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A Sociological and Psychological Survey of One Hundred Patients of The Hays Crippled Children's Clinic

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DOI: 10.58809/FCPG1264

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A Sociological and Psychological
Survey of One Hundred Patients of the Hays Crippled
Children's Clinic

Being

A Thesis Presented to the Graduate Faculty in Partial
Fulfillment for the Degree of Master of Science

By

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Fort Hays Kansas State College

Approved by:

Geo. A. Kelly

Date 17th May, 1934

R. Macgregor



Gift

ACKNOWLEDGMENTS

The author wishes to acknowledge profound gratitude to the late Professor C. H. Landrum for material assistance, encouragement and inspiration which has been of inestimable value.

Helen Starbuck

To Dr. G. A. Kelly, under whose supervision this thesis was written, the author desires to express her sincere appreciation for the proposal of a thesis subject and for suggestions and corrections in the writing of the thesis.

The author wishes to thank the following individuals and organizations for their interest and assistance: Mrs. Pearl Cruise; Dr. F. E. Coffey; Dr. C. E. Rarick; Sister Frances Clare; Mr. C. A. Beeby; Dr. F. B. Streeter; Dr. H. B. Reed; Prof. R. L. Parker; Dr. R. T. McGrath; The Hays Chapter of the American Association of University Women; the Kansas Crippled Children Commission; the Graduate Council of the Fort Hays Kansas State College; the Clinic Children; and all who have responded helpfully to questionnaires and personal interviews.

6/26/34

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INTRODUCTION

A Brief History of Movements in Behalf of Crippled Children.

National: Until comparatively recent times the crippled child was regarded entirely as an object of philanthropy. The state gave no thought to the crippled child as a prospective citizen. When private philanthropic organizations added education to their program of relief, the possibilities of the crippled child became evident and the sentiment grew that the physically handicapped should be given more attention and training. According to Mangold (6), Massachusetts established a state home and school for crippled children in 1904, this being the first school of this type in the United States to be supported by public taxation. The movement was extended and by 1931 the Kansas State Crippled Children's Temporary Commission (4) reported thirty states with constructive crippled children's legislation. Reeves (7) gives an excellent summary of the widespread medical and educational care being given crippled children in different cities and states.

State: Public and private agencies in Kansas have long been interested in the care and education of the cripples of the state. Since 1916, the Wichita Orthopedic Clinic operated under the sponsorship of Mr. C. Q. Chandler. The Capper Fund for Crippled Children, under the direction of Mr. Con Van Natta, was established in 1919. Since 1920 the Order of the Shrine has been providing care for crippled chil-

dren. The Rotary International has made this work a major activity, as has the Seventeenth District of the Lyons International since 1929. Kiwanis, the American Legion and the Kansas Federation of Women's Clubs have also taken active interest in this work. From 1925 until 1931 the State University Hospital at Rosedale conducted permanent diagnostic clinics at Hays, Dodge City, Hutchinson and Kansas City.

These various agencies realized the need of centralized effort and began agitation for state care of crippled children. Under Chapter 26, Laws of Kansas, 1929, a special commission was created by the legislature and authorized to inquire into the number and condition of cripples within the state, and to make recommendations for their care. In May, 1929, Governor Reed appointed a commission of seven non-salaried members for this purpose.

The Kansas Legislature accepted the recommendations of the Temporary Commission and in January, 1931, passed House Bill 60, or the present State Crippled Children Law. A committee of five non-salaried members was appointed to approve expenditures and orthopedic centers.

Local: The City of Hays was the fourth place chosen by the Kansas Crippled Children Commission for the location of a permanent clinic and orthopedic center.

The interest in a clinic for crippled children began in Hays several years before the movement for state control of this work. Dr. Francisco, from the University of Kansas Medical School, was brought to

Hays by the Rotary Club of that city. He held his first clinic in Hays August 12, 1927. Arrangements were made for bi-monthly clinics and headquarters established in the basement of the Hays Public Library. The territory of the clinic was confined to Ellis and adjoining counties. At first the children were given diagnostic treatment only, but the need for immediate remedial treatment became apparent. When remedial work was attempted, the burden became so heavy that it was impossible for Dr. Francisco to continue his work with only voluntary assistance. Through the Rotary Club an appeal was made to the Business and Professional Women's Club for assistance. At a Club meeting October 20, 1930, Mrs. James Rouse was engaged to assist regularly in the clinical work of the clinic.

The Rotarians maintained an active interest in the clinic. Dr. C. D. Blake made several talks before the Rotary Club and other civic organizations in behalf of crippled children. Through the influence of the Rotary Club, the Chamber of Commerce called a meeting on June 6, 1930, to discuss aid for the clinic.

The clinic grew until the quarters under the library were no longer suitable. It became necessary to make different arrangements for the operation and financing of the clinic.

When the Kansas Crippled Children Law was passed, efforts were immediately begun to locate a permanent orthopedic center at Hays. In April, 1931, representatives of various civic organizations met in the Civic Hall to discuss the possibility of establishing a permanent clinic. Representatives of the Rotary Club and other clubs were sent

to confer with the Crippled Children's Commission about the possibility of securing a clinic at Hays. The Commission gave encouragement and advice.

The Hays Chapter of the American Association of University Women, under the leadership of the president, Mrs. Pearl Cruise, became active in the campaign in behalf of the clinic. On October 20, 1931, a joint public meeting of the Hays civic and social organizations was called under the auspices of the University Women. R. A. Raymond, Secretary of the Crippled Children's Commission, and E. A. Brooks, Commissioner from northwestern Kansas, were present and explained the operation of the new law.

Work in behalf of the clinic progressed, but official approval as a clinic center was withheld until a permanent, resident orthopedist was secured. In January, 1932, St. Anthony's Hospital authorities began an active search for an orthopedist to add to their staff. After a careful consideration, Dr. F. E. Coffey, of the Bell Memorial Hospital, Kansas City, was chosen for the position. Arrangements were made by which Dr. Coffey became a member of St. Anthony's staff and at the same time was to serve the Clinic at the Hays Protestant Hospital.

On February 17, 1932, St. Anthony's Hospital was officially approved as a permanent orthopedic center. On March 14, 1932, the Hays Protestant Hospital was approved.

On April 8, 1932, the Lions and Rotary Clubs acted as hosts

to probate judges, county chairmen of the Crippled Children Commission, members of civic organizations, and members of the Kansas Crippled Commission. Prospects for the future of the clinic were discussed and the doors of the clinic formally opened. One patient, Leon Armstrong, was admitted.

This recently established Orthopedic Clinic, situated in the center of an essentially rural community, with an establishment of two hospitals, a resident orthopedist and a steadily increasing number of patients, offered a rich field for sociological and psychological research. The author recognized and took advantage of the opportunities offered by using the clinic as a thesis subject.

