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THE RELATIONSHIP OF PERSONALITY TRAITS AS MEASURED BY THE BERNREUTER PERSONALITY INVENTORY TO SOME PHYSICAL TRAITS OF FRESHMEN COLLEGE WOMEN OF KANSAS STATE TEACHERS COLLEGE AT PITTSBURG, KANSAS

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Kansas State Teachers College

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THE RELATIONSHIP OF PERSONALITY TRAITS AS MEASURED BY THE
BERNREUTER PERSONALITY INVENTORY TO SOME PHYSICAL TRAITS
OF FRESHMEN COLLEGE WOMEN OF KANSAS STATE
TEACHERS COLLEGE AT PITTSBURG, KANSAS

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A Thesis Submitted to the Graduate Division in Partial
Fulfillment of the Requirements for the Degree
of Master of Science

By

Lois Watson Smith

KANSAS STATE TEACHERS COLLEGE

Pittsburg, Kansas

May, 1943

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TABLE OF CONTENTS

CHAPTER	Page
I. INTRODUCTION.....	1
Purpose.....	1
Background.....	1
II. PROCEDURE.....	7
Description of Tests used in this Study....	7
Administering the Personality and Physical Tests.....	9
III. RESULTS.....	11
Correlation of Physical and Personality Traits.....	11
Another Approach to the Problem.....	14
Interpretation of Results.....	18
IV. SUMMARY AND CONCLUSIONS.....	20
BIBLIOGRAPHY.....	22
APPENDIX.....	24

LIST OF TABLES

TABLE		Page
I	THE MEANS AND STANDARD DEVIATIONS OF THE SIX PERSONALITY TEST SCORES AND THE FOUR PHYSICAL TEST SCORES.....	11
II	CORRELATIONS BETWEEN PERSONALITY AND PHYSICAL TRAITS.....	12
III	MEANS, STANDARD DEVIATIONS, AND STANDARD ERRORS OF THE MEANS OF THE PERSONALITY TRAITS WITH SUBJECTS GROUPED ACCORDING TO BODY BUILD.....	16
IV	COMPARISON OF PERSONALITY TEST SCORES WHEN SUBJECTS ARE GROUPED ACCORDING TO BODY BUILD.....	17

ABSTRACT

Purpose. The purpose of this study is to determine the amount of relationship existing between certain personality traits and certain physical traits of approximately 135 freshmen women at the Kansas State Teachers College of Pittsburg, Kansas.

Procedure. A personality test and various physical tests were administered to approximately 135 freshmen women at the Kansas State Teachers College of Pittsburg. The six personality trait scores measured by the Bernreuter Personality Inventory were correlated with the physical test scores measuring General Motor Capacity, General Motor Ability, Physical Fitness Index, and body build. Pearson's formula for determining the coefficient of correlation was used for all correlations.

As a somewhat different approach to the problem, body build was arbitrarily divided into three groups, linear, average, and stocky. The average personality test scores of these three groups selected on the basis of body build were then compared in an attempt to determine the amount of relationship and difference.

Findings. All in all, while the possibility of a relationship between emotional adjustment, as measured by the

BI-N score on the Bernreuter Test, and body build has been suggested by the results of this study, the findings as a whole would seem to justify the conclusion that there is only a very small relationship between physical and personality traits, as these have been measured in this investigation. The fact that this finding is in essential agreement with another closely related study (Middleton's) would seem to provide additional confirmation for it.

CHAPTER I

INTRODUCTION

Purpose

The problem of determining the amount of relationship existing between personality and physical traits has long been of vital interest to many educators and psychologists. If it could be established that certain personality traits are most likely to accompany certain physical traits our knowledge of personality, both normal and abnormal would be greatly increased. Psychologists and educators would be able to predict the personality characteristics and disorders that would most probably be related to certain physical traits and, in the case of abnormalities at least, be able to take definite steps in the prevention of such deviations. A knowledge of the relationship existing between personality and physical traits would hasten the process of diagnosis as well as being an aid in the matter of therapeutic measures. The purpose of this study is to determine the amount of relationship between personality, as measured by the Bernreuter Personality Inventory, and several physical traits.

Background

Writers for many years have been interested in the relationship between personality and physical traits. Perhaps

the best known study of the relationship of body build and personality traits is that of Kretschmer.

