ANXIETY IN ELEMENTARY SCHOOL CHILDREN
AS A FUNCTION OF INTELLIGENCE
SELF-CONCEPT AND ORDINAL
BIRTH POSITION

THESIS

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By

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TABLE OF CONTENTS

LIST OF TABLES ........................................ iv

Chapter

I.  INTRODUCTION ..................................... 1
   Theoretical Background
   Purpose of the Study
   Hypotheses

II.  RELATED LITERATURE ............................... 7
    Studies of Anxiety
    Studies of Intelligence
    Studies of Ordinal Birth Position
    Studies of Self-Concept
    Studies of Rural-Urban Residence

III.  PROCEDURES ..................................... 21
     Population
     Description of Instruments
     Collection of Data
     Statistical Treatment

IV.  RESULTS .......................................... 26
     Presentation of Data
     Discussion

V.  SUMMARY, CONCLUSIONS AND RECOMMENDA-
    TIONS ............................................... 34
     Summary of the Study
     Conclusions
     Recommendations

BIBLIOGRAPHY ......................................... 37
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Chi Square Analysis of Anxiety and IQ</td>
<td>26</td>
</tr>
<tr>
<td>II.</td>
<td>Chi Square Analysis of Anxiety and Self-Concept</td>
<td>27</td>
</tr>
<tr>
<td>III.</td>
<td>Chi Square Analysis of Anxiety and Ordinal Birth Position</td>
<td>28</td>
</tr>
<tr>
<td>IV.</td>
<td>Chi Square Analysis of Rural-Urban Residence and Anxiety</td>
<td>28</td>
</tr>
<tr>
<td>V.</td>
<td>Chi Square Analysis of Rural-Urban Residence and IQ</td>
<td>29</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Anxiety has attracted more attention than perhaps any other single area of study in the past decade. It is accorded primary, if not central, focus in practically every major theory of personality today. When it was first recognized and explored within the framework of psychoanalysis, it was considered primarily as a totally unconscious concept. It has developed from a general and somewhat vague construct into one with several different facets and aspects. It lacks as yet, however, a total integrating force. The knowledge concerning anxiety has not yet advanced to that stage.

Theoretical Background

The basic nature of anxiety in children is an especially interesting study. Stavsky (1) presents some very interesting insights into this problem. He felt that the problem of anxiety in children was very similar to that in adults. Children have, basically, two types of anxieties: those of which they are aware and those of which they are not. In the former, the anxieties will often clear up if the child is removed from the anxiety provoking environment.
In the latter case the anxiety tends to manifest itself in the form of aberrational behavior. A child may, of course, suffer from both types at the same time.

Unfortunately, when a child manifests symptomatic behavior, it is often unnoticed by either his parents or his teachers. His behavior has in some way alleviated or reduced the anxiety so that it is not easily observed by an outsider nor is it apparent to the child himself. This is the organism's attempt at homeostasis. These symptoms may serve to increase the anxiety in some cases, especially if they collide with the demands of reality. The behavior must be more anxiety reducing than producing, however, or it will be abandoned. This complicated process would suggest the intricate role which anxiety may play in the life of a child.

The genesis of this excess anxiety is an interesting speculation. It was suggested by Stavsky (1) that some people are born with a constitutional predisposition toward unusual responsiveness to anxiety-inducing stimulations. It has been shown that a young child will become unduly anxious if deprived of his basic needs for sucking, tenderness, warmth, cuddling, biting and movement. Such unfortunate traumatic experiences may make him overly sensitive to an anxiety-inducing mother or father. A lack of mothering or fathering may also induce anxiety in the child. The
youngster may, of course, develop anxieties from a combination of constitutional and environmental factors, as he very probably does.

The fact remains that anxiety, in varying degrees, is present in all children. In some, this anxiety becomes intolerable. Whatever the underlying dynamics of his particular situation, anxiety is a very unpleasant experience and the child very quickly learns ways of avoiding or reducing or controlling it so that he will be as free of it as is possible. This avoidance process begins in early infancy and continues until death.