4. In what per cent of the homes is the patient?

influence found?

5. What per cent of the families are poor?

supporting?

6. What per cent of the mothers work?

the home?

7. What per cent of the families are well fed?

ly fed and clothed?

8. How do the families stand socially?

home communities?

9. From what diseases do the children suffer?

Problems

The major and minor problems of the thesis are as follows:

I. Are the children treated at the Hays Clinic as a group mentally, temperamentally and socially normal enough to justify the state in attempting to make them physically well?

A. From what types of environment do the clinic children come?

1. From what localities do the children come?

2. What are the occupations of the parents?

3. What is the general educational level of the parents?

4. In what per cent of the homes is religious influence found?

5. What per cent of the families are self-supporting?

6. What per cent of the mothers work outside the home?

7. What per cent of the families are adequately fed and clothed?

8. How do the families stand socially in their home communities?

9. From what diseases do the children suffer?

B. What are the mental capacities of the clinic children?

1. How do the children score when tested by standard tests of intelligence?

2. What estimates of the children's mental abilities are given by their teachers?

C. What are the outstanding social characteristics and personality traits of the clinic children?

1. Do the children display anti-social traits in their associations inside and outside the clinic?

2. What traits do standard character and personality tests reveal?

3. What psychiatric problems do the children have?

D. What is the educational standing of the clinic children?

1. What per cent of the children are unable to attend school or find it difficult to do so?

2. What per cent of the children are not in school?

3. What is the average educational level of the clinic children?

4. What is the educational achievement of the clinic children according to standard achievement tests?

II. What are the sociological and psychological effects of occupational therapy and school work upon patients in the clinic?

A. How does occupational therapy help solve psychiatric problems?

B. What socializing effects of occupational therapy and school work can be observed?

Method

In order to arrive at a solution of the foregoing problems, a study of 100 children entering the Hays Crippled Children's Clinic was made. Both laboratory and questionnaire methods were used.

Questionnaires,¹ prepared by the investigator, were sent to parents, teachers and ministers of the children in order to gather sociological and psychological data. Material was also obtained from the files of the records kept by St. Anthony's Hospital and the Hays Protestant Hospital, and from club records and personal interviews.

For eleven months the investigator did laboratory work in the clinic, teaching and carrying on experiments and research. Binet-Simon Tests, Stanford Revision, to test intelligence, New Stanford Achievement Tests, to test achievement in school work, and Downey Will-Temperament Tests, to determine character and temperament traits, were given each child. The investigator directed occupational therapy and school work and observed the psychological and sociological effect of both by means of carefully kept records and personal histories.

¹. See Appendix.

CHAPTER I

A Study of the Environments of the Clinic

Children.

General Environment of Clinic Children: The 100 children studied in the survey of the patients of the Hays State Crippled Children's Clinic came from the rural and urban districts of western Kansas. The Clinic is the only authorized orthopedic center west of Hutchinson, consequently it serves a wide range of territory, comprising 40 counties or about 38 per cent of the state.

Occupations of Children's Parents: Since the Clinic is situated in an agricultural region it is not surprising to find that 58.9 per cent of the clinic children's parents were engaged in farming. Other occupations were unskilled labor 13.4 per cent, and semi-skilled labor and clerical work 13.8 per cent. Approximately 8.8 per cent of the parents were without occupations.

Educational Level of Children's Parents: The survey found 9 per cent of the mothers with educations below the sixth grade level, 70.4 per cent were eighth grade graduates, 16.1 per cent had secondary educations, and 4.5 per cent had attended college. The fathers were inferior educationally to the mothers, 15.8 had educations below the sixth grade, 76.6 per cent were graduates of the eighth grade, 8.1 per cent had attended high school, and 1.5 per cent had attended college.

To summarize the combined educational level of the clinic children's parents: 12.4 per cent had less than eighth grade educations, 72.5 per cent were eighth grade graduates, 13.4 per cent had attended high school, and 3 per cent had attended college.

A survey, taken among the parents of pupils of 14 high schools in widely separated regions of the United States, found that 50 per cent of the parents had eighth grade educations and 10 per cent had not advanced beyond the sixth grade.¹ In comparison with this survey the education of the Hays Clinic children's parents is representative of the general population.

Religious Preferences of Clinic Children's Families: The religious preferences of the clinic children's parents are given in Table I.

Table I.

Religious Preferences of Clinic Children's Families.

Religious Preferences	Per cent
Protestants	61.3
Catholics	25.3
No Religious Preference	13.4

The religious influence was found to be present in the majority

¹. United States Presidents Research Committee Report. Recent Social Trends in the United States. Report of the President's Research Committee on Social Trends. New York and London, McGraw Hill Book Company, Inc. [Copyright, New York and London, McGraw Hill Book Company], 1933, Vol. I, p. 328.

of the home.

Economic Conditions of Children's Families: Since the 100 patients studied were state cases, it would naturally be expected that their families would be of a low economic status. However, in comparison with the standards of living in a Kansas rural community, the economic conditions in the homes were not so deplorable. Answers on questionnaires sent to ministers and teachers reported 53.2 per cent of the homes comfortable, 30.2 per cent poor, and 16.7 per cent very poor. The per cent of the families which were self-supporting was 53.6, those barely self-supporting 30.6 per cent, and those which were paupers 15.8 per cent. Approximately 71.9 per cent of the clinic children were adequately fed and clothed, and 28.1 per cent were not. The family livings chiefly depended upon the fathers' wages, but 22.2 per cent of the mothers found it necessary to work outside the home in order to augment the family income.

Social Positions of Children's Families: Reports on the social standing of the clinic children's families in their home communities gave 50.9 per cent as of good social standing, 33.2 per cent of fair standing, and 16.9 per cent of very poor standing.

Table II shows the close relationship of self-support, home conditions, and social standing.

Causes of Crippling		per cent
Congenital deformities		39.2
Accidents		18.4
Infantile Paralysis		18.2
Osteomyelitis		14.8
Spastic cases		4.4
Arthritis		2.6
Bone and joint tuberculosis		1.4

Table II.

Relationship of Self-support, Home Conditions
and Social Standing of Clinic Children's
Families.

Home Conditions	per cent	Self- support	per cent	Social Standing	per cent
Comfortable	53.2	Entire self- support	53.6	Good Social Standing	50.9
Poor	30.2	Bare Self- support	30.6	Fair Social Standing	33.2
Very poor	16.6	Paupers	15.8	Poor Standing	16.9

The table reveals a striking corollary of relationships. The level of social standing and home comfort corresponds almost identically with the degree of economic self-sufficiency.

Diseases of Clinic Children: The diseases from which the clinic children suffer may legitimately be considered a part of the children's environment, since they are constantly a part of their lives and cause modifications of their living habits.

Table III summarizes the causes of crippling among the 100 Hays Clinic patients studied.

