by objective criteria (as test)." This definition captures well many of our institutions about the nature of intelligence. Alfred Binet, a French physician, became interested in studying judgment, attention, and reasoning in 1890, his interest in these complex mental processes led him to try a greater variety of tests than his predecessors used to apply. In his studies published between 1893 and 1911, he tried to find out how "bright" and "dull" children differed. Having little preconception regarding this difference, he tried all sorts of measurement; recall of digits, suggestibility, size of cranium, moral judgment, tactile discrimination, mental addition, graphology-even palmistry and he found, as did other investigators, that test of sensory judgment and other simple functions did have little relation to general mental functioning, and he gradually identified the essence of intelligence as "tendency to take and maintain a definite direction; the capacity to take adaptation for the purpose of attaining a desired end; and power of auto criticism. In 1904 Binet produced the first practical test. Paris school officials became concerned about their many non-learners and decided to remove the hopelessly feeble-minded to schools where they could be taught a simplified curriculum. The official could not trust the teachers to pick out the feeble-minded. Binet's Scale, which is based on his earlier studies, was published in collaboration with Simon in the year 1905,1908, and in 1911 another revised version of the scale was published. There was a great demand at this time, especially in America, for objective methods of investigating psychological development. In 1910 Levis M. Terman began experimentation with the Binet tests. He produced the Stanford revision of the Binet scale in 1916. This revision extended the application of Binet's method to normal and superior children. The 1916 Stanford-Binet was replaced in 1937 when Terman and Merrill published forms L and M of Stanford-Binet. The latest revision in 1960 combines the best test of the 1937 revision into a single form L- M and improves and updates the scoring system. In all parts of the world, there have been other versions taken directly from the Binet test or one of the revisions.

Aim: To assess the criterion validity of WISC-III on Indian School going children with Indian Adaptation of Stanford-Binet test for Intelligence.

Need of the study: to check the criterion validity of WISC-III in Indian Children

Methodology: It is a school-based study using a stratified random sampling technique. The study was conducted at Ranchi in different schools. Where the study was conducted at DAV public school, Gandhi Nagar, Ranchi, Central Academy School, Kanke, Road, Ranchi, Cambrian public school, Kanke, Road, Ranchi, International public school, Kanke, Road, Ranchi. The sample for the present study was collected on the basis using a stratified random sampling technique. Age and gender were two strata, boys and girls (30 boys and 30 girls) were selected from each age group according to stratified random sampling technique. Out of 1076 children, 216 children were initially selected, after screening 180 children were selected in the age range of 6-16 years, grouped in the range of 6-8, 9-11, and 12-16 years. Each group consisted of 30 boys and 30 girls. The children were selected on the basis of the following inclusion & exclusion area (Inclusion Criteria: Public School Children of urban and semi-urban background, Children of either sex in the age range of 6-16 years, Children who gave consent to participate in a study and Children with average 1. Q. as assessed by Stanford Binet Scale; Exclusion Criteria: Children with defective vision and hearing impairment, Recent history of major physical illness, History of psychiatric disorders). Tools were used (Socio-Demographic data sheet, WISC-III (Wechsler, 1991 and Stanford Binet Test(Hindi Adaptation by S.K. Kulshrestha, 1971)).

Procedure: Samples for the present study were selected according to inclusion and exclusion criteria by using a stratified random sampling technique. The first names of students were taken, then every fourth roll number (e.g 4,8,12, and 16) students were selected for the present study Out of 1076 children 216 children were

interviewed. Stanford Binet Test was used for screening. Children whose IQs ranged from 89-117 were finally selected for the study and then WISC-III was administered. Statistical Analysis was done as Description of characteristics of participants, Range differences, boys and girls group differences were analyzed by t-test, IQs of two tests were analyzed by t-test, Pearson correlation was used to analyze test, differences.