A child who is unable to control his anxieties by normal means and behaviors must turn to others. For example, the infant who has been seriously neglected may become apathetic and listless. This does not alleviate his anxiety either, but, normal means having failed, he now turns to those which are not so normal. If the neglect continues he may resort to more and more abnormal behavior until he is far estranged from reality. From this it may be seen that almost all behavior is influenced if not controlled by the need to avoid anxiety.

Stavsky (1) pointed out that, in the child, symptomatic behavior may take the form of severe and frequent temper tantrums, refusal to eat, inability to learn in school (that is, to profit on the basis of his talents), withdrawing in
autistic fashion into a world of his own, becoming difficult to control, truancy or some other conduct disorder, bullying, overdependency and childishness at a level below his chronological age, or other symptomatic behavior (not directly caused by physical factors and theoretically curable by the elimination of the physical factors). These symptomatic acts often interfere with happy living and thus call for further adjutive measures which in turn set up a vicious cycle and, in fact, intensify the anxiety.

It is the aim of psychotherapy with children, as with adults, to get at the basic causes of the anxiety. The current manifestation is usually emphasized in therapy although anxiety throughout the history is considered and dealt with as it arises. In this sense psychotherapy regresses the child and helps him to redevelop into more normal channels. Certainly, also very effective with children often times is actual environmental control and manipulation.

Purpose of the Study

It shall be the purpose of this study to continue this delineation of the dynamics of anxiety. An attempt shall be made to study the nature of anxiety, especially in elementary school children, as it relates to three other factors: namely, intelligence, self-concept and ordinal birth position.
Hypotheses

From the above framework the following hypotheses have been drawn and will be tested:

**Hypothesis I.** Anxiety and intelligence are directly and positively related.

**Hypothesis II.** Anxiety and self-concept are directly and negatively related.

**Hypothesis III.** Anxiety and ordinal birth position are directly and positively related.

**Hypothesis IV.** Urban residence as opposed to rural residence is significantly related to higher intelligence.

**Hypothesis V.** Urban residence as opposed to rural residence is significantly related to higher anxiety.
CHAPTER BIBLIOGRAPHY

CHAPTER II

RELATED LITERATURE

The number of studies and research that have developed as a result of man's search for the reasons behind his actions and reactions is almost uncountable. This barrage parades past in mammoth and minute particles. At times the literature seems fogged with superfluous deviations of little import. But, gradually, the frontiers of knowledge are pushed back and some factor will emerge to weld many infinitesimal details into an integrated whole and make a major contribution of several smaller but no less significant ones. Perhaps one of the most fundamental of these concepts is that of anxiety.

Studies of Anxiety

One of the major contributions to the research in this area is a study of anxiety in elementary school children done by a group of Yale University students (12). This group, headed by S. B. Sarason, developed two scales primarily for the measurement of anxiety in elementary school children. One is very general, the Children's General Anxiety Scale, and the other is related to a specific type of anxiety, the Test Anxiety Scale for Children. The more specific of the
two actually came first, the hypothesis being that anxiety served more often as a symptom than as a disease per se. Such being the case, the more specific reaction might be expected to be overtly manifested first.

The basic hypothesis behind this study was that the test-anxious child would tend to be more anxious in all situations than the non test-anxious child and, furthermore, that the anxiety resulted from a deeper unconscious significance directly related to his home and family situations.

The Children's General Anxiety Scale is composed of 45 items designed to get at the child's basic anxieties without making him aware of its nature. They are taken primarily from fundamental overt manifestations of anxiety. This scale was then validated and standardized on 2211 pupils from grades two through five in the Connecticut school system. This was done by means of a correlation with teacher's ratings. There was a positive correlation in every case significant at the .05 level of confidence and more often at the .01 level of confidence.

