

**A CORRELATION OF BARRON'S EGO STRENGTH  
SCALE AND THE BENDER-GESTALT TEST**



**JANE ELLEN SHOAFF**



### Abstract

The purpose of the present study was to ascertain the degree of relationship between the Barron Ego Strength Scale and the Bender-Gestalt Test employing a sample of college students from an Adolescent Psychology class. The subjects participating were 40 white females, 9 white males, and 11 black females.

A comparison of the Barron and Bender measures for the 40 white females resulted in a correlation coefficient of  $-.32$ , which was significant at the  $.05$  level. A comparison of the Barron and Bender scores for the total group of 60 resulted in a correlation coefficient of  $-.26$ , which attained significance at the  $.05$  level.

No sex differences were found on the Barron or on the Bender. There was, however, a racial difference found on the Bender. Both white males and white females differed significantly at the  $.01$  level from black females.

A CORRELATION OF BARRON'S EGO STRENGTH  
SCALE AND THE BENDER-GESTALT TEST

---

An Abstract  
Presented to  
the Graduate Council of  
Austin Peay State University

---

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
in Psychology

---

by  
Jane Ellen Shoaff

July 1978

A CORRELATION OF BARRON'S EGO STRENGTH  
SCALE AND THE BENDER-GESTALT TEST

---

A Thesis

Presented to

the Graduate Council of  
Austin Peay State University

---

In Partial Fulfillment  
of the Requirements for the Degree  
Masters of Arts  
in Psychology

---

by

Jane Ellen Shoaff

July 1978

To the Graduate Council:

I am submitting herewith a Thesis written by Jane Ellen Shoaff entitled "A Correlation of Barron's Ego Strength Scale and the Bender Gestalt Test." I recommend that it be accepted in partial fulfillment of the requirement for the degree of Master of Arts, with a major in Psychology.

John D. Martin  
Major Professor

We have read this thesis and  
recommend its acceptance:

Garland E. Blair  
Minor Professor  
or  
Second Committee Member

Charles R. Grah  
Third Committee Member

Accepted for the  
Graduate Council:

William H. Ellis  
Dean of the Graduate School

## ACKNOWLEDGEMENTS

Sincere appreciation is extended to Dr. John D. Martin, Professor of Psychology, Austin Peay State University, who suggested the problem and aided the author during the course of study; to Dr. Garland Blair for his assistance with the statistics and computer; and to Dr. Charles Grah for his comments.

Gratitude is also extended to the students who volunteered to serve as subjects in this study.

I wish to express special appreciation to my mother for her support, patience, and understanding.

# TABLE OF CONTENTS

	Page
LIST OF TABLES . . . . .	vii
Chapter	
I. INTRODUCTION . . . . .	1
II. METHOD . . . . .	6
The Sample . . . . .	6
Description of the Instruments . . . . .	6
Administration and Scoring . . . . .	7
III. RESULTS . . . . .	9
IV. DISCUSSION . . . . .	12
REFERENCES . . . . .	15
APPENDIX . . . . .	17

# LIST OF TABLES

Table

Page

1. The Means, Standard Deviations and Correlations between Age and Bender-Gestalt Scores, Age and Barron's Ego Strength Scores, and Bender-Gestalt Scores and Barron's Ego Strength Scores for the White Female Subjects . . . . . 10
2. The Means, Standard Deviations and Correlations between Age and Bender-Gestalt Scores, Age and Barron's Ego Strength Scores, and Bender-Gestalt Scores and Barron's Ego Strength Scores for the Total Population . . . . . 11



## CHAPTER I

### INTRODUCTION

Ego strength has been defined in different ways by different people. There appears, however, to be a general understanding among psychologists and psychiatrists that what is meant by ego strength is the ability to adapt to the environment effectively. Moreover, it is patently presupposed by psychologists and psychiatrists that the relation of the total ego to its environment, its strengths and weaknesses, should be considered in terms of adaptation. By way of elaboration and elucidation, ego strength can be conceived to be a general capacity for personality integration.