Result and Discussion: The present study commenced in April 2005 and the planned sample was obtained from different schools in Ranchi. A number of 216 children were interviewed and out of which 30 boys and 30 girls were taken in the range age of 6-8, 9-11, and 12-16 years. The children, who fulfilled the required criteria, and gave consent to participate, were finally evaluated by Stanford Binet Test. The children, whose IQs ranged from 89-117, were finally selected for the present study. The academic level of students ranged from Preparatory to class X. In the present study, out of 180 children (30 boys, and 30 girls) in the 6-8, 9-11, and 12-16 year age groups were included for the study. In respect to the socio-economic background of boys in the age group of 6-8 years, 43% belonged to below Rs.10000 per month family income, and 57% belonged to Rs.10000 20000 per month family income. In girls group. 37% of children from the families have Rs.10000 per month family income and 63% belonged to 10000 20000 per month family income. Again, in context to the socio-economic background in the boys' group of 9-11 years, 47% belonged to families below Rs.10000 per month of income group and 53.33 children were from families with Rs.10000-20000 per month family income. In the girls' group, 40% were from families having an income of less than Rs.10000 per month and 60% belonged to a 10000-20000 per month of family income. In the socio-economic background of the 12-16 years group, 30% of children belonged to below Rs. 10000 per month and 70% of children belonged to Rs. 10000-20000 per month of monthly family income. In the girls' group 23% of children were above Rs. 10000 per month and 77% of children belonged to Rs.10000-20000 per month of family income. Wechsler (1971) discussed the fact that individuals with lower socio-economic status (SES) tended to score lower on IQ tests. He viewed this as evidence for a call to change the social condition that causes these differences in IQ tests. In terms of socio-cultural background in the age range of 6-8 years of the boy's group, 47% of boys were living in urban areas and 53% of children hailed from semi-urban areas. While in the girls' group, 60% of girls were from urban areas, and 40% of girls hailed from semi-urban areas. In the boys' group, 60% of children were living in nuclear families and 40% of children represented joint family set-up. In the girls' group, 43% of children hailed from nuclear and 57% from joint family set-ups. Out of boys in the age group 9-11 years 33% of boys were living in urban areas and 67% in semi-urban areas. While in the girls' group, 26% of girls were living in urban areas and 73% living in semi-urban areas. In the boys' group, 37% were from nuclear families and 63% lived in joint families. In the girls' group, 47% lived in nuclear families and 53% lived in the joint family. Regarding the socio-cultural background of boys between the age of 12-16 years, 77% of boys have been staying in urban areas and 23% came from semi-urban areas. While in the girl's group, 80% of girls were living in urban areas and 20% of girls were in semi-urban areas. In the boys' group, 73% of children were from living in the nuclear family, and 40% of children were from a joint family set-up. In the girls' group, mostly 80% and 20% of girls were from nuclear and joint family set-ups respectively.

The present study sample consisted predominantly of Hindus. The excess of Hindus in the sample represents the local pattern of the population in this area. As clarified by the teacher regarding the educational level of the father and mother, most of the parents were not educated up to graduation.

Table 12. Showing Range. Means, Standard Deviations, Standard Error, and '1' value of boys and girls in the age group of 6-8 years.

Tests	Boys				Girls				
	Range	Mean	SD	SE	Range	Mean	SD	SE	't' value d.f. 29
Stanford Binet Test									
IQ	89-117	99.90	6.85	1.27	89-117	101.50	7.99	1.48	-0.818 NS
WISC-III									
Verbal IQ	69-98	90.70	9.85	1.83	68-108	90.57	11.39	2.12	0.070 NS
Performance IQ	81-100	94.57	6.68	1.24	69-116	92.43	10.15	1.88	0.945 NS
Full Scale IQ	75-107	91.20	8.06	1.49	68-107	91.37	9.68	1.79	2.338 NS
NS- Not significant									

Table 12 presents IQ scores for 6-8-year-olds on the Stanford Binet and WISC-III tests. For both boys and girls, IQ scores range from 89-117. The mean IQ on the Stanford Binet scale was 99.9 for boys and 101.5 for girls. On WISC-III, the mean IQ was 91.20 for boys and 91.37 for girls. The standard deviation on the Stanford Binet scale was 0.85 for boys and 7.99 for girls. There was no significant difference between boys and girls groups. On the verbal scale, mean IQs were 90.70 in boys and 90.57 in girls, while on the performance scale, mean IQs were 94.57 in boys and 92.43 in girls.

Table 13. Showing Range, Means, Standard Deviations, Standard Error, and '1' value of boys and girls in the 9-11 years age group.