Another important feature of the Children's General Anxiety Scale is the lie scale. It attempts to detect the tendency to lie about anxiety more than any attempt to make oneself appear better than one really is. The items refer more to things that nearly everyone experiences. They
include such words as "worry”, "scared"., and "afraid". Such qualifiers are used as "ever" and "when you were younger". The lie scale is composed of eleven of the items of the General Scale. If a child answers "yes" to fewer than seven of the items, his total score is probably not very reliable.

In doing some of the validation studies on the Test Anxiety Scale for Children, it was found that there was a negative correlation between intelligence and test anxiety. The question was raised as to whether the intelligence or the anxiety was the causative factor in this relationship. No significant conclusion was reached.

A study was done by Calvin (4) and others to investigate the relationship between anxiety and classroom examination performance. Subjects were 152 female undergraduate students taken from five classes at Hollins College. Each group was administered a typical standardized examination. The experimental groups were permitted to comment upon items in this objective examination while control groups were not. It was found that experimental subjects performed significantly better on the last half of the examination than control subjects. One group of 61 subjects was divided into high anxious and low anxious. Anxiety was significantly related to improved performance on the second half of the examination. It was noted that the subjects who made the most
comments improved the most although this relationship was not significant.

Bendig (2) did a correlative study using the Taylor Manifest Anxiety Scale, the McCleland Projective Need Achievement Scale and the Edwards Personal Preference Record. Bendig pointed out that Ralphson had previously found a significant correlation between anxiety and need achievement in a population of 25 college students. Bendig used 244 subjects, 136 of whom were men and 108 of whom were women. The subjects were administered all three measures at intervals and the raw scores were computed separately for men and women. No significant difference was found on the basis of the division so the scores were therefore treated together. No significant correlation was found between anxiety and need achievement. The correlations between projective and subjective measures of need achievement were also not significant. This would seem to indicate that at least two different types of need achievement were being measured and, possibly, even two different factors entirely.

Perhaps part of the vagaries surrounding the research on anxiety stem from the wide variations of the definition of anxiety. Malmo (9) did a study on anxiety in psychotic subjects in which he described anxiety quite differently from most researchers. In this study anxiety was differentiated as an acute pathological state in which the patient
was severely agitated more or less continuously and not merely as any behavioral change in the patient. Pathological anxiety was defined as:

A state of such severity that work efficiency was seriously affected over long periods of time, a state in which the patient was characterized by one or more of the following:
1) persistent feelings of tension or strain
2) irritability
3) unremitting worry
4) restlessness
5) inability to concentrate
6) feelings of panic in everyday life situations (9, p. 277).

In this study using the psychiatric patients who fitted this description, it was found that a direct relationship existed between behavioral arousal and anxiety in anxious patients. In controls no such relationship existed. There were no significant differences between anxious and control groups when in a resting state.

A study of anxiety and learning in children was done by Waite and others (17) in which 747 grade school children were administered the Children's General Anxiety Scale and the Test Anxiety Scale for Children. On the basis of the scores, they were divided into pairs of high and low anxious subjects. They were then given two modified paired associate learning tasks separated by an interval of failure and success instructions. No significant difference was found to exist in performance due to differences in instructions. There was a significant difference, however, due to degree
of anxiety. The low anxious subjects performed significantly better on the last half of the task than did the high anxious subjects. Several explanations were offered to account for this reversal.

Sandler and others (11) did a comparative study in which they made an attempt to differentiate ways in which external environmental influences could be translated into internal pathogenic states. They attempted to show that each child's anxiety was pathologically reinforced by real fear of the mother who combined in her behavior to the child both seductive and aggressive attitudes. The anxiety felt by the child was a combination of neurotic anxiety and a real fear based on the mother's unpredictability. The heightened anxiety in the child found discharge chiefly through bodily excitement.

Studies of Intelligence

The relationship which exists between a child and his parents has long been known to be a very effecting fact in the child's total growth and development. Just how vital this relationship is has been pointed up in much of the recent research. Parents control and affect what the child does from the moment of conception until his death. Perhaps one of the most fundamental reflections from parents to their children is in the area of intelligence.
Honzik (8) did a long term developmental study of the existing relationships between intelligence of parents and intelligence of their children. She found a very definitely significant relationship to be operating. She also found that the strength of this relationship increased with age. Her findings in general supported the many previous studies indicating that intelligence is genetically determined.

