Case study of an adult Down's Syndrome woman in a behavior modification program

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CASE STUDY OF AN ADULT DOWN'S SYNDROME WOMAN IN A BEHAVIOR MODIFICATION PROGRAM

by

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A RESEARCH PAPER SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN EDUCATION AT THE CARDINAL STRITCH COLLEGE

Milwaukee, Wisconsin

1974
This research paper has been approved for the Graduate Committee of the Cardinal Stritch College by

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(Adviser)

Date May, 1975
ACKNOWLEDGMENTS

A great deal of love and respect to everyone involved in the 1973 summer camp program for their understanding and encouragement.

I am most grateful to Sister Sheila Haskett for the interest and concern shown for my client and the encouragement needed to complete this paper.

I would like to thank the parents of my client for allowing me to work with their daughter.

A very special thank you to my client for doing her very best to make my project successful.

I would also like to thank Sister Diana Tergerson for typing this paper.
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CHAPTER I

INTRODUCTION

Statement of the Problem

This paper deals with a twenty-five year old Down's Syndrome woman, who seems to be going through a regressive stage in life.

The problem stems from the lack of motivation exhibited by the individual in her ability to move, complete tasks and enter into activities.

The question arises as to whether the behaviors exhibited are a result of a physical change or whether they are learned behaviors as a result of her present environment.

Significance of the Problem

The significance of this paper is that the present behaviors emitted by this individual show a dramatic change over past behaviors.

Studies have been done to show that Down's Syndrome individuals do go through a regressive stage. They seem unable to keep up with daily routines that have been established in the past. "Data supported the hypothesis that in Down's Syndrome, there is both a developmental lag and an arrest of certain psychological and social capacities."¹ This seems to be an opinion held by many professionals, however there seems to be no clear-cut guidelines for treatment procedures.

The change in behavior might also be the result of a physical change, however, that notion will be ruled out due to recent physical examinations and tests done on the individual which show there is nothing physically wrong with the individual in question.

Another possible reason for the change in behavior may be due to the individual's present environment as it relates to past environmental situations.

... inappropriate and distressing behaviors (as well as "normal" behaviors) occur mainly because social or behavioral forces external to the person (mainly involving parents, spouse, peers, etc.) in some way support and encourage the behavior.²

Society has a way of letting individuals know when they are unable to conform to certain performance standards, intellectual, mobility, etc. Many handicapped people have the ability to compensate for their handicap, thus in many ways enabling them to conform. An intellectual handicap might be considered most serious in that it dictates the person's every move. Psychologically the individual is aware of his inabilities, but is unable to compensate for them.

As stated before, there has been a drastic change in behavior of this individual. The reason is unknown.

Purpose

The purpose of this project is to show a change in behavior of a Down's Syndrome adult through the use of behavior modification.

A case study will be presented to show past behaviors and environment. A behavior modification program will be set up, showing procedures and results.

CHAPTER II

CHARACTERISTICS OF DOWN'S SYNDROME

Mongolism (Down's Syndrome) is of special interest because its symptoms are usually clear cut, because it constitutes the largest single syndrome accompanied by severe retardation, because it occurs in all strata of society, and because the underlying chromosomal anomaly has so recently been discovered.¹

"Down's Syndrome occurs approximately once in every 600 to 700 live births."²

The reason for the great interest in Down's Syndrome is easily recognizable. In this chapter the causes of Down's Syndrome will be discussed, as well as physical description, description of behavior and the adult Down's Syndrome individual.

Causes

Through the years there have been numerous findings as to the causes of Down's Syndrome. Several of these causes will be briefly covered.

John Langdon Down, for whom the syndrome is named, is credited with the first information on the physical characteristics of these individuals in 1866. Downs observed that all these children had an oriental slant to their eyes and all seemed similar in appearance. "He,


therefore, deduced that they represented a particular stage in evolutionary history, the stage of the Mongoloid race which he thought more primitive than the Caucasian."³

In 1947, Benda studied the maternal condition of 75 mothers. The following is a summary of the possible causes of the resulting Down's Syndrome children.

Inability to become pregnant (involuntary long intervals)  
Habitual abortions  
Attempted abortions  
Thyroid deficiencies and goiter  
Ovarian cysts and operations  
X-ray or radium treatment of uterus and ovaries  
Gallbladder  
Heart disease  
Depressive states  
Kidney trouble  
New pregnancy immediately after another child  
Unusual weight gain during pregnancy⁴

Of the 75 mothers in this study, 22 who conceived Down's Syndrome children fell under the category of being unable to become pregnant for long periods of time. This would also lead to the assumption by many that the risk of Down's Syndrome children is higher in older mothers.