Table III.

Causes of Crippling of Hays Clinic
Patients.

Causes of Crippling	per cent
Congenital deformities	39.2
Accidents	19.4
Infantile Paralysis	18.2
Osteomyelitis	14.8
Spastic cases	4.4
Arthritis	2.6
Bone and joint tuberculosis	1.4

In Table IV, for purposes of comparison, figures are quoted from Mangold (6) which show the most prevalent causes of crippling of cases treated in 33 widely separated orthopedic institutions in the United States.

Table IV.

Most Prevalent Causes of Crippling in the United States.

Causes of Crippling	per cent
Infantile Paralysis	27.2
Bone and Joint Tuberculosis	23.7
Congenital Deformities	13.1
Rachitic Conditions	8.
Injuries	4.2
Osteomyelitis	3.6
Miscellaneous	20.2

*Mangold, George B. Social Pathology, New York, The Macmillan Company. Copyright, The Macmillan Company, 1922. p. 264.

The Hays Clinic group had an unusually large amount of congenital cases, 19.2 per cent, whereas the national report gives only 13.1 per cent of such cases. Sociological surveys report accidents as an increasingly important cause of crippling. The Hays report verifies this by giving 19.4 per cent of the crippling due to accidents. The national report gives Infantile Paralysis as the chief cause of crippling; at the Hays Clinic it ranked third. Osteomyelitis, usually a minor cause of crippling, ranks fourth in the Hays survey. Three minor causes of crippling among the Hays group are: Arthritis, Spastic Cases, and Bone

and Joint Tuberculosis. Usually Tuberculosis ranks with Infantile Paralysis as a major cause of crippling.

Summary: According to the survey taken, the environments from which the Hays Clinic children come may be considered as religiously, educationally, occupationally, socially and economically typical of the average western Kansas farm home. The causes of crippling, with slight variations, are typical of those in other orthopedic hospitals.

the lowest was an eleven year old cretic girl. At Hays Clinic she was crippled by congenital dislocation of the hips and at the Hays Clinic at school, made a high score of 133. The grade of the girl was with congenital club feet. He was eight years old, and two years ago, two years, was in the fourth grade, and had an I.Q. of 100.

Mentality of a Cincinnati Group of Crippled Children
Investigation valuable for study in connection with the Hays Clinic is that of Fernald and Smith.¹ They make a study of cases in the Cincinnati Children's Hospital and found the I.Q.'s to be from 30 to 133 and the median to be 88.9.

I.Q.'s of Hays and Cincinnati Patients
Groupings: Table V classifies the I.Q.'s of the Hays patients into

¹ Fernald, Mable, and Smith, Ada. A Psychological Study of Cases of Crippled Children of Various Types. (In School and Society, Vol. 21, pt. 2, p. 449-452, April-June, 1925.)

to the diseases from which they suffered.

CHAPTER II

Mental Abilities of Hays Clinic Children.

Mentality of Hays Cripples as Measured by Binet-Simon Tests:

In order to arrive at an objective estimate of the mental level of the group of children treated in the Hays Clinic, Binet-Simon Tests, Stanford Revision, were given to 100 of the patients. The range of scores found was from 61 to 155, with a median of 101.4. The child scoring the lowest was an eleven year old cretin girl. An eleven year old girl, crippled by congenital dislocation of the hips and in the sixth grade at school, made a high score of 133. The genius of the group was a boy with congenital club feet. He was eight years old, had been to school two years, was in the fourth grade, and had an I.Q. of 155.

Mentality of a Cincinnati Group of Crippled Children: An

investigation valuable for study in connection with the findings at the Hays Clinic is that of Fernal and Arlitt.¹ They made a survey of 144 cases in the Cincinnati Children's Hospital and found the range of I.Q.'s to be from 30 to 138 and the median to be 83.9.

I.Q.'s of Hays and Cincinnati Patients According to Disease

Groupings: Table V classifies the I.Q.'s of the Hays children according

¹. Fernald, Mable, and Arlitt, Ada. A Psychological Study of a Group of Crippled Children of Various Types. (In School and Society, Vol. 21, pt. 2, p. 449-452. April-June, 1925).

to the diseases from which they suffered.

Table V.

Mean I.Q.'s of Hays Clinic Children According to Disease Groupings.

Disease Groups	I.Q.'s
Congenital Deformities	110.3
Injuries	102.1
Infantile Paralysis	98.
Osteomyelitis	94.4
Spastic Cases	70.
Arthritis	80.
Bone and Joint Tuberculosis	116.

The figures given in Table VI classify the I.Q.'s of the Cincinnati children according to the diseases.

Table VI

Mean I.Q.'s of Cincinnati Clinic Children According to Disease Groupings.

Disease Groups	I.Q.'s
Poliomyelitis (Infantile Paralysis) .	83.79
Spastic Paralysis	69.11
Tuberculosis	86.20
Miscellaneous	83.57
Nutritional	86.53
Infectious	85.47
Traumatic (Injuries)	86.
Nervous Diseases	75.93

*Fernald, Mable, and Arlitt, Ada. A Psychological Study of a Group of Crippled Children of Various Types. (In School and Society, Vol. 21, pt. 2, p. 451. April-June, 1925).

Children's Intelligence: The Binet-Simon scores classified in three groups of poor, below 90, average, 90-110, and superior, above 110, gave the following results: 26 per cent poor, 54, per cent average, and 20 per cent superior.

Table VII gives a comparison of the subjective and objective estimates of the Hays clinic children's mentality.

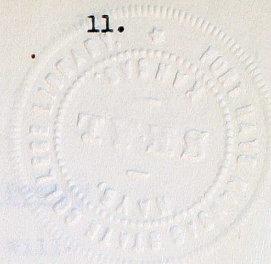
Table VII.

A Comparison of the Subjective and Objective Estimates of the Mentality of the Hays Clinic Children.

Classification	Poor Mentality	Average Mentality	Superior Mentality
Per cent according to I.Q.	26	54	20
Per cent according to subjective estimate	25	60.7	14.3
Difference in Estimates according to per cent	1	6.7	5.7

Summary: The subjective and objective estimates of the clinic children's intelligence agreed in finding the majority of the Hays Clinic children decidedly normal in mentality.

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CHAPTER III

Social Characteristics and Personality Traits of the Hays Clinic Children.

Teachers' Reports of Temperament Traits of Clinic Children:

The group of 100 clinic children studied in the survey were tested for social characteristics and personality traits. Teachers were asked to rate the children according to the social characteristics and personality traits listed in the questionnaires sent to them. Table VIII gives a summary of the replies.

Table VIII.

personality Traits of Hays Clinic Children as
Reported by their Teachers.