According to Kretschmer¹ there is a positive correlation between major forms of psychoses and certain bodily characteristics. He believes that there is a clear biological affinity between the psychic disposition of the manic-depressives and the pyknic body type, and likewise, a clear biological affinity between the psychic disposition of the schizophrenes and the bodily characteristics of the asthenics, athletics, and certain dyplastics. This psycho-physical relationship is said to hold for normal individuals as well as for abnormal, the personality of the normal asthenic being described as schizothymic, and that of the pyknic as cyclothymic.

Studies tending to confirm Kretschmer's theories.

Wertheimer and Hesketh² devised an index of body build composed of skeletal points alone. This index, which is leg length times ten cubed, divided by the transverse chest diameter, times the sagittal chest diameter, times trunk height, times one hundred, was used to diagnose Kretschmer's classes of physique. The clear asthenic, athletic, and pyknic observation types of Kretschmer could be exactly differentiated by the use of the index. The authors found a

¹E. Kretschmer, Physique and Character (New York, 1926).

²F. I. Wertheimer, and Florence E. Hesketh, The Significance of the Physical Constitution in Mental Disease (Baltimore, 1926).

tendency for the pyknic habitus to be associated with manic-depressive insanity and for the asthenic, athletic, and dysplastic types to be associated with schizophrenia, thereby providing some confirmation for Kretschmer's conclusions.

Sheldon and Stevens³ list the three primary components of temperament as Viscerotonia, Somatotonia, and Cerebrotonia. The three corresponding static components of physical build are Endomorphy, Mesomorphy, and Ectomorphy. In determining the relationship between the primary and static components the authors found that "correlations of the order of about plus .80 between the two levels of personality (morphological and temperamental) indicate that temperament may be much more closely related to the physical constitution than has usually been supposed."

Husband⁴ selected pyknics and asthenics from over 500 students and compared them on the basis of four personality measures in an attempt to verify Kretschmer's hypothesis. His results, especially when extreme cases of body build were excluded from consideration, tend to agree mainly, although not in every case, with those of Kretschmer. There is a certain definite correspondence between neuroticism and introversion and body build. Pyknics of both sexes tend to be less neurotic and introverted while asthenics tend toward neuroticism and introversion.

³W. H. Sheldon, and S. S. Stevens, The Varieties of Temperament (New York and London, 1942), p. 11.

⁴R. W. Husband, "Body Build and Personality Traits in College Students," Journal of General Psychology, XVIII (January, 1928), 199-201.

Studies tending to disprove Kretschmer's theories. On the other hand, several studies designed to test Kretschmer's conclusions have produced negative results.

Mohr and Gundlach,⁵ studying a group of male prisoners, found only slight differences between the two main physical types, pyknic and asthenic, in intelligence and performance. Their results show a general gradation both in performance and in physical characteristics rather than a sharp division into types.

Wells,⁶ attempting to test Kretschmer's theory, used one hundred adult male patients at Danvers State Hospital in Massachusetts. Statistical analysis of physical measurements of the fifty dementia praecox and fifty manic-depressive patients showed no reliable difference between the groups. Neither Kretschmer's theory of distinct physical types nor his correlation between body types and psychoses was sustained by Wells' analysis.

Attempting to verify Kretschmer's theory, Campbell⁷ measured a large group of state hospital patients. He failed to establish any correlation agreeing with those of Kretschmer.

⁵G. J. Mohr and R. E. Gundlach, "A Further Study of the Relation between Physique and Performance in Criminals," Journal of Abnormal and Social Psychology, XXIV (April-June, 1929), 91-103.

⁶E. F. Wells, "The Relationship between Psychoses and Physical Type; A Statistical Study," American Journal of Psychology, LI (January, 1938), 136-145.

⁷K. J. Campbell, "The Relationship of the Types of Physique to the Types of Mental Disease," Journal of Abnormal and Social Psychology, XXVII (July-September, 1932), 147-151.

A similar study made by Garvey⁸ also provided little support for Kretschmer's claims.

In a study conducted by Hamilton and Shock⁹ physical measurements were taken according to the technique described by Wertheimer and Hesketh. Measurements included height, weight, transverse and sagittal chest diameters, trunk height, chest, abdomen, and hip circumferences, and leg length. Morphological indices calculated were the height-weight ratio, the Mohr and Gundlach index, and the Wertheimer and Hesketh index. Both of these latter indices have been described previously in this study. They concluded that although the morphological indices were in some agreement among themselves, they did not correlate consistently with any of the personality measures used in the study.

