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WECHSLER SOCIAL FUNCTIONING SCORES
OF ADOLESCENTS
INSTITUTIONALIZED FOR DISORDERED CONDUCT

By

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Abstract

Previous research on populations with conduct problems has shown a tendency for these groups to obtain significantly higher Performance than Verbal Scale IQ's on the Wechsler Intelligence Scales. The purpose of the present study was to update previous research by using DSM III diagnosed patients and the revised Wechsler Scales. Furthermore, the present study analyzed Wechsler subtest scores as well as Scale IQ's. Scores for 330 adolescents admitted to a private psychiatric hospital were investigated. Eighty-four subjects, who were diagnosed Conduct Disorder, Oppositional Disorder, Antisocial Personality Disorder, Adjustment Disorder with disturbance of conduct, or Explosive Disorder, served as the experimental group. Adolescents with other diagnoses, exclusive of these, served as the clinical control group. Results show that male subjects in the experimental group obtained significantly lower mean scaled scores on the Comprehension subtest compared to the Picture Arrangement subtest and significantly lower Verbal than Performance Scale IQ's. Present findings suggest that these patients are especially weak in the knowledge or abilities measured by the Comprehension subtest.

Acknowledgements

Sincere appreciation is given to my family, colleagues, and faculty members who provided valued assistance in the preparation and completion of this thesis.

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Wechsler Social Functioning Scores
of Adolescents
Institutionalized for Disordered Conduct

The Wechsler Intelligence Scales (Wechsler, 1974 & 1981) have been used in past research on juvenile delinquents and other antisocial groups. A frequent finding has been the tendency for these groups to obtain a significantly higher Performance Scale IQ than Verbal Scale IQ (Kaiser, 1964; Lutey, 1977; Matarazzo, 1972; Wiens, Matarazzo & Gaver, 1959; Reisman 1973). In fact, it has been said that the most outstanding single feature on the delinquent's test profile is the systematically higher score on the Performance Scale over the Verbal Scale (Wechsler, 1958). For example, Camp (1966) studied children whose symptoms included acting-out and delinquency. She found that the boys obtained a higher Performance Scale IQ than Verbal Scale IQ significantly more often than expected. Although the girls' mean Performance IQ was also higher, the difference was not significant. Another study, (Hays et al, 1978) whose subjects consisted of juvenile murderers and status offenders, found that both groups obtained significantly lower Verbal scores than Performance scores ($p < .05$).

Wechsler score patterns among these diagnostic groups is an area in need of further research using current tests and diagnostic labels. Past studies in this area have generally employed terminology that is now outdated. With the development of the most recent diagnostic manual (DSM III, 1980) and the revision of the Wechsler tests (Wechsler, 1974 & 1981), many of the previously used terms, interpretations, and diagnoses have now become obsolete. Not only have some diagnostic terms changed, but the criteria needed to assign them have also changed. Many of the

categories have become more precise and restrictive. For example, a DSM II diagnosis of "Group delinquent reaction of childhood" would now be re-classified as "Conduct disorder, socialized" and would be further specified as "aggressive" or "nonaggressive" (DSM III, 1980). Patient classification may have been less clear in past studies. The syndromes studied in the present research are five diagnostic categories indicating an antisocial, aggressive, oppositional or defiant nature which include; Conduct disorder, Oppositional disorder, Antisocial personality disorder, Adjustment disorder with disturbance of conduct, and Explosive disorder.

While the findings of the Verbal-Performance IQ studies are useful, more research also needs to be done using the specific subtests that relate to societal standards and interpersonal interactions. For one thing, there may be greater utility in the findings of specific subtest performance than in the broad Verbal - Performance discrepancy due to the more specific information that it offers. The ability to determine a clinical diagnosis based on subtest scores has generally not been supported (Hale & Landino, 1981). Nonetheless, specific subtest scores may provide useful information in the treatment and prevention of childhood disorders (Sattler, 1982). Sattler also states that profile analysis of uneven skill development serves as an adjunct to other assessment strategies used by clinicians and educators (p. 199). Thus, a second purpose of the present study is to investigate subtest scores as well as Scale IQ's.

The two subtests investigated in the present study are Comprehension and Picture Arrangement. Both subtests are directly concerned with social interaction. Comprehension reflects knowledge of conventional standards of behavior, extensiveness of cultural opportunities, and

development of conscience or moral sense (Sattler, 1982, p. 177). The Picture Arrangement subtest may be viewed as a measure of planning ability requiring anticipation of initial acts or situations as well as the interpretation of these social situations (Sattler, 1982, p. 181).

Several authors (e.g., Sattler, 1982, p. 202) have suggested that scores on the two subtests may permit comparison of knowledge of social norms (Comprehension) with the ability to anticipate and plan in a social context (Picture Arrangement). High Picture Arrangement coupled with low Comprehension scores may indicate that the individual is sensitive to interpersonal nuances, but disregards social conventions (Blatt & Allison, 1968). On the other hand, an adequate Comprehension score coupled with a poor Picture Arrangement score shows an understanding of social situations in the abstract, but once involved in them the individual may be unable to decide what they mean or how to act (Palmer, 1983, p. 105).

Research in this area has been, thus far, rather limited, and the findings have been mixed. Wechsler (1958) reported that "adolescent sociopaths or delinquents" generally obtain Comprehension subtest scores lower than the mean and Picture Arrangement subtest scores higher than the mean subtest score. Krippner (1964) investigated these two subtests as measures of social competence. He found that WISC Comprehension scaled scores correlated significantly with the Vineland Social Age scores (Doll, 1953), however the WISC Picture Arrangement scores did not. Kaiser (1964), found significantly higher Performance than Verbal subtest scores and Picture Arrangement scores significantly higher than the mean subtest scores among a sample of institutionalized subjects diagnosed as "sociopathic types." However, a study using public school students

(Brannigan, 1976) found no significant correlation between scores on The Childrens Social Desirability Scale (Crandall, Crandall, & Katkovsky, 1965) and scores on the WISC Comprehension and Picture Arrangement subtests. Another study by Brannigan (1975) showed significant positive relationships between Comprehension scores and emotional and interpersonal maturity among a student sample; the results for the Picture Arrangement subtest were not significant.