Traits	per cent
Cheerful	82.5
Moody	17.5
Persevering	55.5
Easily Discouraged	44.5
Spoiled	10.
Unspoiled	90.
Courteous	95.6
Rude	4.4

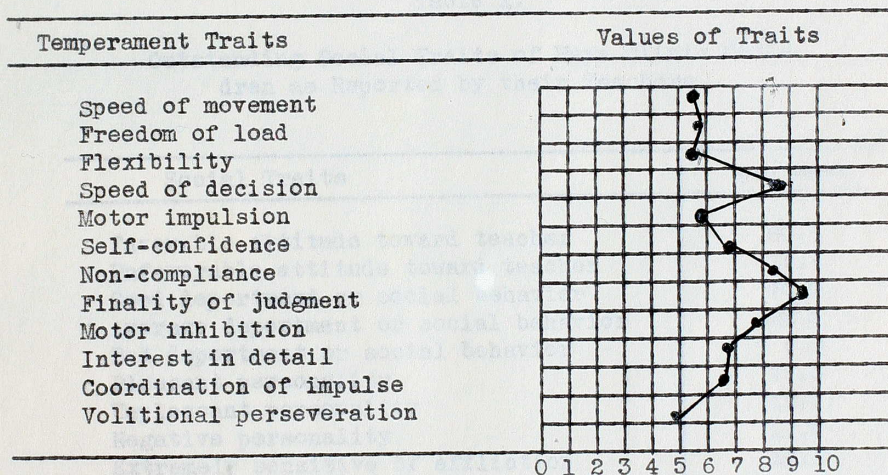
According to this data 80.6 per cent of the traits investigated were commendable and 19.4 per cent were undesirable. Each set of paired traits rated more heavily for the desirable than for the undesirable qualities.

Temperament Traits of Clinic Children According to Downey

Will-Temperament Tests: The clinic children were given Downey Will-Temperament Tests as a standard measurement of temperament traits. This test rates the temperament traits in values of 0 - 10. The investigator plotted the individual will-temperament profiles and from these made the group profiles given in Table IX.

Table IX.

Downey Will-Temperament Group Profile of Temperament Traits of Hays Clinic Children.



The profile reveals several rather interesting facts about the temperament traits of the crippled children tested. The ratings in finality of judgment, motor inhibition, speed of decision and self-confidence are high, despite the fact that these are traits in which crippled children are not expected to excel. Cripples are supposed to be superior in perseverance and interest in detail, but the profile shows

the value for interest in detail to be mediocre and that for perseverance to be the lowest of all. Data show that, although the teachers listed

19.4 per cent Social Traits of Clinic Children as Reported by Their Teachers:

A popular belief is that crippled individuals tend to become bitter and develop traits of character which make them undesirable and unpleasant members of society. In order to arrive at a conclusion concerning this belief, the teachers of the clinic children were asked to rate their pupils according to traits listed on questionnaires sent to them. Table X summarizes the replies.

Table X.

Outstanding Social Traits of Hays Clinic Children as Reported by their Teachers.

Social Traits	per cent
Favorable attitude toward teacher	80.6
Unfavorable attitude toward teacher	19.4
Good deportment or social behavior	70.9
Average deportment or social behavior	22.5
Bad deportment or social behavior	6.6
Pleasant personality	73.3
Unpleasant personality	15.2
Negative personality	11.5
Extremely sensitive of affliction	15.5
Not sensitive of affliction	84.5
Good mixers	76.6
Poor mixers	23.4
Engaged in playground activities	70.
Held aloof in playground activities	30.

According to the data in the table 68.3 per cent of the traits were socially desirable and 31.7 per cent were not. Every pair of traits

scored in favor of the crippled child as a social being.

Summary: The data show that, although the teachers listed 19.4 per cent of the children as having undesirable temperament traits, 31.7 per cent as having undesirable social characteristics, and some of the Downey Will-Temperament values were low, the majority of the 100 children studied in the survey were not abnormal in personality traits or social characteristics.

Approximately 33.4 per cent of the children were of pre-school age, while 66.6 per cent were of school age, or between 3 and 21 years. Table XI shows the grade placement of the children in school age.

Table XI.

School Grade Placement of Cripple Children.

Grade Placement	per cent
Grade I	18
Grade II	10
Grade III	6
Grade IV	14
Grade V	8
Grade VI	6
Grade VII	10
Grade VIII	14
Grade IX	6
Grade X	4
Grade XI	2
Grade XII	2
College	3

The largest percentage groupings were found in the fourth and eighth grades. A small per cent, 14, were in high school and only

2 per cent in college.

CHAPTER IV.

Educational Status of Hays Clinic Children.

41.5 per cent, retarded 33.3 per cent, and advanced 7.6 per cent.

School Grade Placement of Children: A survey was made of the 100 clinic children studied to ascertain their school attendance, educational advancement and scholastic achievement. Approximately 33.4 per cent of the children were of pre-school age, while 66.6 per cent were of school age, or between 6 and 21 years. Table XI shows the grade placement of the children of school age.

Table XI.

School Grade Placement of Clinic Children.

Grade Placement	per cent
Grade I	10
Grade II	10
Grade III	6
Grade IV	14
Grade V	8
Grade VI	6
Grade VII	10
Grade VIII	18
Grade IX	6
Grade X	4
Grade XI	2
Grade XII	8
College	2

Crippling and School Attendance: According to the survey the largest percentage groupings were found in the fourth and eighth grades. A small per cent, 14, were in high school and only

2 per cent in college.

Returns from questionnaires sent to teachers gave the grade placement of the clinic children according to age as normal 41.5 per cent, retarded 50.9 per cent, and advanced 7.6 per cent. This represents a retardation of approximately 17 per cent more than that of the general school population, as 33.3 per cent of the public school children are retarded. Again, the per cent of advancement is not so great, as 12.5 per cent of the general school population is advanced.

Scholastic Achievement of Clinic Children: New Stanford Achievement Tests were given to determine the scholastic achievement of the clinic group studied. The results are given in Table XII.

Table XII.

Scholastic Achievement of Clinic Children According to New Stanford Achievement Tests.

Level of Achievement	Per cent
Below proper grade for age	35.6
Normal grade for age	45.6
Above proper grade for age	18.8

Approximately 64.4 per cent of the clinic children were normal or above in scholastic achievement.

Crippling and School Attendance: According to the survey 26 per cent of the crippled children studied found it difficult to

attend school, 10.8 per cent were unable to attend, and 63.2 per cent were reported as well able to attend regular public school. Returns from questionnaires showed 72.9 per cent of the children in school and 28 per cent not in attendance.

Table XIII gives the school attendance record of the crippled children studied.

Table XIII.

School Attendance Record of Clinic Children as Reported by their Teachers.

Regularity of Attendance	Per cent
No absences	10.6
Few absences	67.9
Frequent absences	21.5

Approximately 78.5 per cent of the crippled children were fairly regular in school attendance despite their condition.