A study by Morton¹⁰ was made to shed some light on the possible relation between body build and certain measurable normal variations in personality traits. The Wertheimer-Hesketh morphological index, used as a measure of physical build, was correlated with scores on the Newman Kohlstedt Diagnostic Test for Introversion-Extroversion and with the

⁸C. R. Garvey, "Comparature Body Build of Manic-Depressive and Schizophrenic Patients," Psychological Bulletin, XXX (October, 1933), 567-568.

⁹J. A. Hamilton and N. W. Shock, "An Experimental Study of Personality, Physique, and the Acid-Base Equilibrium of the Blood," American Journal of Psychology, XLVIII(July, 1936), 467-473.

¹⁰N. W. Morton, "Personality Tendencies and Physique," Journal of Abnormal and Social Psychology, XXX (January-March, 1936), 419-422.

B1-N, B2-S, and B4-D scores of the Bernreuter Personality Inventory. The study provided little or no basis for belief in any linear relationships between the Wertheimer-Hesketh morphological index and personality test scores.

Other investigations of the relationship between mental and physical traits. A more recent investigation which is more directly comparable to this study is that of Middleton.¹¹ In correlating height and weight with personality traits, as measured by the Bernreuter Personality Inventory, Middleton found very small relationship between the various physical and psychological traits considered. The correlations brought to light by his study are as follows: height and neuroticism .07; weight and neuroticism -.03; height and introversion .05; weight and introversion -.02; height and dominance .06; weight and dominance -.02; height and self-confidence .06; weight and self-confidence .09; height and sociability .04; weight and sociability -.02; height and self-sufficiency .05; and weight and self-sufficiency -.02.

¹¹ Warren C. Middleton, "The Relation of Height and Weight Measurements to Certain Personality Qualities as Measured by the Bernreuter Inventory; Some Errata," The Journal of Psychology, II (April, 1941), 421-422.

CHAPTER II

PROCEDURE

Description of Tests Used in This Study

It was decided that the best procedure to use in determining the degree of relationship between personality traits and physical traits would be to administer both personality tests and physical tests to the same group of subjects. The scores from the physical tests would then be correlated with the personality scores in order to determine the degree of relationship between them.

The personality test. The instrument used for the measurement of personality traits in this study was The Personality Inventory¹² constructed by Robert G. Bernreuter. It was chosen because it is easy to administer, measures a variety of personality traits, and appears to possess a fairly high degree of validity. This personality scale provides measurements of the six following traits: B1-N, neurotic tendency; B2-S, self-sufficiency; B3-I introversion-extroversion; B4-D, dominance-submission; F1-C, self-confidence; and F2-S, sociability.

The physical tests. Physical tests of general motor capacity, general motor ability, physical fitness, and body

¹²See appendix for sample copy.

build were used.

The first two items, general motor capacity and general motor ability, were measured by McCloy's batteries.¹³

The items in the General Motor Capacity battery and their descriptions by the author are:

- (1) The Sargent Jump, which measures power composed of elements of strength and velocity.
- (2) The Burpee test, which is a test of agility and large muscle co-ordinations.
- (3) The Iowa revision of the Brace test of motor educability, which measures ability to learn new motor skills rapidly.

Scott's scoring tables,¹⁴ which were constructed on the basis of 433 cases, were used in T-scoring the foregoing tests.

The items in McCloy's General Motor Ability battery are the dash, standing broad jump, basketball throw, and number of chins. This battery was T-scored at Pittsburg from data on 262 women college students.

The Physical Fitness Index¹⁵ was also devised and T-scored for these same subjects. In explanation of the Physical Fitness Index, which was first proposed by Rogers, the following statement from McCloy¹⁶ may be helpful:

¹³Charles H. McCloy, Test and Measurements in Health and Physical Education (New York, 1939), p. 124.

¹⁴Gladys Scott, "The Assessment of Motor Abilities of College Women Through Objective Tests," Research Quarterly of the American Physical Education Association, X (October, 1939), 82.

¹⁵S. Lucille Hatlestad, Unpublished scales.

¹⁶Charles H. McCloy, op. cit., pp. 26-27.

Physical Fitness Index is a use of strength tests in which the individual's actual strength is divided by the average strength for those of his age and weight, and the total is multiplies by one hundred to convert it into the form of a percentage. Thus, individuals with a score of one hundred have the amount of strength that is average for their skeletal peers. An individual with a score of 120 has 20 per cent more strength than the average for those of his age, weight, et cetera. Rogers has called this index the Physical Fitness Index, usually abbreviated P.F.I.