Based on previous findings, we hypothesized that the subjects in the conduct disordered (CD) group, regardless of sex, would obtain a significantly higher scaled score on the Picture Arrangement subtest compared to the Comprehension subtest. We predicted that a clinical control group would not show this pattern. We also hypothesized that for the CD subjects, the Performance Scale IQ would be significantly higher than the Verbal Scale IQ. A third hypothesis concerning the CD subjects is that the Picture Arrangement and Comprehension subtest scores would be significant strengths or weaknesses, respectively, when compared to the mean scale score.

Method

Subjects

The subjects were 330 in-patients admitted to a private psychiatric hospital from January 1982 through May 1986 who have received a DSM III diagnosis and were administered either the WISC-R or WAIS-R. Four licensed diagnosticians were involved in supervision of the examiners. Patients with a DSM III primary diagnosis of either Conduct Disorder, Oppositional Disorder, Antisocial Personality Disorder, Adjustment Disorder with disturbance of conduct, or Explosive Disorder (possibly in addition to other diagnoses) served as the experimental (CD) group, and

those with all other diagnoses, exclusive of these, served as the clinical control group. Subjects ranged in age from 9-19, with a mean age of 15. Their confidentiality was upheld in accordance with the "Ethical Principles for Psychologists" (American Psychological Association, 1981). There were 84 subjects in the CD group (29 females and 55 males) and 246 subjects in the control group (121 females and 125 males). The CD group was comprised of 49% Conduct Disorder, 36% Oppositional Disorder, 6% Adjustment Disorder with disturbance of conduct, 6% Intermittent Explosive Disorder, 2% Antisocial Personality Disorder and 1% multiple diagnoses subjects. The diagnoses most often represented in the control group were Adjustment (21%), Dysthymic (19%), Identity (17%), Substance Abuse (12%), and Major Depressive (10%) disorders.

Materials

The Wechsler Adult Intelligence Scale - Revised (Wechsler, 1981) and the Wechsler Intelligence Scale for Children - Revised (Wechsler, 1974) were the tests administered for the intellectual evaluation. The researcher manually collected data from the patient files and recorded all pertinent subject information such as type of test, subtest scores, sex, age, Performance, Verbal and Full scale IQ, and clinical diagnosis from the psychological evaluation. As a scorer reliability check, independent examiners reviewed a random sample of protocols. An agreement percentage of 99% for the subtest scale scores was thereby determined.

Design and Analysis Procedure

A three factor repeated measures ANOVA (group x score x sex) was used in order to test the hypothesized differences between the scaled scores on the Picture Arrangement and Comprehension subtests and between the Performance and Verbal Scale IQ's for each sex. A 2x2

chi-square analysis was used to compare the percentage of CD subjects versus controls for whom Picture Arrangement or Comprehension are significant personal strengths or weaknesses.

Several methods have been used to determine whether specific subtest scores represent an individual's strengths or weaknesses on the Wechsler tests. In the Kaufman (1979) method for determining intellectual strengths or weaknesses, scaled scores must deviate from the mean scaled score by 3 points or more. The Kaufman method is ideal for research purposes because it does not require the use of statistical tables for each protocol. In the present study, we used the Kaufman method to determine the percentage of experimental vs. control group subjects for whom Comprehension and/or Picture Arrangement is a significant weakness or strength.

Results

Results of the ANOVA analysis showed significant three-way (group x score x sex) interactions for subtest, ($F(1) = 4.62$) and IQ, ($F(1) = 4.03$), $p < .05$. Tables 1 and 2 illustrate the subtest and IQ means for both groups.

Insert Tables 1 and 2 about here

Planned comparisons show that subjects in the experimental group obtained significantly higher scaled scores on the Picture Arrangement

Insert Figure 1 about here

subtest when compared to the Comprehension subtest, ($t(81) = 5.60$, $p < .05$). This was not the case in the control group where the Picture

Arrangement and Comprehension subtest scale scores were not significantly different, ($t(238) = 1.82, p > .05$). Furthermore, it was found that the experimental group's mean Comprehension score was also significantly lower than the control group's mean Comprehension score, ($t(136) = 3.11, p < .05$). Closer investigation of the experimental group yields somewhat different results when each sex is separately considered (see Figures 2 and 3). Females' Picture Arrangement scores and Comprehension

Insert Figure 2 about here

scores were not significantly different, ($t(28) = 1.55, p > .05$). However, the males evidenced a much greater and significant difference between their Picture Arrangement and lower Comprehension score, ($t(52) = 6.17, p < .05$). Within the control group, there remained no significant differences between the Picture Arrangement and Comprehension scores for females, ($t(116) = 6.17, p > .05$), or males, ($t(121) = 1.01, p > .05$). Additionally, the females in the experimental group did not differ significantly on their Comprehension scores compared to females in the control group, ($t(39) = .35, p > .05$). The experimental group females also did not differ from the control group females on their Picture Arrangement scores, ($t(38) = 1.50, p > .05$). Conversely, the male subjects in the experimental group obtained

Insert Figure 3 about here

significantly lower scores on the Comprehension subtest when compared to the males in the control group, ($t(111) = 4.37, p < .05$). There were no significant differences between these two groups of males on their mean

Picture Arrangement scores, ($t(97) = .48, p > .05$). In comparing females to

Insert Figure 4 about here

males within the same group, as seen in Figures 4 and 5, there is a significant difference on the mean Comprehension scores, but only in the experimental group. The females in the experimental group obtained significantly higher Comprehension scores than did the males in the same group, ($t(50) = 2.85, p < .05$). No other significant differences were found between sexes within the same group on either the Picture Arrangement

Insert Figure 5 about here

or Comprehension mean scores ($p > .05$).

The experimental group's Performance Scale IQ was significantly

Insert Figure 6 about here

higher than their Verbal Scale IQ, ($t(82) = 4.49, p < .05$). The control group's Performance and Verbal Scale IQ's were not significantly different, ($t(245) = 1.79, p > .05$). Furthermore, the experimental group's Verbal Scale IQ was significantly lower than the control group's Verbal Scale IQ, ($t(140) = 2.77, p < .05$). However, the two groups' Performance Scale IQ's were not significantly different, ($t(143) = .09, p > .05$).