Tests	Boys				Girls				
	Range	Mean	SD	SE	Range	Mean	SD	SE	't' value d.f. 29
Stanford Binet Test									
IQ	89-113	90.16	6.51	1.21	89-113	97.43	6.89	1.28	0.585 NS
WISC-III									
Verbal IQ	74-110	89.10	9.04	1.68	73-105	88.90	9.96	1.85	0.080 NS
Performance IQ	74-110	92.46	8.58	1.59	74-103	91.37	7.91	1.47	0.508 NS
Full Scale IQ	77-107	90.33	7.16	1.33	77-107	89.57	7.89	1.46	1.978 NS
NS- Not significant									

Table 13 provides IQ data for the 9-11 age group on the Stanford Binet and WISC-III tests, with IQ ranges of 89-113 for both boys and girls. The mean IQ on Stanford Binet for boys was 90.16 and for girls was 97.43, while the mean IQ on WISC-III was 90.33 for boys and 89.57 for girls. The standard deviation on Stanford Binet was 6.51 for boys and 6.89 for girls. For the 12-16 age group, there was a significant difference in mean IQ scores between boys and girls on both verbal and performance tests, with mean IQs of 95.80 and 90.83 for boys, and 96.90 and 88.83 for girls, respectively.

Table 14. Showing Range, Means, Standard Deviations, Standard Error, and 't' value of boys, and girls age group of 12-16 years.

Tests	**Boys**				**Girls**				
	Range	**Mean**	**SD**	**SE**	**Range**	**Mean**	**SD**	**SE**	**'t' value d.f. 29**
Stanford Binet Test									
IQ	89-115	97.90	8.09	1.50	89-115	96.87	7.14	1.33	1.034 NS
WISC-III									
Verbal IQ	60-108	95.80	12.03	2.23	72-112	96.90	11.25	2.09	0.359 NS
Performance IQ	69-110	90.83	13.08	2.43	77-113	88.83	9.87	1.83	3.120 NS
Full Scale IQ	84-113	94.80	8.73	1.62	84-113	93.53	8.26	1.53	0.119 NS
NS- Not significant									

Table 14 shows the IQ distribution of boys and girls on the Stanford Binet Test and WISC-III. The mean IQ for the boys' group was 97.90 on the Stanford Binet Test and 94.80 on the WISC-III, while for girls, it was 96.87 and 93.53, respectively. The standard deviation and standard error were also reported for each group. There was no significant difference between boys and girls in terms of IQ distribution. The verbal IQ range was 60-108 in the boys' group and 72-112 in the girls' group on the WISC-III, and there was no significant difference between the boys' and girls' groups in terms of IQ scores. On the performance scale, the IQ range was 81-100 in the boys' group and 69-116 in the girls' group.

In this study, results showed a range of IQs discrepancy and mean differences in the two tests. Stanford Binet Test and WISC-III among boys and girls. IQs varied from ranged 2-20 in boys and 2-24 in girls and the mean difference was 9.3 in the boys' group and 9.7 in girls in the age of 6-8 years, in 9-11 years age group IQs varied from range 0-18 in boys and 0-18 in girls and mean difference in IQs was 8.3 in the boys and 8.5 in girls, and in 12-16 years age group IQs varied with a range of 2-12 in boys group and 2-12 in girls and mean difference was 5.3 for boys and 5.4 for girls. The mean difference in IQs was greater in younger children and gradually smaller in elders. This might be because of the fact that the children's understanding of English improved with