In 1958 Cyril Bert (3) combined and reiterated many of the findings concerning the inheritance of mental abilities. He included a discussion of Thorndike's independent abilities and contrasted these with Spearman's general factor theory. He arrived at the conclusion that, actually, both concepts might account for the functioning of the intellect. Intelligence appears to be a composite, a multidimensional combination of general and specific, inherited and environmentally influenced factors.

It is known that intelligence and anxiety are related and that they do have definite effects on each other. The effect of distrust on some aspects of intelligence test behavior was noted by Weimer (18) in 1957. He hypothesized that distrustful attitudes, supposedly stemming from anxieties, would create an impairment in intellectual functioning which could be measured by the picture completion and similarities subtests of the Wechsler Adult Intelligence Scale. Two groups were selected, one low distrustful and one high.
distrustful, determined on the basis of questionnaires. They were then administered the WAIS and their scores computed. Subjects with high distrustful attitudes showed significant impairment in intellectual behavior on the proposed measures.

Intelligence is also related to many other factors. For example, in 1958 Nesbit (10) did a chronological comparative study of intelligence as related to family size. In 1949 the mean family size was 3.41. In 1956 it had decreased to 3.05. The mean IQ, however, had remained the same. Some trends were revealed for the mean intelligence to decrease as family size increased although not significantly. It was felt, however, that, actually, this was a spurious correlation since both factors were probably more related to a third factor, namely socio economic status, than to each other.

Studies of Ordinal Birth Position

Some trends were noted by Grasz (7) in regard to incidence of schizophrenia as related to ordinal birth position. He criticised other studies of this nature for lack of proper controls and exercised very rigid ones himself. He selected only definitely diagnosed schizophrenics with two normal siblings. Only 156 cases met his criteria. It was hypothesized that the first born in a family was subjected to greater and more varied stresses than were succeeding
siblings. First born were frequently presented as having a more difficult time adjusting. In this study no significant difference was found to exist between incidence of schizophrenia and ordinal birth position.

One intensive study has shown some statistically reliable relationships between degree of anxiety and order of birth (13). This research began with a series of laboratory experiments using 62 college girls as subjects. These girls were brought into the laboratory under very authentic-appearing conditions and asked to co-operate in an experiment involving some electrical shocks. The shocks were never given but the girls were made to believe that they would be. The girls were then given a questionnaire and asked to indicate through various questions the degree of their anxiety concerning the shocks. They were also asked to indicate whether they wished to drop out of the experiment and, if they remained, whether they preferred to wait with someone or to wait alone. On the basis of the questionnaires, they were divided into high and low anxious groups. Nineteen per cent of the high group indicated that they desired to drop out of the experiment while none of the low anxious group did so. The high anxious subjects also showed a greater tendency to want to wait with others rather than alone. One of the most outstanding features of this study was that the ordinal birth position of the subjects was
highly correlated with affiliative needs. First born subjects chose overwhelmingly to wait with someone rather than alone and this tendency decreased rapidly with increase in position in the family. Family size per se was not found to be significantly related to affiliative needs.

These studies were later repeated with groups of alcoholics, people who go to psychotherapists and with fighter pilots and the results were confirmed in each case. It may be generalized from this series of studies that anxiety and ordinal birth position are definitely related.

Studies of Self-Concept

Another factor which is possibly as inter-related to anxiety as any other one single factor is that of self-concept. Although they appear to be definitely related, their relationship might easily evoke a discussion of which came first—the chicken or the egg, the anxiety or the poor self-concept.

Several studies have been done in this general area. Albert (1) made some comments on three dimensions of self attitudes and anxiety. He differentiated three general areas of consideration: extensiveness, awareness and intensity. The lack of an interval scale made relationships impossible to determine. He did feel that it could not be assumed that intensity of guilt feelings affected the overtness
of anxiety nor that the degree of anxiety necessarily reflected the level of awareness.