Although the subjects in the experimental group, as a whole, obtained a significantly higher Performance than Verbal Scale IQ, results are somewhat different when males and females are analyzed separately. The

females' mean Performance Scale IQ was not significantly different from

Insert Figure 7 about here

their mean Verbal Scale IQ, ($t(28) = 1.53, p > .05$). Rather, it was the males in the experimental group whose Performance Scale IQ was

Insert Figure 8 about here

significantly higher than their own Verbal Scale IQ, ($t(53) = 4.39, p < .05$). Males in the control group did not show any significant differences between their Verbal and Performance Scale IQ's, ($t(124) = .50, p > .05$). The females in the experimental group did not differ significantly from the females in the control group in regards to their Verbal Scale IQ's, ($t(45) = 1.45, p > .05$), or their Performance Scale IQ's, ($t(41) = 1.57, p > .05$). The males in the experimental group did obtain significantly lower Verbal Scale IQ's when compared to the males in the control group, ($t(106) = 4.46, p < .05$). The males in the experimental and control groups did not significantly differ on their Performance Scale IQ's, ($t(110) = -1.31, p > .05$). When comparing females to males within the same group, it was found that the females in the experimental group obtained significantly higher Verbal Scale IQ's than the males, ($t(66) = 3.54, p < .05$). The opposite was true in the control group where females obtained significantly lower Verbal Scale IQ's than the males, ($t(240) = 2.07,$

Insert Figure 9 about here

$p < .05$). The females did not significantly differ from the males on their

Insert Figure 10 about here

Performance Scale IQ's for either the experimental, ($t(58) = 1.72, p > .05$), or the control group, ($t(239) = 1.11, p > .05$).

Results of the two-way chi-square analysis show that 12% of the subjects in the experimental group evidenced a significant weakness in their Comprehension subtest score when compared to their mean Verbal Scale IQ. This is significantly higher than the 5% found in the control group, $\chi^2(1, N = 321) = 5.3, p < .05$. Although 23% of the subjects in the experimental group evidenced a strength in their Picture Arrangement subtest score when compared to their mean Performance Scale IQ, this tendency was not significantly different from the 17% found in the control group, $\chi^2(1, N = 329) = 15.1, p > .05$. Thus, the subjects in the experimental group were more likely to show a weakness in their Comprehension subtest scores than were subjects in the control group.

Discussion

The present data support the hypothesis that adolescents who have been hospitalized and diagnosed as behavior problem children generally obtain lower Comprehension than Picture Arrangement subtest scores and lower Verbal than Performance Scale IQ's. However, it is the males, more so than the females, who are contributing to this effect. Furthermore, these children are more likely to evidence a significant weakness on the Comprehension subtest.

It might be supposed that possessing a knowledge of social norms and expectations (as measured by the Comprehension subtest) contributes to

the ability to behave appropriately, regardless of other psychiatric problems. This appears to be a key distinction between these groups. The behavior problem males appear to have adequate social planning abilities and are sensitive to interpersonal cues but tend to be unaware of social norms. Results suggest that females are being diagnosed with disordered conduct not because of their lack of social norms awareness. One explanation might be that females face a lower threshold of tolerance before society labels them as behavior problem children. Furthermore, they may not necessarily apply this knowledge to their behaviors. This is a question deserving further investigation. In addition, many of the adolescents in the conduct disordered group were from broken or group homes, detention centers or neglected environments, suggesting a need for research on environmental factors that might encourage a vigilance for interpersonal cues (Picture Arrangement) and a lack of internalized values and norms (Comprehension). Previous research suggests that Comprehension measures social maturity and competence (Brannigan, 1975; Krippner, 1964). This could help explain why it is Comprehension, rather than Picture Arrangement, that distinguishes the experimental and control groups in the present study. It has been supposed (Kaufman, 1979) that both the Comprehension and Picture Arrangement subtests are subject to the influence of cultural opportunities at home, but the Comprehension subtest is also related to the development of a conscience or moral sense. The current data support that observation.

Results also support the hypothesis that conduct disordered adolescents diagnosed with DSM III syndromes tend to obtain a significantly higher Performance than Verbal Scale IQ, as seen in previous research using defunct terminology. One previous study showed this

pattern for female subjects (Reisman, 1973); others, including the present research, have confirmed it for males only (Kaiser, 1964). Camp (1966), supported this pattern for both sexes but discovered it to be stronger among boys.

In conclusion, the findings of the present study may not necessarily generalize to all psychiatric settings. However, the use of current testing instruments and diagnostic criteria in researching these populations are a needed contribution. As diagnostic manuals and tests are updated and revised, so too should the research be replicated.

References

- American Psychiatric Association. (1980). Diagnostic and Statistical manual of mental disorders. (3rd ed.). Washington, DC: Author.
- American Psychological Association. (1981). Ethical principles of psychologists (revised). American Psychologist, 36, 633-638.
- Blatt, S.J., & Allison, J. The intelligence test in personality assessment. In A.I. Rabin (Ed.), Projective techniques in personality assessment. New York: Springer, 1968. Pp.421-460.
- Brannigan, G.G. Wechsler Picture Arrangement and Comprehension scores as measures of social maturity. Journal of Psychology, 1975, 89, 133-135.
- Brannigan, G.G. Children's social desirability response tendencies and Wechsler Comprehension and Picture Arrangement performance. Psychological Reports, 1976, 38, 1194.
- Camp, B.W. WISC performance in acting-out and delinquent children with and without EEG abnormality. Journal of Consulting Psychology, 1966, 30, 350-353.
- Crandall, V.C., Crandall, V.J., & Katkovsky, W.A. A children's social desirability questionnaire. Journal of Consulting Psychology, 1965, 29, 27-36.
- Doll, E.A. Vineland Social Maturity Scale. The measurement of social competence. Minneapolis: Educational Publishers, 1953.
- Hale, R.L. & Landino, S.A. (1981). Utility of WISC-R subtest analysis in discriminating among groups of conduct problem, withdrawn, mixed and nonproblem boys. Journal of Consulting and Clinical Psychology, 1981, 49, 91-95.