their age, which helped them to comprehend tests in a better way. The present study showed mean IQs difference in two tests in each group. In the group of boys aged 6-8 years mean IQs on Stanford Binet Test and mean IQs on the WISC-III difference between the two test IQs was 8.7 in boys and 10.1 in girls. There was a significant difference in the IQs of both the boys and girls groups. In the 9-11 years of age range boys and girls group, the mean IQs difference was 0.167 in boys and 7.867 in girls. There was no significant difference between the two IQs in boys but a significant difference in girls. In the 12-16 years age group, the mean IQ difference was 3.1 and 3.333 for boys and girls, respectively. There was no significant difference between the two IQs in both boys' and girls' groups. The present study showed that the mean difference between verbal and performance tests IQs assessed by WISC-III, the difference between verbal and performance test was 3.867 in boys and 1.865 in girls in the age group of 6-8 years, the mean difference between the two tests' IQs was 3.366 in boys and 2.466 in girls in 9-11 years age group, and mean difference between two test IQs was 4.967 in boys and 8.067 in girls in 12-16 years age. There was no significant difference in both verbal and performance IQs in the boys and group girls of all ages. In this study, results showed that the IQs discrepancy between verbal and performance IQs on WISC-III in the age group of 6-8 years ranged from 0-18 in the boys' group and 0-19 in the girls' group. The mean discrepancy was 7.4 and 7.7 in boys and girls respectively. There is no significant difference in both verbal and performance IQs in boys and girls of all ages. The age of 9-11 years group showed differences between verbal and performance IQs ranging was 0-21 in the boys' group and ranged was 0-21 in the girls' group. The mean of verbal and performance discrepancies was found 11 in boys and 8.3 in girls. In the 12-16 years age group results showed differences between verbal and performance IQs range was 2-26 in the boys' group and ranged was 2-26. The mean discrepancy was 11.03 in boys and 12.6 in girls. There is no gender difference found in this study. Verbal-Performance discrepancy was high in elder children because maybe they were in hurry and tried to perform quickly in this process they committed mistakes frequently in picture arrangement. Discrepancy analysis may produce valuable information for clinical interpretation. Many clinical studies demonstrate that, compared with the normative sample, individuals diagnosed with certain clinical conditions, such as ADHD, learning disability, epilepsy, and traumatic brain injury, are more likely to show certain patterns of discrepancies among IQ or Index scores demonstrated that discrepancies between VIO and PIQ are not uncommon in the normal population. However much research supports the notion that injuries to the left hemisphere result in lower VIQ compared to PIQ. Well, if we have additional information that the child recently suffered a head injury that might result in adverse functioning related to verbal abilities. It would appear that studies looking at the validity of test scores and profiles in the assessment process need to also look at the other variables that clinicians use in their assessment and not just at test results. The 12 points discrepancy is statistically significant at $p<.05$ levels for both VIQ-PIQ, difference of this size are not uncommon. The discrepancy of 20 points and above should raise questions in the examiners' minds. A 20 points greater VIQ-PIQ discrepancy was obtained by approximately 14% of the WISC-III standardization sample and less than 10% obtained 22 points or greater discrepancy on either of these measures. The present study showed average mean IOs difference between these two tests was 3.877 points in boys and 7.111 in girls. In the present study, the Pearson Product- Moment correlation coefficient was utilized to determine the validity coefficients. The finding showed a correlation between IOs obtained by WISC-III and Stanford Binet Test Form L-M (Hindi adaptation). The correlation of performance of subjects of different groups (6-8 years, 9-11 years, and 12-16 years) on both tests ranged from 0.058 for boys and 0.717 for girls, 0.731 among boys and 0.641 among girls, and 0.770 in boys and 0.744 among girls. In the

present study, a high positive correlation suggests that both the test's scale measure similar ability. However, studies on other tests supported the findings of the present study.

Table 15. Showing correlation between IQs as measured by Stanford Binet scale and WISC-III scale in each age group.

Age range in groups	Boys	Girls
	R	R
6-8 years	0.582	0.717
9-11 years	0.731	0.641
12-16 years	0.770	0.744

Table 15 shows the correlation between IQs obtained by WISC-III and Stanford Binet Test Form L-M (Indian adaptation). The mean IQs for verbal tests were 95.80 for boys and 96.90 for girls with standard deviations of 12.03 and 11.25, respectively. There was no significant difference between the two groups. On the performance scale, IQs ranged from 69-110 for boys and 77-113 for girls. Mean IQs were 90.83 for boys and 88.83 for girls, with standard deviations of 13.08 and 9.87, respectively. There was no significant difference in the distribution of IQ scores between the boys and girls groups on both tests.