Summary: The crippled children studied in the survey were 17 per cent retarded in grade placement, but 64.4 per cent were normal or above in scholastic achievement. The majority of the clinic children were fairly regular in school attendance, but 36.8 per cent were in need of special educational advantages.

CHAPTER V.

Some Sociological and Psychological Effects of
 School Work and Occupational Therapy in
 the Hays Clinic.

Problems of Extended Hospitalization and Efforts to Solve

Those Problems: The hospitalization period of the 100 Hays Clinic cases studied in the investigation varied from one day to fifteen months. Approximately 50 per cent of the cases studied remained in the hospital over twenty days and 10 per cent stayed longer than 100 days. Extended hospitalization of child patients created vital problems of a sociological and psychological nature. It was hard for the children to adjust to hospital life. Several suffered from homesickness and mental complexes. Most of the children were of school age and in need of educational advantages. It became increasingly difficult to occupy and content a group of lively children who were unable to be physically active.

In an attempt to solve some of the problems two projects were undertaken. At the request of Mr. F. C. Beeby, Ellis County Chairman of the Crippled Children's Commission, Dr. R. L. McGrath, head of the Department of Education at Fort Hays Kansas State College, and Mrs. Pearl Cruise, supervisor of teacher training at the same institution, devised a plan to give school work to the clinic children. Student teachers of the various departments, from kindergarten to high school, went each day and conducted classes at the hospitals. The chil-

dren received regular school credits and the teachers were given college credits in teacher training for their work. During this first school year sixty children were given school work.

Under the auspices of the Hays Chapter of the American Association of University Women diversional occupational therapy, directed by the investigator, was established. In connection with this work psychological experiments and observations, directed by Dr. George A. Kelly, were undertaken.

Some Objective Measurements of the Results of School Work and Occupational Therapy in the Hays Clinic: In order to obtain objective measurements of the results of the occupational therapy and school work on the daily programs of the clinic children, time records were kept of their activities before and after engaging in these activities. For purposes of comparison, records were kept of the occupations of clinic patients who were at no time enrolled in school or engaged in occupational therapy.

The three tables given show the approximate amount of time spent by four patients before and after engaging in school work and occupational therapy; also, for purposes of comparison, the daily activities of four patients who did not participate in either activity. The time recorded for each individual was 16 hours a day for 5 days, or a school week, making a total of 80 hours in the week. The title recreational activities included any activities for amusement other than reading. The heading miscellaneous activities included such items as eat-

ing, bathing, dressing and medical attention.

Table XIV summarizes one 5-day week's activity of four patients who were not at any time engaged in occupational therapy or enrolled in school work.

Table XV gives a record of the way four patients spent their time before school and occupational therapy was available.

Table XVI shows the way the same four patients spent their time after engaging in school work and occupational therapy.

Table XIV

Five Day Week Time Record of the Activities of Four Clinic Patients at No Time Enrolled in Occupational Therapy or School Work.

Hours per Individual per Week Spent in Activities Listed.						
	Sleeping During Day	Reading	Recrea- tion	Visiting	Idling	Miscellaneous Activities
Patient I	8	15	13	20	9	15
Patient II	9	7	15	18	18	13
Patient III	5	8	18	21	14	14
Patient IV	10	18	17	15	10	10
Total hours for 4 pa- tients.	32	48	63	74	51	52

Table XV.

Five Day Week Time Record of the Activities of Four Clinic Patients
Before Engaging in School Work and Occupational Therapy.

Hours per Individual per Week Spent in Activities Listed						
	Sleeping During Day	Reading	Visiting	Idling	Recrea- tion	Miscel- laneous Activities
Patient I	7	10	16	16	12	19
Patient II	11	6	15	22	10	16
Patient III	5	8	20	20	11	17
Patient IV	6	12	18	19	13	12
Total hours for 4 pa- tients	19	36	69	77	56	64

Table XVI

Five Day Week Time Record of the Activities of Four Clinic Patients
After Engaging in School Work and Occupational Therapy.

Hours per Individual per Week Spent in Activities Listed.								
	Sleep- ing During Day	Read- ing	Visit- ing	Idling	Recre- ation	School and Study	Occupa- tional Therapy	Miscel- laneous Activities
Patient I	3	7	15	5	9	10	14	17
Patient II	5	3	11	6	7	15	15	18
Patient III	1	2	10	10	10	10	18	19
Patient IV	3	4	11	6	5	18	14	16
Total hours for 4 pa- tients.	12	16	47	27	21	53	61	70

The most significant factor in these tables is the contrast, before and after engaging in school work and occupational therapy, in the columns headed 'Visiting' and 'Idling.' The four individuals who were not at any time enrolled in school or therapy spent approximately 63 hours a school week in play, 74 hours in visiting and 51 hours in idling. Four patients, before engaging in school work and occupational therapy, spent 69 hours visiting, 77 hours idling and 56 hours in recreation. The same four persons, after engaging in school work and therapy, spent only 21 hours in playing, 27 hours in idling and 47 hours in visiting, while 53 hours were spent on school work and 61 hours on therapy. Therapy largely took the place of aimless play and school work supplanted idling.

Occupational Therapy As an Aid to Psychiatric Adjustments:

The investigator used diversional occupational therapy as a route to gain the children's confidences and as a means of helping them to make social and psychiatric adjustments.

Occupational therapy is any activity prescribed by a physician which will aid in the recovery of a patient. Occupational therapy may be of three types, curative, for the purpose of strengthening muscles and joints, vocational, training for an occupation, and diversional, for the betterment of mental health and diversion from pain and troubles. The latter type was chosen for the work in the Hays Clinic because of the lack of funds and equipment for the other types of therapy. For eleven months the investigator spent from three to four hours five days out of each week working with the children. Various kinds of work were done,

such as sewing, bead-work, vase making, stick-printing, wood-work, dramatics, story-telling and cut-paper work. Records of the results of this work were kept in the form of personal case histories rather than objective measurements. Four of the outstanding cases studied were Leon, Lily, Dora and Frances.

Leon was a seventeen year old victim of Infantile Paralysis, which left his hands deformed and his lower limbs absolutely helpless. He was in the tenth grade and had received all of his education in hospital schools. He had an I.Q. of 104 and a good Downey Will-Temperament profile. His personality was interesting, he met people easily, conversed fluently on many subjects and had a confident, aggressive air.

Suffering and affliction made the lad morbid. Denied physical activity as an outlet for his feelings he sought relief in the writing of sentimental poetry about home, mother and the hardship of being a cripple. His affliction caused a feeling of inferiority which induced him to seek compensation by belief in mental superiority and the assumption of an assertive manner. He also sought refuge in "Conquering Hero" dreams and had visions of becoming a great writer to show people that cripples are capable of accomplishing great things. Through his interest in lessons and therapy the lad came to trust the investigator enough to talk over the things which were troubling him. Talking seemed to ease the soreness and Leon became more satisfied and cheerful, more polished and less self-assertive. He decided to devote his time to acquiring an education which would enable him to do clerical work.