- Hays, R.J., Solway, K.S., Schreiner, D. Intellectual characteristics of juvenile murderers versus status offenders. Psychological Reports, 1978, 43, 80-82.
- Kaiser, M.D. The Wechsler Intelligence Scale for Children as an instrument for diagnosing sociopathy (Doctoral Dissertation, Florida State University). Ann Arbor, Mich.: University Microfilms, 1964. No. 64-10571.
- Kaufman, A.S. Intelligent testing with the WISC-R. New York: Wiley Interscience, 1979.
- Krippner, S. WISC Comprehension and Picture Arrangement subtests as measures of social competence. Journal of Clinical Psychology, 1964, 20, 366-367.
- Lutey, C.L. Individual intelligence testing (2nd ed.). Greeley, Colo: Carol L. Lutey Publishing, 1977.
- Matarazzo, J.D. Wechsler's measurement and appraisal of adult intelligence (5th ed.). Baltimore, Md.: Williams & Wilkins, 1972.
- Palmer, J.O. The psychological assessment of children. New York: Wiley, 1983.
- Reisman, M.N. WISC Verbal and Performance IQ differences in delinquents. Journal of Community Psychology, 1973, 1, 200.
- Sattler, J.M. Assessment of children's intelligence and special abilities. Boston: Allyn & Bacon, 1982.
- Wechsler, D. The measurement and appraisal of adult intelligence. Baltimore: Williams & Wilkins, 1958.
- Wechsler, D. Manual for the Wechsler Intelligence Scale for Children - Revised. New York: Psychological Corporation, 1974.
- Wechsler, D. Manual for the Wechsler Adult Intelligence Scale - Revised. New York: Psychological Corporation, 1981.

Weins, A.N., Matarazzo, J.D., & Gaver, K.D. Performance and Verbal IQ in a group of sociopaths. Journal of Clinical Psychology, 1959, 15, 191-193.

Footnote

The comparability of the WAIS-R and WISC-R was shown in a study of 16 year olds who were administered these tests in counterbalanced order (Wechsler, 1981). Results suggest that the WAIS-R and WISC-R yield equivalent IQ's and that the mean Scale IQ's are remarkably similar.

Table 1

Summary of Subtest Means by Sex for both Groups

	FEMALES	
	Comprehension	Picture Arrangement
Experimental	9.6	10.6
Control	9.3	9.7

	MALES	
	Comprehension	Picture Arrangement
Experimental	7.5	10.1
Control	9.6	9.9

Table 2

Summary of Scale IQ Means by Sex for both Groups

	FEMALES	
	Verbal	Performance
Experimental	99.2	102.4
Control	95.5	97.6
MALES		
	Verbal	Performance
Experimental	88.5	96.5
Control	99.2	99.8

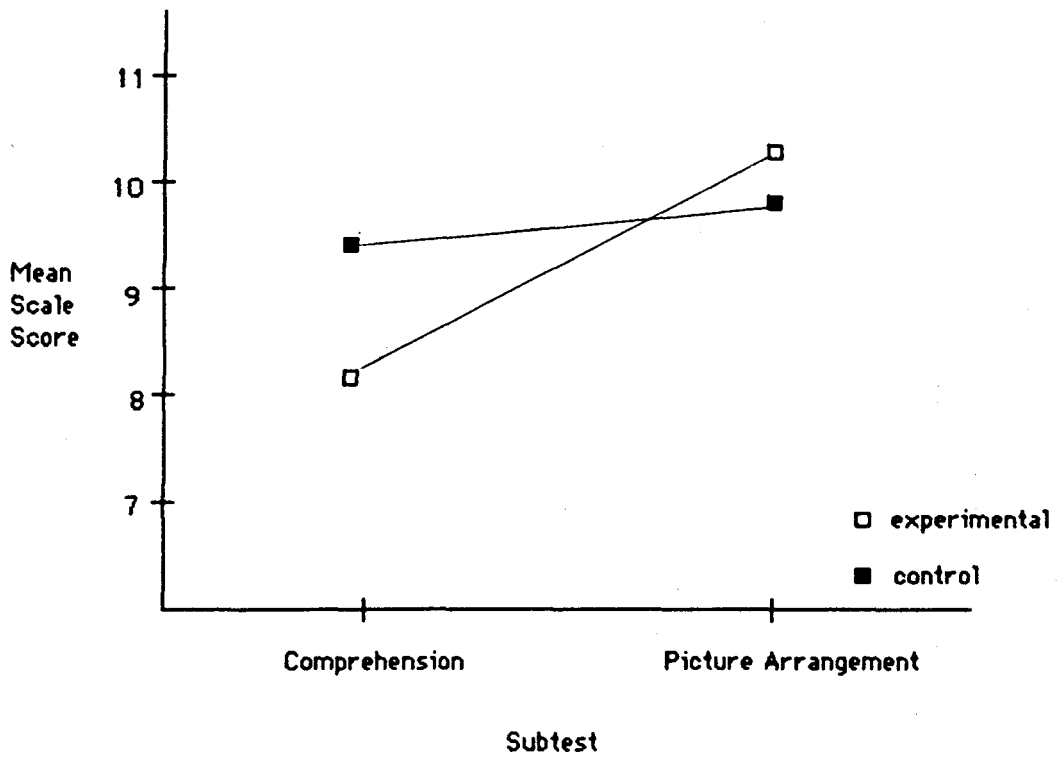


Figure 1. Comparison between subtest scaled scores for the experimental and control group.