The Physical Fitness Index used in this study was the sum of the chinning and dipping strength divided by the strength norm. These "strengths" were determined by McCloy's tables.¹⁷

The method of identifying body build used in this study was devised by Jorgensen and Hatlestad.¹⁸ These authors T-scored the Ponderal Indices¹⁹ of college students and set up their measurements in such a way that the low T-scores of a distribution of ponderal indices were indicative of a linear type of body build and high T-scores of a stocky type of body build. The Ponderal Index consists of 100 times the cube root of the body weight in kilograms, divided by the height in centimeters.

Administering the Personality and Physical Tests

The Bernreuter Personality Inventory was administered by Dr. Paul Murphy, Head of the Psychology Department of Kansas

¹⁷Charles H. McCloy, Ibid., Tables XL, XLI and XLIII, pp. 365, 365, and 368.

¹⁸N. M. Jorgensen and S. Lucille Hatlestad, "The Determination and Measurement of Body Build in Men and Women College Students," Research Quarterly of the American Physical Education Association, XI (December, 1940), pp. 60-75.

¹⁹Charles H. McCloy, "Appraising Physical Status: Methods and Norms," University of Iowa Studies in Child Welfare, Iowa City, Iowa, 1938, p. 13.

State Teachers College at Pittsburg, to approximately 135 white freshmen women during one session of freshmen lectures in the fall semester of 1940. The tests were then scored, and the raw scores of the six personality traits were used for correlation with the T-scores of the various physical traits for the same individuals.

Near the beginning of the fall semester of 1940 the physical tests were administered by the physical education instructors during regular class periods of freshmen physical education. All of the white freshmen women of Kansas State Teachers College at Pittsburg pronounced by the college examining physician to be free of abnormal or pathological conditions were given the physical tests used in this study. The author assisted Dr. S. Lucille Hatlestad of the Women's Physical Education Department in scoring the physical tests and in the preparation of a record sheet²⁰ for each freshman girl.

²⁰See appendix for a sample copy.

CHAPTER III

RESULTS

Correlation of Physical and Personality Traits

The means and standard deviations of the six personality scores and the four physical test scores are presented in Table I.

In interpreting these measures it should be remembered that scores on the Bernreuter Test vary both above and below zero, which is approximately the average score for the population at large.

TABLE I

THE MEANS AND STANDARD DEVIATIONS OF THE SIX
PERSONALITY TEST SCORES AND THE FOUR PHYSICAL TEST SCORES

Trait	Mean	Standard Deviation
B1-N	23.75	71.25
B2-S	10.70	46.00
B3-I	16.64	40.95
B4-D	14.30	61.00
F1-C	8.30	74.10
F2-S	38.30	46.00
General Motor Capacity	47.90	8.50
General Motor Ability	50.07	8.13
Physical Fitness Index	48.20	10.36
Body Build	54.63	10.65

Correlations were then computed between the various personality measures and the physical measures. These are set forth in Table II.

TABLE II

CORRELATIONS BETWEEN PERSONALITY AND PHYSICAL TRAITS

B1-N and General Motor Capacity.....	-0.028 ± 0.063
B2-S and General Motor Capacity.....	-0.150 ± 0.062
B3-I and General Motor Capacity.....	-0.074 ± 0.063
B4-D and General Motor Capacity.....	-0.012 ± 0.064
F1-C and General Motor Capacity.....	-0.051 ± 0.064
F2-S and General Motor Capacity.....	-0.065 ± 0.063
B1-N and General Motor Ability.....	-0.063 ± 0.091
B2-S and General Motor Ability.....	-0.024 ± 0.061
B3-I and General Motor Ability.....	-0.066 ± 0.061
B4-D and General Motor Ability.....	-0.022 ± 0.061
F1-C and General Motor Ability.....	-0.004 ± 0.061
F2-S and General Motor Ability.....	-0.100 ± 0.067
B1-N and Physical Fitness Index.....	-0.011 ± 0.063
B2-S and Physical Fitness Index.....	-0.046 ± 0.063
B3-I and Physical Fitness Index.....	0.034 ± 0.063
B4-D and Physical Fitness Index.....	-0.049 ± 0.066
F1-C and Physical Fitness Index.....	-0.002 ± 0.063
F2-S and Physical Fitness Index.....	0.046 ± 0.063
B1-N and Body Build.....	-0.200 ± 0.055
B2-S and Body Build.....	-0.038 ± 0.086
B3-I and Body Build.....	0.071 ± 0.058
B4-D and Body Build.....	0.061 ± 0.058
F1-C and Body Build.....	0.05 ± 0.058
F2-S and Body Build.....	0.028 ± 0.056

The three highest degrees of relationship brought out by this study were between B1-N and body build, with a correlation of -0.20 ± 0.05 ; between B2-S and General Motor Capacity, with a correlation of -0.15 ± 0.06 ; and between F2-S and General Motor Ability with a correlation of -0.10 ± 0.067 .