At the same time he planned to keep alive his interest in literature and writing.

Dora had Arthritis Deformans when she was seven years old and since that time she had not attended school. When she came to the hospital the child was shy and made friends slowly. She trusted no one, doctor, nurse, nor would-be friends. Day after day she lay listlessly in her bed, brightening only when visited by relatives. When she talked it was of her afflictions and how badly she felt. Gradually the therapist gained her confidence and the child talked freely about her troubles. When given a cushion to make, she brightened and began to take interest in things about her. Dora's whole attitude gradually changed and she began to take pleasure in being with a group of girls to sew. She grew much less ego-centric, more adjusted and almost completely socialized.

Lily had chronic osteomyelitis and had been unable to attend school since she was in the second grade. She had very odd manners and did not fit at all in the social group at the hospital. At first doctors and nurses were inclined to think her mentally deficient. The investigator gained the child's confidence and gave her a Binet Test. She had an I.Q. of 85, not brilliant, but certainly not feeble-minded. She was good at handwork and had infinite patience. She worked with the other children on therapy projects and gradually began to fit into the group and become socially acceptable.

Frances had a bad case of Infantile Paralysis and had to

undergo several operations. While she and the investigator were working on a gay cushion the child confided her troubles. A thoughtless individual had told the girl that she could never be a teacher or amount to much because she was crippled. The investigator pointed out the fallacy of this argument and cited examples of handicapped persons who had succeeded. The child became much happier and seemed to regain her confidence in self and others.

Summary: Diversional occupational therapy and school work filled a real need in the Hays Clinic, helping the children to make more worthy use of their leisure time and assisting in solving troublesome psychiatric problems.

Some of the crippled children studied in the survey were found to have decided complexes and showed undesirable social characteristics. However, the majority of the children studied evidenced social characteristics and personality traits which marked them as social beings rather than individuals with distorted personalities, holding aloof from society and brooding over their misfortunes until they became socially useless members of their communities.

Mentally, the clinic children were found to be somewhat retarded, 17 per cent being below the normal grade for chronological age. Of the cripples studied, 55.2 per cent were well able to attend the

SUMMARY

The investigator, in a year's work with 100 patients of the Hays Crippled Children's Clinic, found several conditions and factors to be definitely outstanding in her attempt to answer the following questions: 1. Are the children treated in the Hays Clinic as a group mentally, socially, and temperamentally normal enough to justify the state in attempting to make them physically well? 2. What are the sociological and psychological effects of occupational therapy and school work upon patients in the clinic?

Mentally, the group of children studied in the survey were decidedly normal. The I.Q.'s found ranged from 61 to 155, with a median of 104. This record challenges the popular theory that crippled children, as a class, are below normal mentality.

Some of the crippled children studied in the survey were found to have decided complexes and showed undesirable social characteristics. However, the majority of the children studied evidenced social characteristics and personality traits which marked them as social beings rather than individuals with distorted personalities, holding aloof from society and brooding over their misfortunes until they became socially useless members of their communities.

Educationally, the clinic children were found to be somewhat retarded, 17 per cent being below the normal grade for chronological age. Of the cripples studied, 63.2 per cent were well able to attend the

regular public schools, but 36.8 per cent needed special care if they were to receive an adequate education.

The environments from which the clinic children came were found to be largely typical of western Kansas farm homes and the moral and social standards found in the homes were in general typical of that class of people.

I. The children treated at the clinic have been seen by the clinic physician, social worker, and occupational therapist. The introduction of occupational therapy and school work into the daily program at the clinic enabled the children to make more worthy use of their leisure time, helped to form habits of industry, brought about socialization and assisted in overcoming undesirable mental complexes.

II. Occupational therapy and school work were found to be sociologically and psychologically beneficial to those undergoing hospitalization.

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CONCLUSIONS

The conclusions reached from the survey of 100 patients of the Hays Crippled Children's Clinic are as follows:

- I. The children treated in the Hays Clinic have been, as a group, mentally, socially, and temperamentally normal enough to justify the state in attempting to make them physically well.
- II. Occupational therapy and school work were found to be sociologically and psychologically beneficial to those undergoing hospitalization.

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Questionnaire Form for Ministers.

Are the child's parents living together _____ divorced _____
_____ dead _____?

What is the social standing of the family in the community?

Are the parents refined or rough?

Do either father or mother use alcohol _____ tobacco _____ drugs _____
excessively?

APPENDIX

Are any members of the family sex delinquents?

Is the home comfortable _____ poor _____ very poor _____?

Do the members of the family seem to have adequate food and clothing?

Is the family self-supporting or does it receive aid from charity?

Questionnaire Form for Teachers.
Questionnaire Form for Ministers.

How long did the child attend the school?

Are the child's parents living together _____ divorced _____ remarried
_____ dead _____?

Was the child often absent?

What is the social standing of the family in the community?

What grade had the child reached?
Are the parents refined or rough?

Did the child like school?

Do either father or mother use alcohol _____ tobacco _____ drugs _____
What was the child's attitude toward the teacher?
excessively?

Was the child's deportment good?

Are any members of the family sex delinquents?

Did the child mix well with other children or did the affliction, if
apparent, tend to isolate it socially?

Is the home comfortable _____ poor _____ very poor _____?

Did it take part in the playground activities?

Do the members of the family seem to have adequate food and clothing?

What type of personality did the child have?

Is the family self-supporting or does it receive aid from charity?

Was the child clean _____ courteous _____ cheerful _____ moody _____
easily discouraged _____ spoiled _____ persevering _____?

In what studies did the child do best?

In what studies did the child do the poorest work?

Questionnaire Form for Teachers.

Questionnaire Form for Teachers (Continued).

How long did the child attend the school?

How long has the child been out of school? student?

Was the child often absent? times did the child have?

If so, what usually caused the absences? sal ability?

What grade had the child reached? over-interested in?

 different to the child's school progress? of school?

Did the child like school?

What was the child's attitude toward the teacher?

Was the child's deportment good?

Did the child mix well with other children or did its affliction, if apparent, tend to isolate it socially?

Did it take part in the playground activities?

What type of children were the child's most intimate friends?

What type of personality did the child have?

Was the child clean courteous cheerful moody
easily discouraged spoiled persevering ?

In what studies did the child do best?

In what studies did the child do the poorest work?

Questionnaire Form for Parents
 Questionnaire Form for Teachers (Continued).

What is the father's religion?

Was the child a good _____ average _____ poor _____ student?

What is the mother's religion?

What special talents or abilities did the child have?