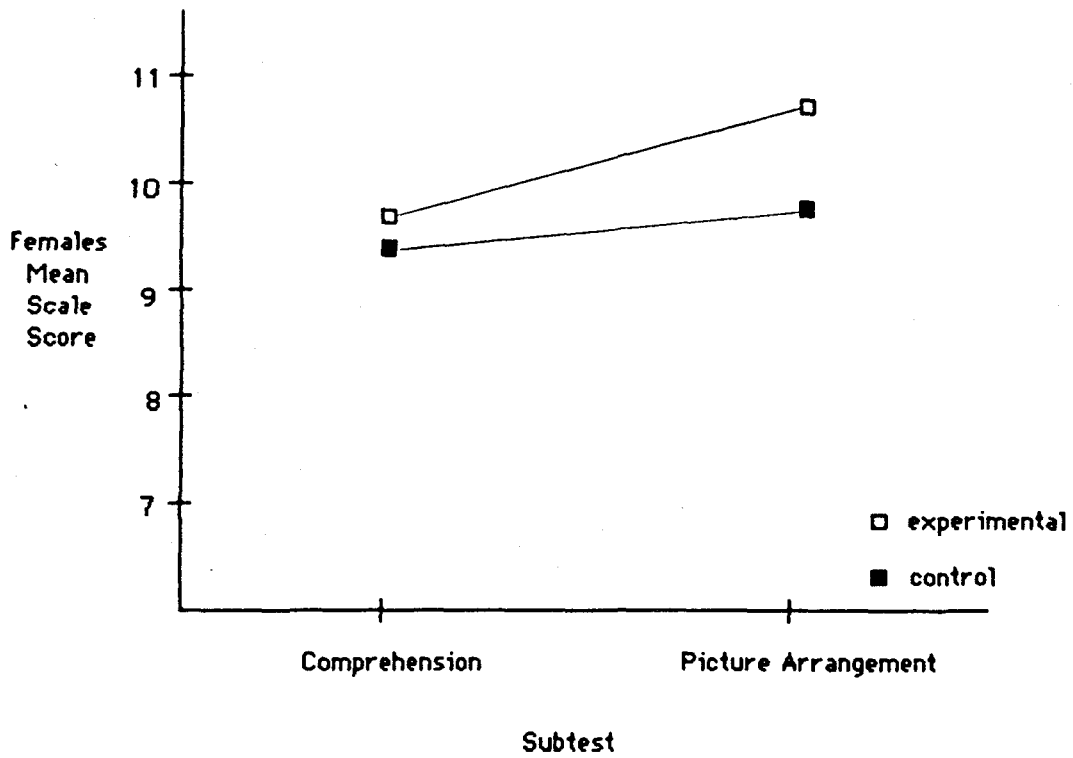


Figure 2. Comparison between subtest scaled scores for females in the experimental or control group.

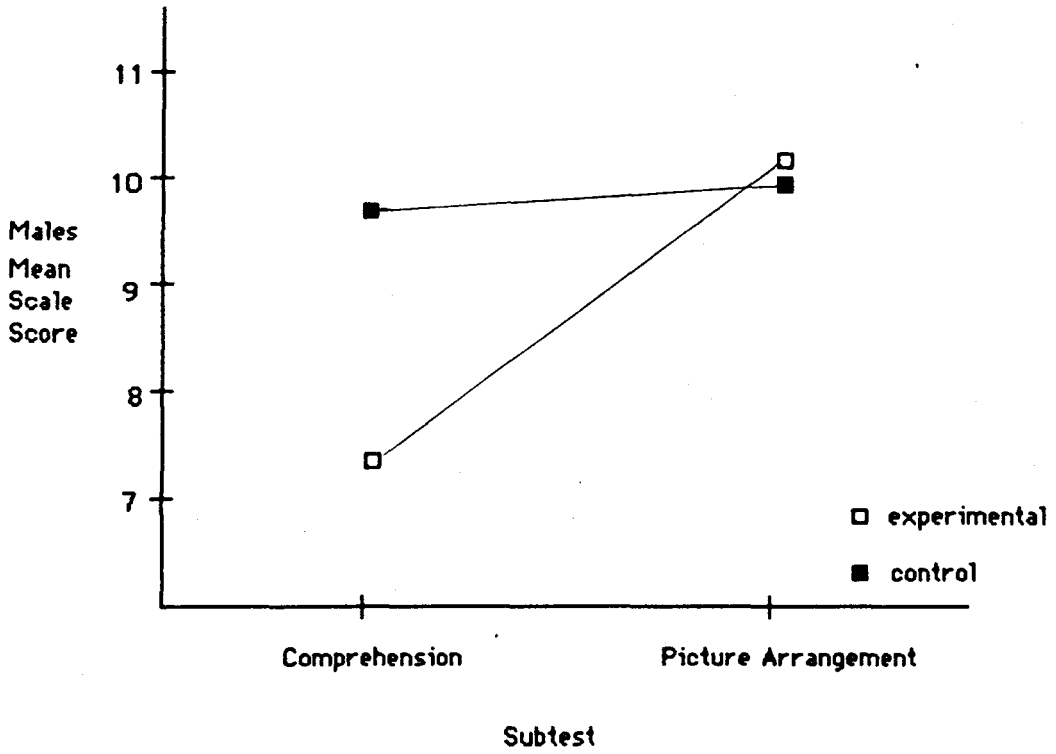


Figure 3. Comparison between subtest scaled scores for males in the experimental or control group.