Barron (1950) developed his Ego Strength Scale to predict the favorable response of neurotic patients to psychotherapy. He believed, however, that consideration of the scale content and its correlates suggested a comprehensive psychological interpretation. Such an interpretation made it useful as an assessment device in any situation in which some estimate of adaptability and personal resourcefulness is desired. The scale appears to measure various aspects of effective personal functioning which are usually considered descriptive of ego strength (Barron, 1953a).

In constructing the Ego Strength Scale, Barron selected 68 items from the Minnesota Multiphasic Personality Inventory (MMPI) on the basis of their significant correlations with rated improvement in neurotic patients who had been treated for six months in a psychiatric clinic. Using a sample of 33, two skilled judges evaluated the patients for degree of improvement. The correlation was .91, which was significant well beyond the .01 level. The odd-even reliability of the scale in a clinic population of 126 patients was estimated to be .76. Test-retest reliability after three months in a sample of 30 cases was .72.

When the Ego Strength Scale was administered to graduate students at the Institute of Personality Assessment and Research, the students were described by staff members by filling out an adjective checklist. The ten highest scorers and the ten lowest scorers on the psychotherapy prediction scale were then compared by item-analyzing the composite adjective list for the two groups. The high scorers gave an impression of greater resourcefulness, vitality, and self-direction. The psychotherapy prediction scale correlated significantly with vitality (.38), drive (.41), self-confidence (.24), poise (.24), and breadth of interest (.25). Significant negative correlations were submissiveness (-.40), effeminacy (-.34), and intraceptiveness (-.34).

Barron's Ego Strength Scale is also related to tolerance and lack of ethnic prejudice. In a standardization sample, it correlated  $-.47$  with the ethnocentrism (E) scale of Form 60 of the University of California Public Opinion Questionnaire. In a sample of graduate students, it correlated  $-.35$  with the prejudice scale of the MMPI, and  $-.46$  with the E scale. These findings, also, support the theory that what is being measured is the general excellence of ego functioning (Barron, 1953a).

In an attempt to ascertain the Ego Strength Scale's predictive potential, Barron (1953b) conducted a cross-validation study on three new samples. Fifty-three patients, who had been studied earlier and later showed patterns of improvement, were given a shortened form of the MMPI, and the results correlated  $.42$  with the terminal rating.

A second group of 52 patients from Langley Porter Clinic was related by therapists as examples of exceptional improvement, moderate improvement and complete lack of improvement. The degree of relationship between the Ego Strength Scale scores and the rating by therapists was  $.54$ .

A third group of 46 patients from a general hospital was rated by therapists on a nine-point scale of improvement. The correlation with the pretherapy prognosis scale (Ego Strength Scale) scores was  $.38$ .



Inasmuch as the concepts of Ego Strength and Dogmatism comprise antagonistic characteristics, an inverse relationship between them should exist. Indeed, Ayers (1978) compared the scores on the Barron's Ego Strength Scale to the scores on Rokeach's Dogmatism Scale and obtained a correlation of  $-.42$ , which was significant beyond the  $.01$  level.

The Bender-Gestalt test consists of nine relatively simple geometric designs, each of which is presented to a subject for him to copy on a sheet of paper. The results of Bender's studies with the nine designs are presented in her monograph, *A Visual Motor Gestalt Test and Its Clinical Use* (1938). Subsequent to the publication of her monograph, Bender's test has come to be well-known and widely used as a clinical instrument. It has been used to estimate intelligence, maturation, psychological disturbances, and brain damage.

The most widely accepted and used Bender-Gestalt scoring system for adults is that of Pascal and Suttell (1951). It was designed for adults 15 to 50 years old, of normal intelligence, who have maturity and capacity to perceive and to reproduce the Bender figures without error. Pascal and Suttell (1951) view the performance of a subject on the Bender-Gestalt as a reflection of his attitude toward reality. They see the ability to reproduce the



Bender designs as a function of the individual's integrative capacity or ego strength.

Koppitz (1963) and Pascal and Suttell (1951) cite validity studies relative to the Bender and maturation, intelligence, psychological disturbances, and brain damage. However, a perusal of the pertinent literature did not disclose any validity studies relative to the Bender-Gestalt and ego strength. Therefore, the present project was prompted by a desire to determine the degree of relationship between Barron's Ego Strength Scale and the Bender-Gestalt. Whereas a high score on the Barron's Ego Strength Scale is indicative of emotional health or ego strength, and a high score on the Bender-Gestalt is indicative of pathology, it was hypothesized that a significant but inverse relationship would be obtained.