Sorenson²¹ states,

To be significant or dependable a coefficient of correlation should be about four to six times its probable error. When the correlation is less than six times its probable error, little significance can be attached to it because there is no assurance that it differs from zero.

It can easily be seen from Table II, which shows the twenty-four coefficients of correlations and their probable errors, that there are no correlations which are six times their probable error. If we are to accept Sorenson's interpretation of a significant correlation, we may say that there are no significant correlations revealed by this study.

However, four times the probable error is usually considered by most statisticians to indicate the possibility of some significant relationship. Since the correlation between B1-N and body build is approximately four times its probable error, it might be regarded as meeting this demand for significance. In concluding our interpretation we may say that according to most statistical interpretations, the size of the coefficient of correlation between B1-N and body build

²¹Herbert Sorenson, Statistics for Students of Psychology and Education (New York and London, 1936), p. 318.

indicates that there is some relationship or at least the possibility of relationship here, the relationship being of such a nature as to indicate that linear individuals tend to be somewhat more neurotic than the stocky type. This is in agreement with the findings of most other studies.

Another Approach to the Problem

After completion of the correlations, it was decided to try a different approach to the problem of finding relationships. It was felt that since body build scores were computed in such a way as to cause both high and low scores to represent abnormal conditions and average scores a more normal or acceptable state of body build, a positive relationship between body build and personality makeup might easily be obscured by the correlation technique. Therefore in the following paragraphs a different approach to the problem designed to overcome this difficulty has been set forth.

In this phase of the study the T-scores of body build were arbitrarily divided into three groups. Approximately 25 per cent of the subjects, whose scores fell at the lower end of the distribution, were classified as linear, the middle 50 per cent as average, and the upper 25 per cent as stocky build. The T-scores and number of cases in each group were:

<u>Build</u>	<u>T-score</u>	<u>No. of Cases</u>
Linear	25 to 46	33
Average	47 to 59	64
Stocky	60 to 85	37

After arbitrarily dividing the T-scores of body build into these three groups it was then possible to make comparisons of the average scores of the three groups on the various personality traits measured by the Bernreuter Test, with a view to determining whether any reliable differences existed. This was done by computing the means of the personality test scores for the three groups and testing differences between them for statistical reliability. In Table III the means, standard deviations, and standard errors of the means are set forth.

Table IV sets forth the comparisons on personality traits between various body build groups in terms of differences between mean scores and the critical ratios of such differences. In the case of each personality trait, differences were computed only between the two extreme scores on the assumption that if the larger differences were not reliable then certainly the smaller ones would not be.

As an example of the whole procedure, the mean, standard deviation, and standard error of each mean of the BI-N scores of each body type was found. Since the linear and stocky groups represented the two extreme means of the BI-N scores, the standard error of the difference between these two means and the critical ratio were found.

According to Sorenson²² when the critical ratio is more than three, it is practically certain that the difference in

²²Herbert Sorenson, op. cit., p. 318.

TABLE III

MEANS, STANDARD DEVIATIONS, AND STANDARD ERRORS OF THE MEANS
OF THE PERSONALITY TRAITS WITH SUBJECTS GROUPED
ACCORDING TO BODY BUILD

	Mean	S.D.	S.E. of Mean
B1-N Linear	-15.79	73.50	12.9
B1-N Average	-25	71.75	8.94
B1-N Stocky	-37.67	68.50	11.2
B2-S Linear	-15.56	49.80	8.73
B2-S Average	-11.14	51.40	6.42
B2-S Stocky	-10.46	44.20	7.26
B3-I Linear	-11.54	39.15	6.09
B3-I Average	-21.30	40.5	5.06
B3-I Stocky	-15.36	48.45	7.96
B4-D Linear	9.68	57.40	10.07
B4-D Average	22.30	58.20	7.27
B4-D Stocky	27.9	55.60	9.14
F1-C Linear	33.58	72.90	12.7
F1-C Average	3.77	69.80	8.72
F1-C Stocky	10.61	72.60	11.9
F2-S Linear	-38.6	53.20	9.3
F2-S Average	-33.58	50.80	6.35
F2-S Stocky	-35.44	41.40	6.8
Linear Body Build	40.56	4.62	.81
Average Body Build	52.53	3.58	.44
Stocky Body Build	65.36	5.0	.82