What is the father's occupation or job?

What is your estimate of the child's mental ability?

What work, if any, does the mother do outside the home?

Were the child's parents interested _____ over-interested _____ in-
 different _____ to the child's school progress?
 (the father worked?)

How long have you lived at your present home? In what other places
 have you lived?

What is the name of your pastor or priest and his address?

Education of mother: 8th grade _____ high school _____ college?

Education of father: 8th grade _____ high school _____ college?

How many children in the family? _____

How many boys? _____

How many girls? _____

What grade has the child reached in school?

Who is your child's teacher?

What is her address?

Questionnaire Form for Parents.

What is the father's religion? *now, who was its last teacher?*

What is the mother's religion?

What is the father's occupation or job? *religion, good?*

What work, if any, does the mother do outside the home?

At what things, other than the present job, has the father worked?

How long have you lived at your present home? In what other places have you lived?

Did your child have religious work before coming to the present school?
What is the name of your pastor or priest and his address?

Education of mother: 8th grade high school college?

Education of father: 8th grade high school college?

How many children in the family? *and extent of the family?*

How many boys? *up to 100,000 enough to make attendance in the school?*

How many girls?

What grade has the child reached in school?

Who is your child's teacher?

What is her address?

Questionnaire Form for Parents (Continued).

If your child is not in school now, who was its last teacher?

Her address?

Is the child's health, aside from its affliction, good?

What contagious or catching diseases has the child had?

What was the child's weight at birth?

Was the delivery normal hard by instrument?

Did your child have medical care before coming to the Crippled Children's Clinic?

If so, when and where was the treatment?

Will the child be permanently handicapped?

If so, what will be the nature and extent of the handicap?

Will the handicap be serious enough to make attendance at school difficult for the child?

The father is fond of his mother and idealizes her to such an extent that none of her faults are apparent to him.

Leonard has an extremely interesting personality. He keeps up on current events and happens to be the hospital community. He meets people easily and can carry on an intelligent conversation without apparent effort. He is decided in his opinions, frank in his ex-

CASE HISTORIES

Leonard

The nature of his affliction and his personality combined to make Leonard's case one of the most interesting studied. When four years old he suffered an attack of Infantile Paralysis, which left his lower limbs useless and his hands deformed. He suffers from hypothyroidism to such an extent that the upper part of his body is almost grotesquely deformed. There is small hope of his ever being able to walk without the use of heavy braces and crutches.

The lad's family history is not especially good or happy. He has one brother four years younger than himself. The father deserted the family soon after the second boy was born. The mother remarried but has separated from her second husband. She is a waitress and has worked in that capacity in several different states. She is a hard worker but seems to lack executive ability as she has failed in several ventures as restaurant proprietress. She is often out of work and at such times she makes her home with relatives. She is fond of Leonard but cannot keep him with her because of financial difficulties. The lad is fond of his mother and idealizes her to such an extent that none of her faults are apparent to him.

Leonard has an extremely interesting personality. He keeps up on current events and happenings in the hospital community. He meets people easily and can carry on an intelligent conversation without apparent effort. He is decided in his opinions, frank in his ex-

pression of them and militant in their defense. Leonard reads his Bible regularly and is rather emotionally religious. However, his religion does not prevent him from smoking, swearing and engaging in mild forms of gambling. Suffering and affliction have made Leonard rather morbid. Because physical activity as an outlet for his feelings is denied him, Leonard seeks relief from his blue moods through the writing of sentimental poetry about home, mother and the hardship of being a cripple. His affliction causes him to have a feeling of inferiority and he seeks compensation by belief in mental superiority and the assumption of an assertive manner. He also seeks compensation in "Conquering Hero" dreams and has visions of becoming a great writer and showing people that a crippled person can really accomplish great things. He is musically inclined, and his harmonica affords himself and others much real enjoyment. Leonard's personality is a mixture of good and bad traits but outstanding characteristics are grit and ambition.

The youth is slightly above normal mentally, having an I.Q. of 104 on the Binet-Simon test given by the investigator. He does above average in his school work, being an A and B student. He received all of his education in hospital schools. When he came to Hays he had reached the tenth grade and feared he could go no further as it was impossible for him to attend public school and few hospitals had high school classes. The establishment of school classes in the Hays Clinic brought him renewed hope and opportunity. He wants to be a literary critic, book reviewer and writer. He feels that his phys-

ical condition will not incapacitate him for such work. The following poem is an example of his original work:

The Nurse

She never comes in without a smile
Or passes that she doesn't speak.
She's bright and cheery all the while
And her clothes are always neat.

She always tries to ease the pain
That makes us rave and curse.
Tho she's tired she'll never complain
May God reward the nurse.

She's always gentle, never cross
When she cares for the sick and lame.
And to him who bore the Cross
We pray to bless her name.

Leonard's case presents both sociological and psychological problems. The lad needs an opportunity to develop his interests and become an extravert rather than an introvert. He must learn to place emphasis on the things he can do rather than on the things he cannot do. If he is not to remain a public charge he must be trained in a vocation suited to his physical peculiarities.

Dora

Fifteen year old Dora came from a home whose members were highly respected in the German Catholic community in which they lived. They were quite poor but entirely self-supporting farmer folks. There are eleven children in the family, three of the girls being sisters and one of the boys a priest. The father died during Dora's stay in the hospital.

When Dora was seven years old she was stricken with arthritis deformans, a disease of the joints, causing swelling and deformity. She remained small and delicate and walked with great difficulty. She spent six months in the hospital, five of them flat on her back with heavy weights on her legs. When she left the hospital she was materially improved.

Dora had not attended school since she was in the second grade and could read only very simple primary stories. She was not musically inclined nor gifted intellectually. She had an I.Q. of 80, but the investigator felt that the lowness of the score might be partially due to a language difficulty, as German was spoken in the home and Dora spoke English in a very broken fashion. The child's chief interest was needlework, her sewing and embroidery being painstakingly and exquisitely done.

When Dora came to the hospital she was extremely shy and made friends slowly. She trusted no one--doctors, nurses nor would-be friends. Day after day she lay listlessly in her bed, brightening only when visited by relatives. When she did talk it was about her affliction and how badly she was feeling. She was plainly psychoneurotic. Gradually a few of the Sisters and the investigator gained Dora's confidence and she would talk freely to them about her troubles. The investigator gave Dora a bright cushion to sew and she brightened and began to take interest in things about her. Suddenly she lost interest in her work and would sew only when the therapist was present, grew nervous and excitable and was subject to fevers and vomiting spells.