## CHAPTER II

### METHOD

#### The Sample

The sample used in the present study was undergraduate students enrolled in Adolescent Psychology during the Spring and Summer Quarters, 1978, at Austin Peay State University, Clarksville, Tennessee. All participants volunteered to serve as subjects and received extra points in the class for their participation in this project. The sample was composed of 60 students, of which 9 were males and 51 were females. The subjects were freshmen, sophomores, juniors, seniors, and post-masters. The ages ranged from 18 to 47, with a mean age of 24.

#### Description of the Instruments

The Ego Strength Scale was devised by Frank Barron (1950). It was derived from the MMPI in that 68 items were selected from the test on the basis of significant correlation with rated improvement of 33 neurotic patients. The Ego Strength Scale consists, therefore, of 68 selected statements that are judged to be true or false descriptions of the subjects. A copy of the Ego Strength Scale has been placed in the Appendix. There was no time limit on the Ego Strength Scale which could be administered individually or to a group.

The geometric designs that comprise the Bender-Gestalt Test were originally used by Wertheimer in his studies of visual perception. Dr. Lauretta Bender (1938) selected certain of the designs for inclusion in her test. The Bender-Gestalt has been a widely used clinical test for many years. As stated perviously, it has been employed to estimate maturation, intelligence, psychological disturbances, and brain damage (Pascal & Suttell, 1951). Moreover, Pascal and Suttell suggest that the Bender can be used as a measure of ego strength.

#### Administration and Scoring

The Ego Strength Scale was administered to the subjects as a group. The time required for testing was approximately 15 to 20 minutes. The Ego Strength Scale was administered first to all subjects. The Bender-Gestalt Test was then administered individually with an average testing time of 8 minutes. Both tests were administered by the present researcher.

The Ego Strength Scale was scored according to the directions obtained from Basic Readings on the MMIP in Psychology and Medicine (Welsh & Dahlstrom, 1963). The raw score was obtained by adding the number of correct responses.

The Bender-Gestalt Tests were scored according to the directions given in The Bender-Gestalt Test (Pascal & Suttell, 1951). With the exception of design A which is

not scored, each design is inspected to determine whether scorable deviations occur. The deviations to be scored are given on the score sheet with their assigned weights. Scores are accumulated by designs, plus the scores which are related to the test as a whole (configuration scores). Then a final raw score was obtained by adding the above scores.

The scoring ranged from 50 (high ego strength) to 107 (low ego strength). For scoring purposes, the individual raw scores were converted into a Z score for subjects with one year or more of college. The conversion tables were provided by Pascal and Suttell (1951).



## CHAPTER III

### RESULTS

The Pearson product-moment technique was employed to determine the correlation coefficients. The scores on the Barron's Ego Strength Scale were correlated with the scores on the Bender-Gestalt Test. Additional correlation coefficients were also determined.

A group of 40 white females was extracted from the total group of subjects for comparison purposes. The scores derived from the Barron and the Bender eventuated in a correlation coefficient of  $-.32$ , which attained significance beyond the  $.05$  level. With the same subjects, correlations between subjects' ages and Bender scores, and subjects' ages and Barron scores did not attain statistical significance. Table 1 contains the means, standard deviations, and coefficients.

Table 1

The Means, Standard Deviations and Correlations between Age and Bender-Gestalt Scores, Age and Barron's Ego Strength Scores, and Bender-Gestalt Scores and Barron's Ego Strength Scores for the White Female Subjects

Item	M	SD	1	2	3
1. Age	22.925	6.886	—	.150	.208
2. Bender	71.75	15.417	—	—	-.319*
3. Barron	40.875	5.635	—	—	—

\*Significant beyond the .05 level

Utilizing the total sample of 9 males and 51 females, correlation coefficients were computed between subjects' ages and Barron scores, and between subjects' ages and Bender scores. The resulting coefficient of .45 between the subjects' ages and Barron scores was significant beyond the .01 level. The coefficient obtained between the subjects' ages and Bender scores was not significant.