Cowan and others (5) conducted a study of manifest anxiety in relation to perceptual reactivity, rigidity and self-concept. 102 freshmen men and women were chosen from 276 on the basis of their Taylor Manifest Anxiety Scale scores. These were divided into high, low and medium anxiety groups. They were then administered the Bills-Vance-McLean Index of Adjustment and Values. On this scale a difference in self-concept and ideal self is taken as a measure of the degree to which an individual is maladjusted. There was a significant difference in all groups with the high anxious group always having the greater maladjustment score. It was pointed out, however, that this correlation might be somewhat spurious in that the Taylor Manifest Anxiety Scale and the Bills-Vance-McLean Index of Adjustment and Values might actually be measuring the same thing. This was pointed up also be the fact that high lie subjects produce significantly better self-concepts than low lie subjects in an attempt to produce a "culturally good" record.

Studies of Rural-Urban Residence

Another factor which is said to significantly influence human behavior is rural versus urban residence. A
great deal has been said about this "fast modern pace" and returning to the "easy-going carefree days of down on the farm."

In 1958 vonFieandt (16) noted the psychological effects of urban or rural domiciles on three groups of men ages 19 to 25. They were classified as rural, urban and rural-to-urban. They were compared on the basis of Wechsler-Bellvue Test scores. The chief findings of this study were that the urban group appeared to be superior in intelligence, with the rural-to-urban group second and the rural group last. Educational levels were not found to be differentiated by the measure used.

Egawa (6) did a study of the intellectual differences between rural and urban children in 1956. Qualitative differences in intelligence were studied with 334 rural and 483 urban children. The mean score was significantly lower in the rural group. There were exceptions in some grades, however. Five factors were analyzed. They were chiefly those listed by Thurstone as mental alertness, verbal meaning, induction, memory and space factor. Mental alertness appeared to be the most decisive factor.
CHAPTER BIBLIOGRAPHY


CHAPTER III

PROCEDURES

Population

Fifty-six subjects were selected from third-grade classes in the Denton County Schools on the basis of availability. Twenty-seven of these were from rural schools and 29 of them were from an urban school population. These children ranged in age from eight years four months to 11 years three months with a mean age of nine years two months. The range of rural students was eight years five months to 11 years three months with a mean age of nine years. The range of urban students was eight years four months to 11 years one month with a mean age of nine years four months.

Description of Instruments

An intellectual assessment was made on the basis of the Otis Quick Scoring Intelligence Test, Alpha Short Form. It was administered and scored according to the standardized instructions accompanying the records.

The Children's General Anxiety Scale was used as a measure of the subjects' anxiety. This is a 45-item questionnaire designed to differentiate general anxiety in elementary school children. It was administered with the following directions:
Here are some questions to answer. They will help me to get to know you better. No one will ever see your answers except me. Your teacher will never see them and no one else will ever see them. Answer the questions as honestly as you can to the best of your ability. There are no right or wrong answers. The answer depends on you. I will read the questions to you and wait a minute after each one while you write your answer in the blank beside each question. Now are there any questions before we begin? Please do not talk while we are working.

This measure was scored by simply taking as the score the number of items to which the subject had answered "yes". This is according to the method suggested by Sarason (1). A lie score was computed for each subject also according to the method suggested by Sarason. This is composed of eleven items taken from the general scale and very general in nature. They are considered to be things experienced by nearly everyone. They include such words as "worry", "afraid" and "scared" and such qualifiers as "ever" and "when you were younger".

The Draw-A-Person was taken as a measure of self-concept. The drawings were given to three clinical psychologists presently in active practice and they were asked to rate them on the basis of self-concept into one of five categories as follows:

1) poor
2) somewhat limited
3) average
4) good
5) excellent

Only one stipulation was placed on the raters: They were
asked to place at least three subjects in each of the extreme categories, i.e., one and five. This was to correct for possible generosity factors and halo effects.