TABLE IV

COMPARISON OF PERSONALITY TEST SCORES WHEN SUBJECTS
ARE GROUPED ACCORDING TO BODY BUILD

	Diff.	S.E. diff.	Critical Ratio
B1-N Linear and Stocky	21.88	13.4	1.63
B2-S Linear and Stocky	5.10	11.7	.435
B3-I Linear and Average	9.76	10.02	.97
B4-D Linear and Stocky	18.22	13.6	1.33
F1-C Linear and Average	29.81	18.3	1.62
F2-S Linear and Average	5.02	11.2	.448
Body Build Linear and Stocky	24.80	1.15	21.56

the means is a real and true one. By referring to Table IV it can easily be seen that only one critical ration is large enough to satisfy this requirement. The critical ration between the means of linear and stocky body build scores is 21.56. This difference was to be expected because it was on the basis of these T-scores that the classes of body build were arbitrarily divided. There naturally would be a difference between the linear scores at the low end of the scale and stocky scores at the upper end. The remainder of the critical ratios between personality test scores are so small that the differences of the means cannot be considered real or significant. As would be expected, the difference between the linear and stocky groups on B1-N scores approaches

most nearly to reliability, but even this difference lacks a good deal of reaching the criterion of complete reliability. This raises some question as to the significance of the correlation found between body build and E1-N scores.

Interpretation of Results

All of the relationships found in this study by means of correlation were very small. Considering four times the probable error to be the minimum necessary for a significant correlation, only one correlation, that between E1-N and body build scores, met this requirement. The other two correlations nearest to this criterion were between B2-S and General Motor Capacity, and between F2-S and General Motor Ability scores. Considering these very small coefficients of correlation we may interpret the results so indicating that relatively little relationship exists between personality traits and physical traits as discovered by the measures used in this study.

In our attempt to find relationships possibly obscured by the correlation method, body build scores were arbitrarily divided into three groups, and comparisons of the average personality test scores of these three groups made. No true differences nor relationships were found by this method.

The results of this study seem to agree in the main with results of other similar studies. Middleton,²³ previously

²³Middleton, op. cit.

discussed in Chapter I, likewise found that the measures he used showed very little existing relationship between personality traits and physical traits.

CHAPTER IV

SUMMARY AND CONCLUSIONS

The purpose of this study was to determine the degree of relationship existing between certain personality traits and physical traits. The subjects used in this study were approximately 135 freshmen women of Kansas State Teachers College at Pittsburg, Kansas.

The Personality Inventory by Robert G. Bernreuter, which provides measures of six traits, was chosen as a means of measuring personality. This test was administered by Dr. Paul Murphy, Head of the Psychology Department in the fall of 1940 to the freshmen women. During physical education classes, these same subjects were given a series of physical tests designed to furnish measures of General Motor Capacity, General Motor Ability, Physical Fitness, and Body Build. Both tests were then scored and the raw scores of the six personality traits were correlated with the T-scores on the physical tests.

Only one coefficient of correlation was found to meet the statistical criterion of significance by being four times its probable error. This correlation between BI-N, a measure of neuroticism, and body build suggests that there is a certain amount of relationship or at least the possibility of a

relationship between these two traits. The relationship is of such a nature as to indicate that individuals of a linear type of body build show more marked tendencies toward neurotic symptoms than persons of a stocky build.

In order to obviate some of the difficulties of the correlation technique and to discover whether certain relationships might not be obscured by the correlation method, body build scores were arbitrarily divided into three classes, representing linear, average, and stocky types of body build. The differences between the personality test scores of these three groups were then tested for statistical significance, but no true differences nor relationships were found by this method.

All in all, while the possibility of a relationship between emotional adjustment, as measured by the B1-N score on the Bernreuter Test, and body build has been suggested by the results of this study, the findings as a whole would seem to justify the conclusion that there is only a very small relationship between physical and personality traits, as these have been measured in this investigation. The fact that this finding is in essential agreement with another closely related study (Middleton's) would seem to provide additional confirmation for it.