For the total sample, again, the coefficient computed between the Barron scores and Bender scores was -.26, which was significant beyond the .05 level. Table 2 shows the means, standard deviations, and coefficients.

Table 2

The Means, Standard Deviations and Correlations between Age and Bender-Gestalt Scores, Age and Barron's Ego Strength Scores, and Bender-Gestalt Scores and Barron's Ego Strength Scores for the Total Population

Item	M	SD	1	2	3
1. Age	23.816	7.649	—	.002	.446*
2. Bender	76.266	22.465	—	—	-.255**
3. Barron	41.683	6.146	—	—	—

\*Significant beyond the .01 level

\*\*Significant beyond the .05 level

## CHAPTER IV

### DISCUSSION

The significant correlation obtained on the group of 40 white females suggests that the Barron's Ego Strength Scale and the Bender-Gestalt Test are measuring, to some extent, the same construct. Based upon previous validity studies by Barron, it was presupposed that his Ego Strength Scale was, indeed, a measure of ego strength. Assuming that presupposition to be valid, given the significant correlation coefficient obtained in the present project, the Bender too should be, among other things, a measure of ego strength. Be that as it may, the hypothesis was confirmed.

The resulting inverse relationship was a function of the fact that a high score on the Barron Ego Strength Scale was indicative of mental health and that a high score on the Bender-Gestalt was indicative of pathology. It was deemed desirable to determine the degree of relationship, if any, between the subjects' ages and Bender scores, and subjects' ages and Barron scores. Between those variables statistical significance was not obtained.

An analysis of the data derived from the entire group of subjects eventuated in a significant correlation of .45 between the subjects' ages and Barron scores. If, within limits, ego strength increases as a function of age,



then a positive relationship should exist between those variables. Therefore, the significant correlation appeared not as an enigma but as theoretically explicable.

The lack of relationship between the subjects' ages and Bender scores was anticipated in that Pascal (1950) reported the same phenomenon. Pascal stated that within limits, such as between 15 and 50 years of age, there seems to be little or no effect of age on the Bender.

A further analysis of the data gathered from the entire sample resulted in a significant correlation of  $-.26$  between the Barron scores and Bender scores, thus confirming the hypothesis that a significant relationship exists between those variables. It should be noted that this group of subjects included nine males in addition to 11 black females and 40 white females.

In that the white female group yielded a significant correlation coefficient between the Barron scores and the Bender scores, and the total group, including males, also resulted in a significant correlation on the same measures, it did not appear that a sex difference existed. At least for the Bender-Gestalt Test, Pascal and Suttell (1951) concluded, as a result of their research, that there seems to be little basis for the expectation of a sex difference. The present research also indicates that there are no sex differences on the Barron. It was determined from the data derived from the present study that there was a racial

difference on the Bender. Both white males and white females differed significantly from black females. The significance level was .01.

It was not expected that a high correlation would eventuate between the Barron and the Bender by virtue of the fact that the tests are quite dissimilar. The Barron is essentially a cognitive test and the Bender is essentially a perceptual-motor test.

## REFERENCES

- Ayers, J. A. A correlation of Barron's Ego Strength Scale and Rokeach's Dogmatism Scale. Educational and Psychological Measurement, 1978, 38, 583-586.
- Barron, F. Psychotherapy as a special case of personal interaction, prediction of its course. Ph.D. dissertation. University of California. Berkley, 1950.
- Barron, F. Some test correlates of response to therapy. Journal of Consulting Psychology, 1953, 17, 235-241. (a)
- Barron, F. An ego-strength scale which predicts response to psychotherapy. Journal of Consulting Psychology, 1953, 17, 227-233. (b)
- Bender, L. A visual motor Gestalt test and its clinical use. American Journal of Orthopsychiatry, 1938, 3 176.
- Koppitz, E. The Bender-Gestalt Test for young children. New York: Grune & Stratton, 1953.
- Pascal, G. Quantification of the Bender-Gestalt test: A preliminary report. American Journal of Orthopsychiatry, 1950, 20, 418-423.
- Pascal, G., & Suttell, B. The Bender-Gestalt Test. New York: Grune & Stratton, 1951.