As a differentiation of ordinal birth position, the subjects were asked to write down the names and ages of all of their brothers and sisters. This was checked against school records, as was their correct birthdate and age.

Collection of Data

Exactly the same procedure was followed on each of the three times when the tests were administered. The Otis Quick Scoring Intelligence Test was administered first according to the standardized instructions accompanying the tests. The subjects were then given a short break in which to talk or exercise briefly. They were then administered the Children's General Anxiety Scale according to the method described above. The subjects were then asked to take out a piece of paper and write their names and the date somewhere on it. They were then instructed to draw a person. Any questions were answered as nondescriptly as possible in an effort not to lead the subjects. When they had finished, they were asked to turn the paper over and draw a person of the sex opposite the one they had just drawn. At the end of this exercise, each student was asked to list the names and ages of all of his brothers and sisters.
Statistical Treatment

The scores were computed for the Otis Intelligence Test and Children's General Anxiety Scale and the mean, median, standard deviation and range found. They were then divided into high, medium and low anxious and intelligence groups by simple division of the class into thirds. This artificial division was used in chi square tables in comparison with the self-concept and ordinal birth position data.

The self-concept ratings were reduced into three major categories. Ratings one and two were combined to form the "poor" category. Rating three was taken as "average". Ratings four and five were combined to form the "good" category. The actual value of the subject's self-concept was taken as the rating given him by two or more of the three raters. In cases where three different category ratings were given, the mean was taken. The latter procedure was necessary in only three cases. While the average of ratings may be considered questionable, it was felt that it occurred in such few cases that it would not seriously confound the data.

Ordinal birth positions were divided into two groups: those who were first born and those who were not.

The urban and rural residents were then compared in a chi square table with low, medium and high anxiety and then with low, medium and high intelligence.
CHAPTER BIBLIOGRAPHY

CHAPTER IV

RESULTS

Presentation of Data

As mentioned in Chapter III, chi square was used to determine whether any significant difference existed between the various experimental groups of subjects. In the following analysis of results, each hypothesis will be examined in the order presented in Chapter I.

The data concerning the hypothesis that anxiety and intelligence are directly and positively related are presented in Table I.

TABLE I

CHI SQUARE ANALYSIS OF ANXIETY AND IQ*

<table>
<thead>
<tr>
<th>Factor</th>
<th>High IQ</th>
<th>Low IQ</th>
<th>Chi Square</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Anxious</td>
<td>15 (13)</td>
<td>13 (15)</td>
<td>1.87</td>
<td>.20</td>
</tr>
<tr>
<td>Low Anxious</td>
<td>10 (13)</td>
<td>18 (15)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*In all tables, the top number represents the observed frequency while the number in parentheses represents the expected frequency.
The group as a whole was found to have a mean anxiety score of 23 with a range of 8 to 33 and a standard deviation of 9.9. The group obtained a mean IQ of 98 with a range of 73 to 122 and a standard deviation of 9.95. As seen in the table, the chi square obtained was 1.87 which is not sufficiently significant to support the hypothesis.

The data concerning the hypothesis that anxiety and self-concept are directly and negatively related are presented in Table II.

TABLE II

CHI SQUARE ANALYSIS OF ANXIETY AND SELF-CONCEPT

<table>
<thead>
<tr>
<th>Factor</th>
<th>Good</th>
<th>Average</th>
<th>Poor</th>
<th>Chi Square</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Anxious</td>
<td>3</td>
<td>11</td>
<td>14</td>
<td>1.07</td>
<td>.50</td>
</tr>
<tr>
<td>Low Anxious</td>
<td>5</td>
<td>8</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This hypothesis was not supported by the data. As seen in the table, the chi square obtained was 1.07 which is not statistically significant.