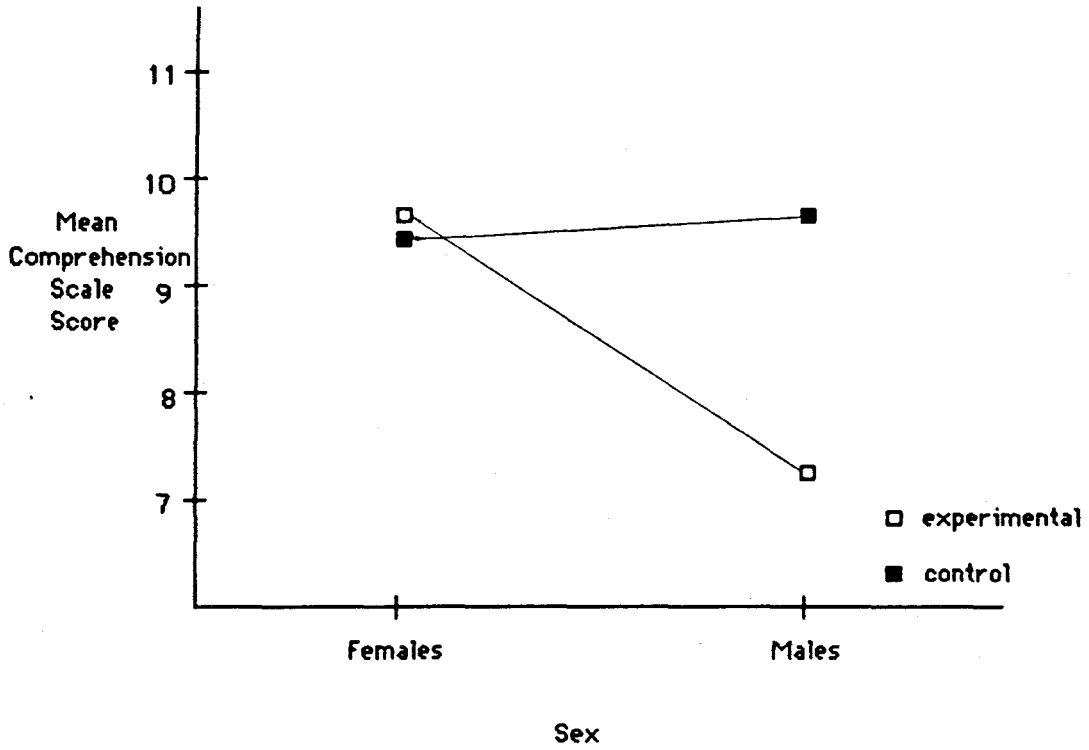


Figure 4. Comparison between females and males Comprehension subtest scaled scores.

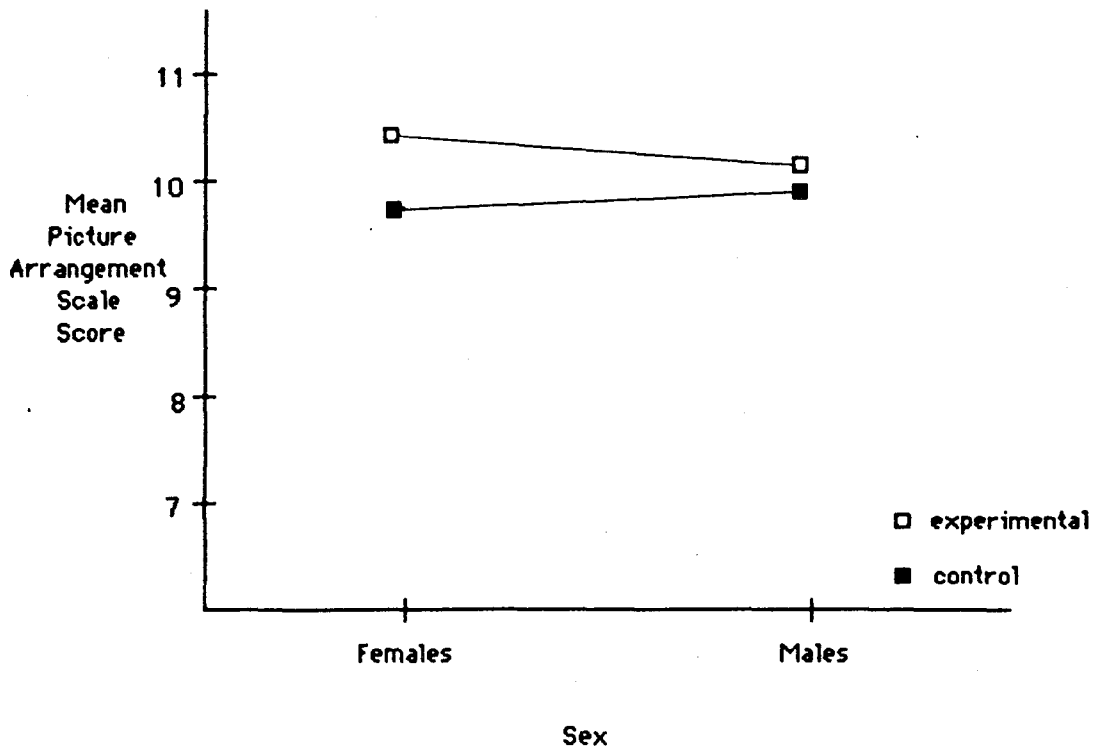


Figure 5. Comparison between females and males
Picture Arrangement subtest scaled scores.