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FOR THE LIBRARY

APPENDIX

Tests of General Motor Ability, Capacity and Strength
 Kansas State Teachers College of Pittsburg, Department of Health and
 Physical Education for Women

Date _____ Name _____
 Class hour _____ Teacher _____
 Age _____ Height _____ in. _____ cm. Weight _____

SCORES

Sargent Jump _____ in. _____ cm. T-score _____
 Burpee Test _____ no. _____ no/4 T-score _____
 Ia. Rev. Brace Test (2) _____ (3) _____ (7) _____
 Mark: (1) if o.k. 1st trial
 (2) if o.k. 2nd trial (9) _____ (11) _____ (16) _____
 (0) if failure
 (17) _____ (18) _____ (19) _____ (20) _____ Total _____ T-score _____

GENERAL MOTOR CAPACITY SCORE

MOTOR QUOTIENT - $\frac{\text{G. M. C. S. ()}}{\text{Norm for G.M.C. ()}} \times 100 =$ _____

POINTS

60-yard dash _____ sec. _____
 Standing broad jump _____ ft. _____ in. _____
 (Best of three trials)
 Basketball Throw (distance) _____ nearest ft. _____
 (Best of three trials)
 Total _____
 Number of chins _____ T-score _____

GENERAL MOTOR ABILITY SCORE

Total _____

GENERAL MOTOR ACHIEVEMENT QUOTIENT

$\text{G. M. A. Q.} = \frac{\text{G. M. A. S. ()}}{\text{G. M. C. S. ()}} \times 100 =$ _____

Chinning strength _____
 Number of dips () plus () ()
 Dipping strength _____
 Total strength _____
 divided by _____ = _____
 100 x Strength Norm _____ = _____
 (Beg. Sem.)

PHYSICAL FITNESS INDEX (P.F.I.)

PFI (9 wks) (Sem. end) PFI

THE PERSONALITY INVENTORY

By ROBERT G. BERNREUTER

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Date.....

NAME..... Age..... Sex.....

Address.....

Name of school
or business firm..... School grade
or occupation.....

	B1-N	B2-S	B3-I	B4-D	F1-C	F2-S
Plus						
Minus						
Difference						
Percentile	%	%	%	%	%	%

H.S.—COLL.—ADULT

Based on

norms

MALE—FEMALE

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The questions on this blank are intended to indicate your interests and attitudes. It is not an intelligence test, nor are there any right or wrong answers.

In front of each question you will find: "Yes No ?"

If your answer is "Yes," draw a circle around the "Yes." If your answer is "No," draw a circle around the "No." If you are entirely unable to answer either "Yes" or "No" to the question, then draw a circle around the question mark.

-
1. Yes No ? Does it make you uncomfortable to be "different" or unconventional?
 2. Yes No ? Do you day-dream frequently?
 3. Yes No ? Do you usually work things out for yourself rather than get someone to show you?
 4. Yes No ? Have you ever crossed the street to avoid meeting some person?
 5. Yes No ? Can you stand criticism without feeling hurt?
 6. Yes No ? Do you ever give money to beggars?
 7. Yes No ? Do you prefer to associate with people who are younger than yourself?
 8. Yes No ? Do you often feel just miserable?
 9. Yes No ? Do you dislike finding your way about in strange places?
 10. Yes No ? Are you easily discouraged when the opinions of others differ from your own?
 11. Yes No ? Do you try to get your own way even if you have to fight for it?
 12. Yes No ? Do you blush very often?
 13. Yes No ? Do athletics interest you more than intellectual affairs?
 14. Yes No ? Do you consider yourself a rather nervous person?
 15. Yes No ? Do you usually object when a person steps in front of you in a line of people?
 16. Yes No ? Have you ever tried to argue or bluff your way past a guard or doorman?
 17. Yes No ? Are you much affected by the praise or blame of many people?
 18. Yes No ? Are you touchy on various subjects?
 19. Yes No ? Do you frequently argue over prices with tradesmen or junkmen?
 20. Yes No ? Do you feel self-conscious in the presence of superiors in the academic or business world?
 21. Yes No ? Do ideas often run through your head so that you cannot sleep?
 22. Yes No ? Are you slow in making decisions?
 23. Yes No ? Do you think you could become so absorbed in creative work that you would not notice a lack of intimate friends?
 24. Yes No ? Are you troubled with shyness?
 25. Yes No ? Are you inclined to study the motives of other people carefully?
 26. Yes No ? Do you frequently feel grouchy?
 27. Yes No ? Do your interests change rapidly?
 28. Yes No ? Are you very talkative at social gatherings?
 29. Yes No ? Do you ever heckle or question a public speaker?
 30. Yes No ? Do you very much mind taking back articles you have purchased at stores?
 31. Yes No ? Do you see more fun or humor in things when you are in a group than when alone?
 32. Yes No ? Do you prefer travelling with someone who will make all the necessary arrangements to the adventure of travelling alone?
 33. Yes No ? Would you rather work for yourself than carry out the program of a superior whom you respect?
 34. Yes No ? Can you usually express yourself better in speech than in writing?
 35. Yes No ? Would you dislike any work which might take you into isolation for a few years, such as forest rangers, etc.?
 36. Yes No ? Have you ever solicited funds for a cause in which you were interested?
 37. Yes No ? Do you usually try to avoid dictatorial or "bossy" people?
 38. Yes No ? Do you find conversation more helpful in formulating your ideas than reading?