The results concerning the hypothesis that anxiety and ordinal birth position are directly and positively related are presented in Table III. Again the chi square obtained was not sufficiently significant to support the hypothesized relationship between anxiety and birth position.
TABLE III

**CHI SQUARE ANALYSIS OF ANXIETY AND ORDINAL BIRTH POSITION**

<table>
<thead>
<tr>
<th>Factor</th>
<th>1st Born</th>
<th>Not 1st Born</th>
<th>Chi Square</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Anxious</td>
<td>10 (11)</td>
<td>18 (17)</td>
<td>.30</td>
<td>.50</td>
</tr>
<tr>
<td>Low Anxious</td>
<td>12 (11)</td>
<td>16 (17)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data concerning the hypothesis that urban residence as opposed to rural residence is significantly related to higher anxiety are presented in Table IV. As seen in the

TABLE IV

**CHI SQUARE ANALYSIS OF RURAL-URBAN RESIDENCE AND ANXIETY**

<table>
<thead>
<tr>
<th>Factor</th>
<th>High Anxious</th>
<th>Medium Anxious</th>
<th>Low Anxious</th>
<th>Chi Square</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>11 (8)</td>
<td>11 (10)</td>
<td>5 (9)</td>
<td>6.86</td>
<td>.05</td>
</tr>
<tr>
<td>Urban</td>
<td>6 (9)</td>
<td>9 (10)</td>
<td>14 (10)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table, the chi square obtained was 6.86 which is significant at the five per cent level. The hypothesis as stated was not supported, however, since the exact converse
of the hypothesis occurred. An inspection of the raw data indicates a high incidence of anxiety in rural children as opposed to urban ones.

The data concerning the hypothesis that urban residence as opposed to rural residence is significantly related to higher IQ are presented in Table V.

TABLE V

CHI SQUARE ANALYSIS OF RURAL-URBAN RESIDENCE AND IQ

<table>
<thead>
<tr>
<th>Factor</th>
<th>High IQ</th>
<th>Med IQ</th>
<th>Low IQ</th>
<th>Chi Square</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>7 (8)</td>
<td>7 (10)</td>
<td>13 (9)</td>
<td>6.957</td>
<td>.05</td>
</tr>
<tr>
<td>Urban</td>
<td>9 (8)</td>
<td>14 (11)</td>
<td>6 (10)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This hypothesis was supported. As seen in the table, the chi square obtained was 6.957 which is statistically significant at the five per cent level of confidence.

Discussion

The hypotheses that anxiety is related to intelligence, self-concept and ordinal birth position were not supported. As noted by Stavsky (1) anxieties in children tend to be covered by aberrational behavior and not so obvious to the outside observer as anxieties. By inspection of the raw data some definite trends are noted.
More children who ranked in the high anxiety group achieved high IQ scores and more children who ranked in the low anxiety group achieved low IQ scores. This would seem to indicate a tendency in the direction of the hypothesis. Children who indicate any superior abilities are usually singled out fairly early in life on the basis of their superiority. They are also often cognizant of their heightened abilities themselves. This might tend to be responsible for two chief factors not ordinarily operating in other children. First, the child gradually comes to have "a reputation to live up to" in regard to his "brains." Secondly, the child might be expected to feel some heightened motivation as a result of his extra abilities. His creativity would probably also be above average and the urge toward productivity might serve to motivate him further. Both of these factors as well as others might serve to create anxieties additional to those normally experienced in childhood. Anxiety might also be induced in the child by the frustrations incurred from the reactions of a normal world to his superior abilities. These might vary along a continuum from ridicule and fun-poking at a "walking encyclopedia" to unreal expectations of greatly increased productivity. These tendencies might easily tend to increase with increase in the intellectual capacities of the children. With all of the additional attention and expectations focused upon a child because of his heightened
intellectual abilities, it is easy to see that he might develop additional anxieties.

In the area of anxiety as related to self-concept, although no significant difference was noted here, some differences do exist. The relationship is easy to see since anxiety and self-concept appear to be components of each other. Since man has a basic need to think well of himself, if he did not, it would most certainly be an anxiety-inducing factor. By the same token, if a child had a great deal of anxiety in some area of his life, it might impair his self-concept.

The trends noted in these data in anxiety and self-concept are not strong enough to infer any real existing relationship, but they do infer that a tendency in this general direction is present.