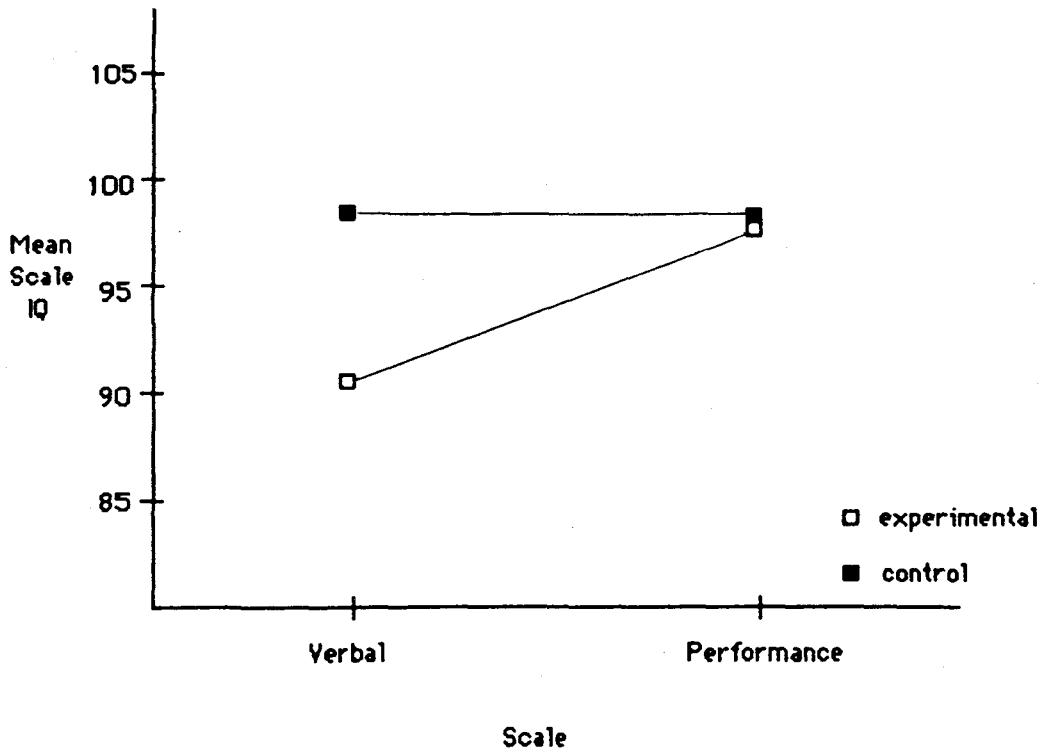


Figure 6. Comparison between Verbal and Performance Scale IQ's for the experimental and control group.

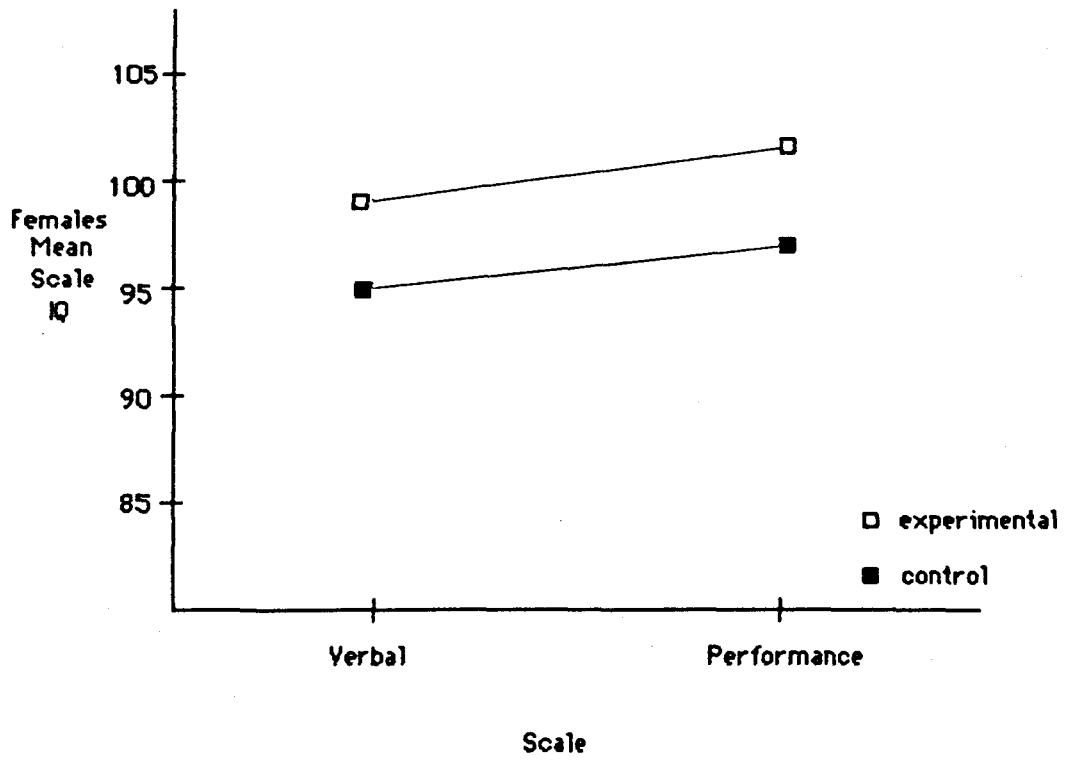


Figure 7. Comparison between females Verbal and Performance Scale IQ's for the experimental or control group.

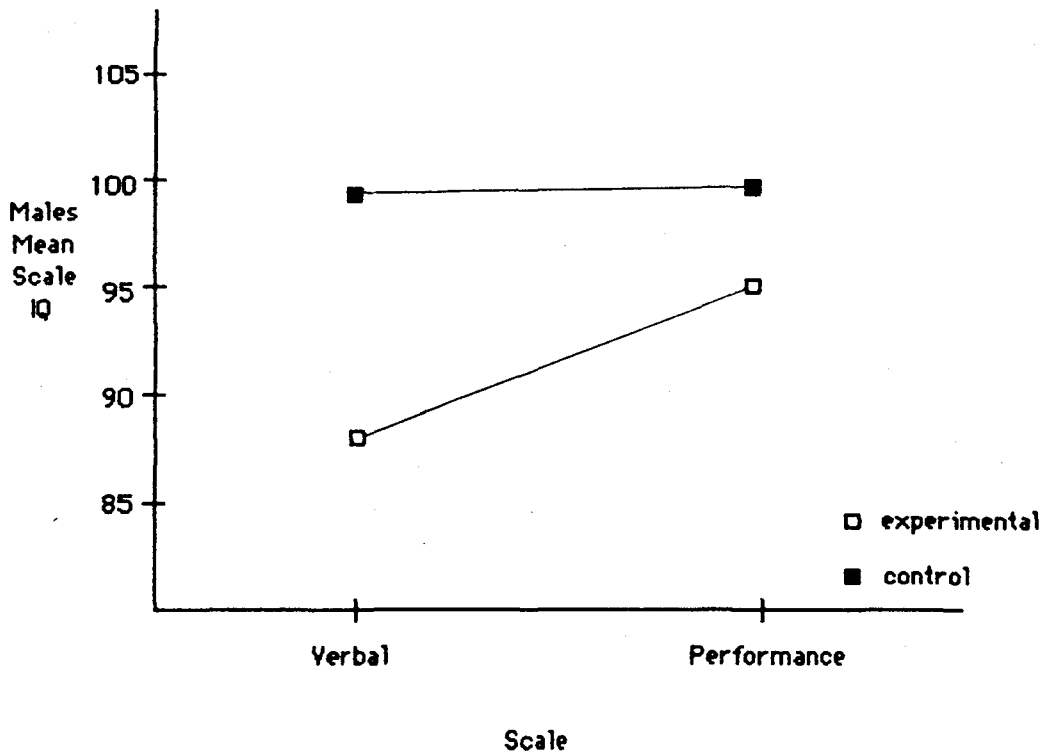


Figure 8. Comparison between males Verbal and Performance Scale IQ's for the experimental or control group.