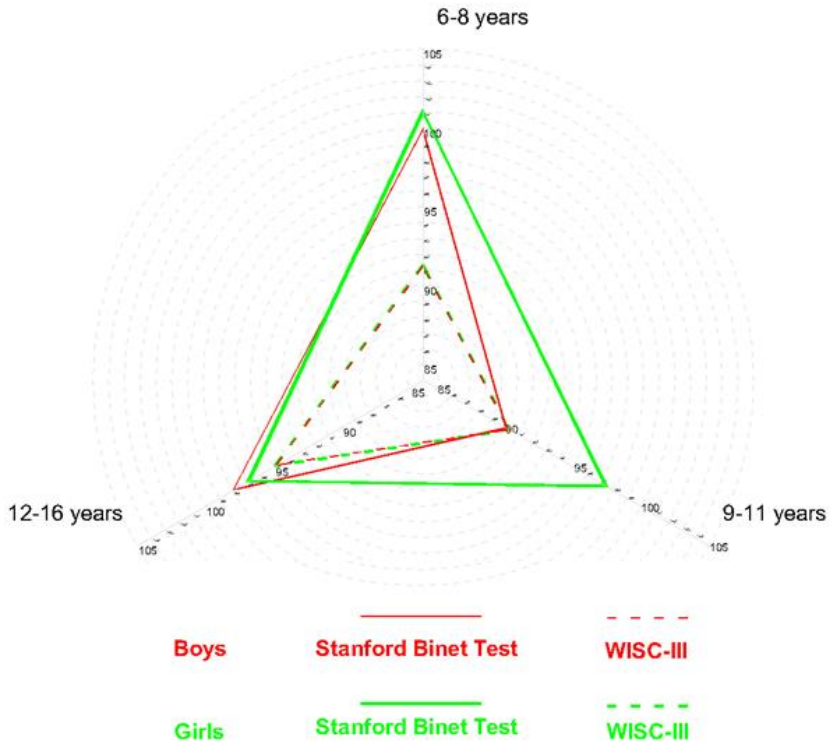

Figure 1 shows:

The Indian children and adolescents showed significant differences in their performance compared to western norms.

Conclusion: The WISC-III performance of Normal Indian Children and adolescents shows a significant difference when compared to various normative studies in Western Countries. These differences are culturally determined and are not indicative of low Intelligence. The WISC-III is not a culture-free test as claimed earlier. In view of the differences in the test performance, some change is needed in WISC-III test items.

References

1. Ackerman, P.L; Anhall, J.M., & Dykman, R.A., (1987). Arithmetic auto-matization failure in children with attention and reading disorders: Association and sequela. Journal of Learning Disabilities, 19: 222-232.
2. Allen, S. R. and Thorndike, R. L. (1995). Stability of the WPPSI-R and WISC-IIIfactor structure using cross-validation of covariance structural models.Journal of Psychological Assessment, 13 (1): 3-20.
3. Blaha, J. and Wallbrown, F. H. (1996). Hierarchical factor structure of the Wechsler Intelligence Scale for Children-III. Psychological Assessment, 8: 214-218.
4. Psychology, 40 (3): 365-370. Cohen, J. (1959). The factorial structure of the WISC at ages 7-6, 10-6, and 13-16 Journal of Consulting Psychology, 23: 285-299.
5. Decker, S. L.; Allen, R. and Choca, J. P. (2006). Construct validity of the Bender- Gestalt II: comparison with Wechsler Intelligence Scale for Children- III. Percept. Mot Skills., 102 (1):133-41.
6. Donders, J.; Tulsky, D. S. And Zhu, J. (1997). Criterion validity of New WAIS-III subtest scores after traumatic brain injury. Journal of International Neuro Science (JINS), 7: 892-898.
7. Donders, J.; Tulsky, D. S. And Zhu, J. (2001). Criterion validity of New WAIS-III subtest scores after traumatic brain injury. Journal of International Neuro Science (JINS), 7: 892-898.
8. JS: Kaplan, E. and Fein, D. (2003). Digit Symbol-Incidental Learning in the WAIS-III: Construct Validity and Clinical Significance. The Clinical Neuropsychologist, 17 (2): 182-194.
9. Kames, F. A; Hagen, J. V.. and Carroll, J. L. (1994). Correlation between the WISC-R and Physical Fitness Scores of Intellectually Gifted Youth. Report Review, 7 (2): 124-126.
10. Karnes, F. A. and Brown, K. E. (1980). Sex Differences in the WISC-R Scores of Gifted Students. Psychology in the Schools, 17 (3): 361-363.
11. Kaufman, A. S. (1975). Factor Analysis of the WISC-R at 11 Age Levels Between 6 1/2 and 16 1/2 Years. Journal of Consulting and Clinical Psychology, 43 (2): 135-147.VI
12. Gunter, CM,; Sapp SG, and Green AC. (1995). Comparison of scores on WISC-III and WISC-R of urban learning disabled students. Psychological Report. 77(2):473-4.
13. Hishinuma, E. S. and Yamakawa, R. (1993). Construct and criterion-related validity of the WISC-III for exceptional students and those who are "at risk" Journal of Psychoeducational Assessment, Monograph Series: Advances in Psychoeducational Assessment, WISC-III, 94-104.
14. Hubble, L. M. and Groff, M. G. (1982). WISC-R Verbal Performance IQ Discrepancies among Quay-Classified Adolescent Male Delinquents. Journal of Youth and Adolescence, 11 (6): 502-508.
15. Brown, L.; Sherbenou, R. J. and Johnsen, S. K. (1996). The test of Nonverbal intelligence-3 Edition. Austin, TX: Pro-Ed.
16. Campbell, S. L. (2006). WISC-IV and WISC-III Profiles in Children with ADHD Susan Dickerson Mayes. Journal of Attention Disorders, 9 (3): 486- 493.