No significant difference was found between anxiety and ordinal birth position. If any trends could be said to be present, they would be in opposition to the hypothesis and to most of the other studies in the literature. It is felt that the data might be an artifact of two factors. First, they might be attributed to the size of the sample. Another factor of perhaps more importance is the classification of the data into only two categories, i.e., first born and not first born. It is possible that, if the data had been broken down into three or four categories, other trends might have been apparent.
A significant relationship was found between rural versus urban residence and anxiety. The hypothesis as stated was not supported, but the converse of it was significant at the five per cent level. It would appear that rural children have significantly more anxiety than do urban children. This might be attributed to several factors. Urban children might be said to be more sophisticated, i.e., more conscious of making a "good impression" and more adept in the ability to do so. Their anxieties might not have been elicited as clearly as rural children's on the measure used because of this desire and ability to appear more socially acceptable. On the other hand, some of these same factors might actually make for increased anxiety which was measured on the scale. More pressure appears to be brought to bear on children to conform and to be socially acceptable in a larger, more complex, more active society such as would be found in most urban areas.

A significant difference was found between rural and urban dwellers and IQ. Urban children show a significantly higher IQ than do those who live in rural areas. This supports most of the studies which have been done in this field. It is felt that this is a true difference. Part of the difference, however, might possibly be accounted for by the greater test sophistication and general social sophistication of urban children.
CHAPTER BIBLIOGRAPHY

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary of the Study
Within the framework of the many studies which have been done on anxiety, this research was designed to further investigate some relationships which might exist between anxiety and intelligence, self-concept and ordinal birth position. The basis of this study was a study done by Sarason and others and the instrument used to measure anxiety in elementary school children used in this study was taken from the Sarason study.

The subjects were 56 third-grade children from Denton County schools, 27 of whom were from rural schools and 29 of whom were from urban schools. The subjects were administered the Otis Quick Scoring Intelligence Test, Alpha Short Form as a measure of their intellectual abilities. They were then administered the Children's General Anxiety Scale as a measure of their anxiety. They were asked to Draw-A-Person and this was rated by three professional psychologists as a measure of their self-concept. Their ordinal birth position was taken from school records, as well as their correct ages. The test scores were then divided into artificially dichotomized groups of high, medium and low anxiety.
and intelligence. They were divided into three groups of self-concept: good, average and poor. They were divided into two groups according to ordinal birth position of first born and not first born.

These groups were then compared, using the statistical technique of chi square. Two by two and two by three designs were used.

It was found that there was no significant difference between anxiety and intelligence, anxiety and self-concept, and anxiety and ordinal birth position. A significant difference was found between urban and rural dwellers in both anxiety and intelligence but the difference in anxiety did not occur in the predicted direction.

It was noted in discussion that, although there was no significant difference between anxiety and intelligence, there were some definitely existing differences. Some differences also existed between anxiety and self-concept although, again, this difference was not significant. No trends were noted between anxiety and ordinal birth position and it was felt that perhaps this could be attributed to the handling and grouping of the data.

Conclusions

Some studies in this area have indicated differences in anxiety levels of various intelligence levels, various
self-concepts and of different ordinal birth positions. This study found no such significant differences. The findings did indicate the presence of significant differences between rural and urban children in the areas of anxiety and intelligence. Urban children were found to be significantly higher in intelligence scores. This was felt to be a true difference but one that could easily be influenced by test sophistication. Rural children were found to be significantly more anxious than were urban children. It was suggested that this might be attributed in part to the greater sophistication of urban children and their desire and ability to appear more socially acceptable.

Recommendations

It is felt that this research would bear repeating with some modifications. The size of the sample could be increased with definite advantage. The age range of the children could be increased to include several more and different classifications in the elementary school level. The instrument used to measure anxiety could be standardized on a population of similar cultural and social patterns. The measure of self-concept could be considerably refined or perhaps another one selected which would be more sensitive.
BIBLIOGRAPHY

Books


Articles