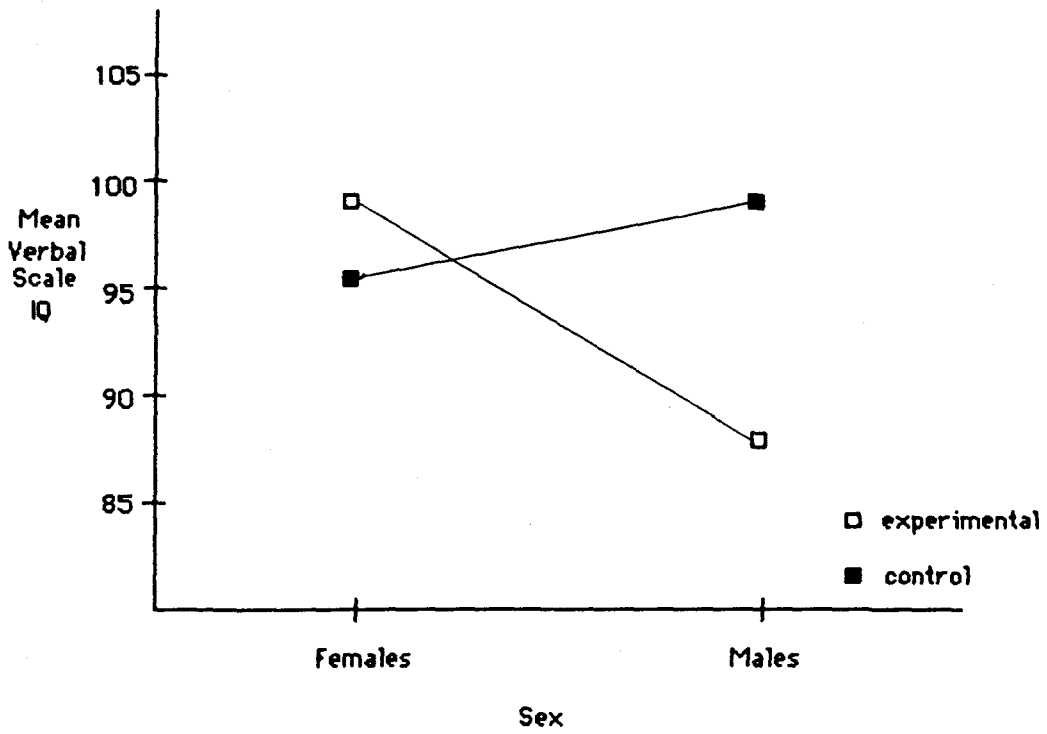


Figure 9. Comparison between females and males Verbal Scale IQ's.

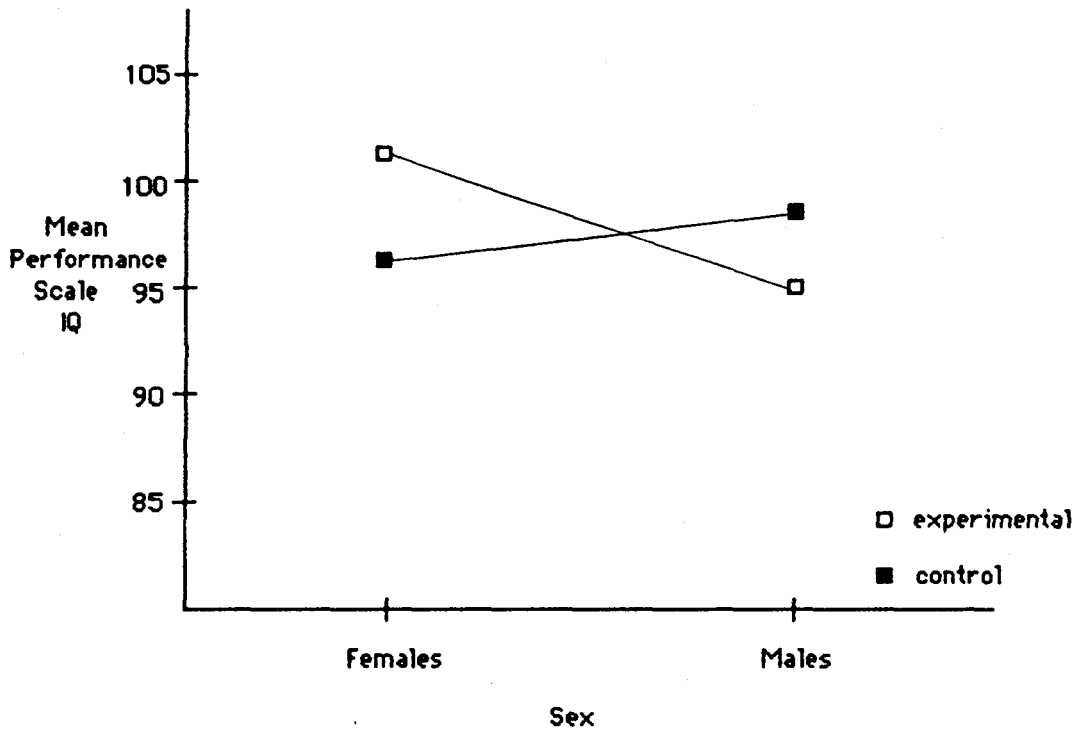


Figure 10. Comparison between males and females Performance Scale IQ's.

Vita

Carole A. Anonick was born in Buffalo, N.Y. on October 9, 1958. After graduating from the State University of New York at Fredonia in 1980 with a B.A. in Psychology, she relocated to Richmond, Virginia. There, she entered graduate school at the University of Richmond in pursuit of a Master of Arts degree. She is currently employed as a Psychology Assistant, performing psychological, intellectual and educational evaluations and participating in treatment planning for patients in a private hospital.