17. Carvajal, H. H.; Parks, J. P.; Bays, J.; Kimberly, L. A. R.; Lujano, C. L.; Page, G. L. and Weaver, K. A. (1991). Relationship between scores on Wechsler preschool and primary scale of intelligence revised and Stanford-Binet IV. Psychological reports, 69: 23-26.
18. Clampit, M. K. and Silver, S. J. (1986). Four Tables for the Statistical Interpretation of Factor Scores on the Wechsler Intelligence Scale for Children- Revised (WISC-R). Journal of School Psychology, 24 (4): 395-404.
19. Wechsler, D. (1989). Manual for Wechsler preschool and primary scale of Intelligence, revised. San Antonio, TX: The Psychological Corporation.
20. Hechsler, D. (1991). Manual for Wechsler Intelligence Scale for Children. Third Edition. San Antonio, The Psychological Corporation.
21. Wechsler, D. (1992). Manual for Wechsler Intelligence Scale for Children. Third Edition, U. K. Edition. Sidcup, Kent: The Psychological Corporation
22. Weiss, L. G.; Prifitera, A. and Roid, G. H. (1993). The WISC-III and fairness of predicting achievement across ethnic and gender groups. Journal of Psychoeducational Assessment, monograph series. Advances in Psychological assessment: Wechsler Intelligence Scale for Children, Third Edition (pp. 35-42).
23. Wielkiewicz, R. Z. (1990). Interpreting low scores on the WISC-R third factor. It's more than distractibility, Psychological Assessment. A Journal of Consulting and Clinical Psychology, 2:91-97.
24. Wielkiewicz, R. M. and Daood, C. J. (1993). Correlations between WISC-R subtests and scales of the Personality Inventory for Children. Psychological. Report., 73 (3):1343-1346.
25. Wilkinson, S. C. (1993). WISC-R Profiles of Children with Superior Intellectual Ability. Gifted Child Quarterly, 37 (2): 84-91.
26. Thorndike, R. L.; Hagen, E. P. and Sattler, J. M. (1986 a). Guide for administering and scoring the Stanford-Binet Intelligence Scale. Fourth Edition Itasca, II: Riverside.
27. Thorndike, R. L.; Hagen, E. P. and Sattler, J. M. (1986 b). Technical manual. Stanford-Binet Intelligence Scale. Fourth Edition.
28. Walter, A.E. (1981-82) Reliability and concurrent validity of the Carolina Picture
29. Vocabulary Test: Dissertation: Duke Univ.
30. Wechsler, D. (1949). Manual for the Wechsler Intelligence Scale for children. New York: Psychological corporation.
31. Wechsler, D. (1981). Manual for Wechsler Intelligence Scale for Children Revised. San Antonio, TX: The Psychological Corporation.
32. Kaufman, A. S. (1976). Intelligence testing with the WISC-III. Wiley & Sons, New York.
33. Kaufman, A. S. (1994) Intelligence testing with the WISC-III. New York: Wiley. Kaufman, A. S. and Lichtenberger, E.O. (2000). Essentials of WISV-III and WPPSI-R assessment. New York: Wiley.
34. Kulshrestra, S. K. (1971). Cited in Indian Adaptation of Stanford Binet Intelligence Test for Indian children, Rupa, Psychological Corporation.
35. Zimmerman, I. L. and Woo-Sam, J. M. (1995). Review of the criterion-related