Many other studies were done to find the causes of this syndrome, however the majority were covered by Benda in the above study.

New techniques for the preparation of slides to be used with the microscope brought about a breakthrough as to the cause.

Lejeune, Gautier and Turpin (1959) are credited with first publishing the discovery of extra chromosomal material in the cells of mongoloid individuals. Their findings were quickly confirmed by others.⁵

Normally, a person has 46 chromosomes. It was found that a Down's Syndrome individual has 47. The error comes in cell division. It is a genetic disorder, not an inherited one.

His (Lejeune) discovery of an extra chromosome number 21 led to naming the condition trisomy 21. It was at first thought that nondisjunction or a failure of the chromosomes to divide properly during mitosis was the condition common to all mongoloid children. Thus, first reports indicated that mongoloid children had 47 chromosomes rather than 46. Subsequent studies by other cytologists soon showed that a few mongoloid youngsters had only 46 chromosomes. An extra 21 was attached to one of the longer chromosomes. It, therefore, was apparent that translocation could also be involved and that mongoloid children were not all alike except that all have extra chromosome material.6

The birth of one Down's Syndrome child to a family does not mean that every child will be born with this syndrome. It is not possible to predict an abnormal pregnancy before fertilization takes place. However, modern science has developed a method of studying the amniotic fluid drawn from the mother. Studies can be done on the cells. "If the amiotic fluid cells reveal trisomic cells in the 21-22 group or translocations, the birth of a mongoloid child must be expected with certainty."7

Physical Description

In 1866, John Langdon Down gave the following physical description of Down's Syndrome individuals.

The hair is not black as in the real Mongol, but of a brownish colour, straight and scanty. The face is flat and broad, and destitute of prominence. The checks are roundish and extended laterally. The eyes are obliquely placed, and the internal canthi more than normally distant from one another . . . The lips are large and thick, with transverse fissures. The tongue is long, thick and is much roughened. The nose is small.8

6Kolstoe, Mental Retardation, An Educational Viewpoint, p. 70.
7Benda, Down's Syndrome, p. 218.
The following is a brief description of body parts and how they are affected by Down's Syndrome.

**Eyes**—almond shaped, slanted, epicanthic fold

**Tongue**—large, thick, fissured

**Nose**—flattening of the bridge

**Neck**—short, broad

**Abdomen**—distended, lacks muscle tone

**Skin**—when young, the skin is soft and thin. As the child grows older, the skin usually becomes thick and rough.

**Hair**—sparse, fine, straight

**Hands and Feet**—short, broad, flat. Increased space between first and second fingers and toes.

**Description of Behavior**

The mongoloid child has a special reputation for being much happier, more friendly, and more easily managed than other retarded children. . . . there may indeed be some tendency for mongoloid children to be "little rays of sunshine," but this is by no means invariable.9

In 1968, J. Clausen did a study on behavioral characteristics of Down's Syndrome children. He found these children to be "friendly, cheerful, humorous, responsive to rhythm and music, possessing a gift of mimicry . . . ."10 In the same article, he stated that his findings had been earlier observed by such names as Benda, Brousseau and Tredgold.

In 1957, Wunsch did a study of 77 Down's Syndrome children living at home. Half of the children showed hostile behavior. "Although many

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of these children were indeed mild in disposition, the pattern apparently depended in large part on the child's affectional environment.\textsuperscript{11}

The type of environment the child lives in is going to have an effect on his behavior. This is not to say that his behavior will be totally controlled by the home environment.

\textbf{Adults}

"It is, however, generally known that the person with Down's Syndrome has no really true adult life. In the twenties, signs of premature aging are observed."\textsuperscript{12}

It has been noted that this aging takes the form of a regressive state. The reasons for this could be studied from many viewpoints. For this paper, the psychological, physical and environmental possibilities causing the change will be discussed.

As a person grows older, society demands a higher level of performance in all areas. A Down's Syndrome person, who is mentally deficient, is unable to keep up with the demands of society. Thus, an aging or a slowing down is noted.

The daily routine of an adult Down's Syndrome person may be a regression-inducing atmosphere. "All too frequently he sits, day in and day out, surrounded by a television set, a radio and a few games and toys, but cut off from social contact except for that afforded him by his family."\textsuperscript{13}


\textsuperscript{12}Benda, Down's Syndrome, p. 44.

A daily life such as this contains very little stimulation for the individual. As a result, he becomes more and more dependent on the family for assistance because of lack of outside stimulation.

Many communities have workshop type settings where Down's Syndrome adults are employed.