39. Yes No ? Do you worry too long over humiliating experiences?
40. Yes No ? Have you ever organized any clubs, teams, or other groups on your own initiative?
41. Yes No ? If you see an accident do you quickly take an active part in giving aid?
42. Yes No ? Do you get stage fright?
43. Yes No ? Do you like to bear responsibilities alone?
44. Yes No ? Have books been more entertaining to you than companions?
45. Yes No ? Have you ever had spells of dizziness?
46. Yes No ? Do jeers humiliate you even when you know you are right?
47. Yes No ? Do you want someone to be with you when you receive bad news?
48. Yes No ? Does it bother you to have people watch you at work even when you do it well?
49. Yes No ? Do you often experience periods of loneliness?
50. Yes No ? Do you usually try to avoid arguments?
51. Yes No ? Are your feelings easily hurt?
52. Yes No ? Do you usually prefer to do your own planning alone rather than with others?
53. Yes No ? Do you find that telling others of your own personal good news is the greatest part of the enjoyment of it?
54. Yes No ? Do you often feel lonesome when you are with other people?
55. Yes No ? Are you thrifty and careful about making loans?
56. Yes No ? Are you careful not to say things to hurt other people's feelings?
57. Yes No ? Are you easily moved to tears?
58. Yes No ? Do you ever complain to the waiter when you are served inferior or poorly prepared food?
59. Yes No ? Do you find it difficult to speak in public?
60. Yes No ? Do you ever rewrite your letters before mailing them?
61. Yes No ? Do you usually enjoy spending an evening alone?
62. Yes No ? Do you make new friends easily?
63. Yes No ? If you are dining out do you prefer to have someone else order dinner for you?
64. Yes No ? Do you usually feel a great deal of hesitancy over borrowing an article from an acquaintance?
65. Yes No ? Are you greatly embarrassed if you have greeted a stranger whom you have mistaken for an acquaintance?
66. Yes No ? Do you find it difficult to get rid of a salesman?
67. Yes No ? Do people ever come to you for advice?
68. Yes No ? Do you usually ignore the feelings of others when accomplishing some end which is important to you?
69. Yes No ? Do you often find that you cannot make up your mind until the time for action has passed?
70. Yes No ? Do you especially like to have attention from acquaintances when you are ill?
71. Yes No ? Do you experience many pleasant or unpleasant moods?
72. Yes No ? Are you troubled with feelings of inferiority?
73. Yes No ? Does some particularly useless thought keep coming into your mind to bother you?
74. Yes No ? Do you ever upbraid a workman who fails to have your work done on time?
75. Yes No ? Are you able to play your best in a game or contest against an opponent who is greatly superior to you?
76. Yes No ? Have you frequently appeared as a lecturer or entertainer before groups of people?
77. Yes No ? Are people sometimes successful in taking advantage of you?
78. Yes No ? When you are in low spirits do you try to find someone to cheer you up?
79. Yes No ? Can you usually understand a problem better by studying it out alone than by discussing it with others?
80. Yes No ? Do you lack self-confidence?
81. Yes No ? Does admiration gratify you more than achievement?
82. Yes No ? Are you willing to take a chance alone in a situation of doubtful outcome?
83. Yes No ? Does your ambition need occasional stimulation through contact with successful people?