She was now able to walk but never wanted to be found in any room but her own when the doctor came and never wanted to sew when he was around. When the investigator was present and the doctor absent she seemed enthusiastic about her work. After some gentle urging the story finally came out. One day the doctor had come into Dora's room while she was sewing and in his breezy manner taken the sewing from her hands and exercised her leg vigorously, at the same time telling her she must exercise her leg more. Dora cannot understand English very well when it is spoken rapidly and she thought he did not want her to sew at all. When the investigator comprehended the situation she kept Dora in the room and at her sewing when the doctor was present and got him to praise her work. After that, the child's whole attitude changed. She ceased to be afraid, was enthusiastic about her work and took great pleasure in being with a group of girls to sew and play. She talked less of herself and her ills and more of her work and the activities of the other patients in the clinic. She became adjusted and socialized.

Lindal

Lindal had an extremely pleasing personality. She met people easily and talked to everyone in a frank charming manner. She had a sunny disposition and an optimistic outlook on life. Lindal was talented musically, being a good singer and quick at learning instrumental music. She wrote excellent original stories and was unusually good in dramatics and expression. She was not at all good in handwork or art of any kind.

The family from which Lindal came are of substantial German

stock, self-supporting but far from wealthy farmers. There are seven children, all well and strong except Lindal. The family is sober, temperate and religiously inclined, being staunch members of the Baptist Church.

The mother was forty-four years of age when Lindal was born. The delivery was hard and by instrument. The child was crippled from birth, suffering from curvature of the spine, dislocation of the left hip and contracted leg muscles. She has walked only with the aid of braces and crutches. It is expected that in time she will be able to walk without either, although she will probably never be entirely well.

At eleven years of age Lindal is in the sixth grade of the public schools. In spite of her affliction she has attended school regularly. Her teacher reports her as cooperative, a good mixer, and mentally superior. She is good in all of her school subjects and especially good in reading, English and spelling. In the New Stanford Achievement Test she has a grade equivalent score of 6.1.

Lindal has an I.Q. of 133 on the Simon-Binet scale. She seems well adjusted psychologically and socially. She is not bitter, moody, self-conscious or in any way abnormal. She realizes that her physical handicap will continue to be such that it will be hard for her to be self-supporting unless she is educated and trained for a special vocation. She wants to be a stenographer. It would seem that mental rather than manual training is the thing needed to make this brilliant child socially self-sufficient.

Lily Bell

Lily Bell came from a very mediocre family mentally and socially. She has a mother and four sisters living. The father is dead. One sister left home leaving no trace of her whereabouts. The other sisters are normal mentally and morally. The mother is uneducated but has a desire to be decent. The family are all members of the Baptist Church.

Chronic osteomyelitis is slowly loosing its hold in Lily Bell. She was troubled with this disease ever since she fell from the school-house porch when she was seven years old. When she came to the hospital she had long been unable to walk. It seems probable now that she will be able to walk quite well.

At first the doctors, nurses and teachers were inclined to think that Lily Bell was mentally deficient. She was slow-spoken and did not mix well with the other children. Her rather unattractive personal appearance did not help the general impression. For almost three months Lily Bell was denied the privilege of a teacher because it was believed she would not profit much from academic training.

The investigator became interested in Lily Bell's case and gave her a Binet-Simon Test. Her I.Q. was found to be 85. Not a high I.Q., of course, but certainly above the level of mental deficiency.

A teacher was secured for Lily Bell and under the influence of school work and therapy she unfolded and revealed her true personality. She has a dry sense of humor, is steady, patient, persevering and honest. She is intensely loyal to those who win her love. She is not a brilliant student but recognizes her need of an education and is

determined to complete school work to an eighth grade level. With her excellent character and temperament traits Lily Bell certainly has mentality enough to enable her to prepare for and enter some simple unskilled or semi-skilled occupation which will not be too strenuous physically.

Thelma Ann

Thelma Ann was one of the most unusual medical cases brought to the clinic. She was a cretin. Her thyroid glands did not function properly and although eleven years of age, she was no larger than a normal six or seven year old child. In appearance she was quite gnome-like, having parchment-like skin, dry straight hair, a short pudgy body, protruding abdomen and a slow waddling gait. Her speech was slow and thick and her face old looking and apathetic in expression.

At birth she was very hairy and slept almost constantly for three months. At the age of eight months normal growth ceased and the child developed very slowly physically and mentally. She could not walk until after she was four and was unable to run until she was six. Thelma Ann still soils her bed and clothing. She did not shed any of her baby teeth until the beginning of her eleventh year.

The child's family consists of father, mother and three sisters, all living and normal. Thelma Ann is the youngest child. The father is farm foreman for a large wheat farming corporation. The family are protestants but have no church preference.

Thelma Ann had an I.Q. of 61, making her a low grade moron.

However, her mental development was about commensurate with her physical development. During her period of treatment in the hospital she grew two inches. If she continues to respond to the treatment, perhaps her mental and physical development will keep pace and she will approximate the normal in both.

The child attended school three years and only reached the second grade. She seemed unable to grasp school work with any degree of success. Her teachers report her as being slow, apathetic, somewhat affectionate and generally good-natured. If really angered, however, she became as vicious and unreasoning as an animal.

Unless Thelma Ann makes a remarkable gain physically and mentally she will always be dependent upon others for care and direction.

Maxine

For three months, nine year old Maxine was the pet of the hospital staff. She came from a small prairie town in western Kansas. Her family consisted of parents, two brothers and three sisters. Her father, an unskilled laborer, had been out of work for some time and the family had been receiving aid from the Red Cross. The home from which the child came was poor, but clean and moderately comfortable.

Maxine had an especially lovable and pleasing personality. Her teachers reported her as cheerful, courteous, persevering and unspoiled. While in the hospital she exhibited courage, unselfishness and common sense. She mixed well with the other children and took part

in all the hospital activities that she could. Her affliction did not make her bitter or self-conscious; she accepted it in a sensible, matter-of-fact way and seemed entirely free of undesirable mental complexes. *... of this brilliant child.*

When she came to the hospital, Maxine had almost completed the required course for the third grade. With the help of a teacher from the Fort Hays Kansas State College she finished her work and took a thorough review. She was a good student and fond of school work. Maxine had an I.Q. of 110.

Maxine had congenital dislocation of the hip joint. An operation very materially improved her condition. Her handicap did not prevent her from keeping step mentally and socially with physically normal children. In her improved physical condition there seems to be no need to fear her ability to make a useful citizen of herself.

John

John was an only child. He lived with his mother on an isolated farm. The lad's father was dead.

Despite the fact that both of John's feet were congenitally clubbed he attended the district school and made a rather remarkable record. At the time the study was made of the boy, he was eight years old, had been to school two years and was in the fourth grade. His vocabulary was so extensive that he could use properly many words that most adults rarely employ. He read with ease and comprehension literature difficult for the average child of his age. John tested an I.Q.

of 155 on the Binet-Simon Test given by the investigator.

The operation performed completely cured John and he will be physically normal. It will be interesting to watch the future progress of this brilliant child.