Welsh, G., & Dalstrom, W. Basic readings on the MMPI in psychology and medicine. Minneapolis: University of Minnesota Press, 1963.



## APPENDIX

## APPENDIX A

### BARRON'S EGO STRENGTH SCALE

This inventory consists of numbered statements. Read each statement and decide whether it is true as applied to you or false as applied to you.

Mark each statement in the left margin. If a statement is TRUE, as applied to you, put a T before the statement. If a statement is FALSE or NOT USUALLY TRUE, as applied to you, put an F before the statement. If a statement does not apply to you or if it is something that you don't know about, make no mark.

Remember to give YOUR OWN opinion of yourself. Do not leave any blank spaces if you can avoid it. Erase completely any answer you wish to change.

Remember, try to make some answer to every statement.

NOW OPEN THE BOOKLET AND GO AHEAD.

1. I have a good appetite.
2. I have diarrhea once a month or more.
3. At times I have fits of laughing and crying that I cannot control.
4. I find it hard to keep my mind on a task or job.
5. I have had very peculiar and strange experiences.
6. I have a cough most of the time.
7. I seldom worry about my health.
8. My sleep is fitful and disturbed.
9. When I am with people I am bothered by hearing very queer things.
10. I am in just as good physical health as most of my friends.
11. Everything is turning out just like the prophets of the Bible said it would.
12. Parts of my body often have feelings like burning, tingling, crawling, or like "going to sleep."
13. I am easily downed in an argument.
14. I do many things which I regret afterwards (I regret things more or more often than others seem to).
15. I go to church almost every week.
16. I have met problems so full of possibilities that I have been unable to make up my mind about them.
17. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.
18. I like collecting flowers or growing house plants.
19. I like to cook.
20. During the past few years I have been well most of the time.
21. I have never had a fainting spell.

22. When I get bored I like to stir up some excitement.
23. My hands have not become clumsy or awkward.
24. I feel weak all over much of the time.
25. I have had no difficulty in keeping my balance in walking.
26. I like to flirt.
27. I believe my sins are unpardonable.
28. I frequently find myself worrying about something.
29. I like science.
30. I like to talk about sex.
31. I get mad easily and then get over it soon.
32. I brood a great deal.
33. I dream frequently about things that are best kept to myself.
34. My way of doing things is apt to be misunderstood by others.
35. I have had blank spells in which my activities were interrupted and I did not know what was going on around me.
36. I can be friendly with people who do things which I consider wrong.
37. If I were an artist I would like to draw flowers.
38. When I leave home I do not worry about whether the door is locked and the windows closed.
39. At times I hear so well it bothers me.
40. Often I cross the street in order not to meet someone I see.
41. I have strange and peculiar thoughts.
42. Sometimes I enjoy hurting persons I love.
43. Sometimes some unimportant thought will run through my mind and bother me for days.



44. I am not afraid of fire.
45. I do not like to see women smoke.
46. When someone says silly or ignorant things about something I know about, I try to set them straight.
47. I feel unable to tell anyone all about myself.
48. My plans have frequently seemed so full of difficulties that I have had to give them up.
49. I would certainly enjoy beating a crook at his own game.
50. I have had some very unusual religious experiences.
51. One or more members of my family is very nervous.
52. I am attracted by members of the opposite sex.
53. The man who had most to do with me when I was a child (such as my father, stepfather, etc.) was very strict with me.
54. Christ performed miracles such as changing water into wine.
55. I pray several times every week.
56. I feel sympathetic towards people who tend to hang onto their griefs and troubles.
57. I am afraid of finding myself in a closet or small closed space.
58. Dirt frightens or disgusts me.
59. I think Lincoln was greater than Washington.
60. In my home we have always had the ordinary necessities (such as enough food, clothing, etc.).
61. I am made nervous by certain animals.
62. My skin seems to be unusually sensitive to touch.
63. I feel tired a good deal of the time.
64. I never attend a sexy show if I can avoid it.
65. If I were an artist I would like to draw children.

66. I sometimes feel that I am about to go to pieces.
67. I have often been frightened in the middle of the night.
68. I very much like horseback riding.