These workshops enroll adolescent and adult mentally retarded individuals, train them to do routine tasks, contract with industry for piece work on simple assemblies and also develop and make saleable products. In well-established workshops, the mentally retarded come to work or are transported to work on a full-day basis, and are paid wages for their labor.\(^{14}\)

A workshop setting can provide the individual with an environment filled with stimuli.

There have been physical changes which in turn cause psychological changes.

Some patients show psychological changes with the increased stubbornness and unpredictable behavior patterns, which in certain instances suggest cerebral changes. In their thirties and forties, many Down's Syndrome patients show definite evidence of presenile changes (Alzheimer's disease). This has been demonstrated in postmortem examinations of some of these adults when they died in their thirties and forties. Why mongoloids show these early presenile, metabolic changes is not known.\(^{15}\)

**Summary**

Down's Syndrome is a condition that is usually evident, both physically and mentally, from birth until death. It is caused by an extra chromosome in the individual. Down's Syndrome is not a hereditary condition. Nor is it a hopeless condition as far as the individual's ability to participate in life situations. There are many Down's Syndrome


\(^{15}\)Benda, *Down's Syndrome*, p. 44.
children enrolled in Special Education classes, who are receiving an education to meet their needs. Many of these individuals are working in Sheltered Workshops and living in communities with dependency on parents or guardians.
CHAPTER III

CASE STUDY

Developmental History

Susan's birth was a normal delivery. Her parents were told shortly after birth that she was a Down's Syndrome baby.

Susan walked at the age of one and a half. She began to talk at the age of three and a half.

Susan attended kindergarten for one-and-a-half years. At the age of six, she was enrolled in a private, residential school in the Midwest. She remained at this school until the age of eighteen (September 1954 - June 1966). Since the school was about thirty miles from her home, she did go home for some weekends and scheduled vacations.

Academic and Social Behavior

The following comments were obtained from school reports:

June 1955: CA 7-2, MA 4-3

Courteous
Happy and well-adjusted
Is not shy and withdrawing
Participates
A good sport

June 1956: CA 8-2, MA 4-10

Very good academic progress
Easily motivated
Likes to keep busy
May 1957: CA 9-2, MA 5-5

Made fair academic progress
Mischievous
Happy and well-adjusted
Leadership qualities shown

May 1958: CA 10-1, MA 5-11

Anxious for attention
Tried to be leader

June 1959: CA 11-1, MA 6-6

Seeking less attention
A bit shy but mischievous

June 1960: CA 12-3, MA 5-5

At times very stubborn
Continued to show leadership qualities

May 1961: CA 13-2, MA 5-9

Stubborn
Happy and well-adjusted

May 1962: CA 14-1, MA 6-3

Usually happy but stubborn

May 1963: CA 15-1, MA 6-9

Rather slow at times
Borders on stubbornness

June 1964: CA 16-1, MA 7-7

Keen about boy-girl relationships
Well-behaved

June 1965: CA 17-3, MA 8-1

A lot of talking for attention
Enjoyed teasing others
Academic achievement can be noted in the following test scores:

1954  Revised Stanford-Binet  IQ  MA  CA  
      59  3-10  6-6  
1959  Revised Stanford-Binet  50  5-9  11-7 
1960  Peabody Picture Vocabulary  53  5-9  12-6 
1962  Goodenough Drawing  42  5-9  13-11 

Achievement Testing--Metropolitan

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<td>1962</td>
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<td>P1-B</td>
<td>1963</td>
<td>2.0</td>
<td>1.4</td>
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<tr>
<td>P1-B</td>
<td>1964</td>
<td>2.4</td>
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(A spelling score was obtained in 1964 of 2.3.)

While at the school, Susan lived in a dormitory setting. There were about twenty-five children in a dormitory. Yearly reports were made on each child in the department.

The following comments were made by people working with Susan in the dormitory:

June 1956
- Very neat
- Pleasant
- Plays hard and rough
- Sees jobs to be done

June 1957
- Has a mind of her own
- Boisterous
- Bully at play
- Always the leader
- Does what she is told not to

June 1958
- Very satisfied with herself
- Naught
- Busy bossing others
- Plays hard
- Good at cleaning
- Likes attention
June 1959
Disobeys to get attention
Bossy with other children
Does tasks well

June 1960
Still bossy
Cries and pouts to get her own way
Likes to boss
Always neat

June 1963
Neat
Cheerful
Aggressive
Boisterous

August 1964
Neat
Aggressive
Converses with peers and adults

June 1965
Often sits alone
Seldom gives a satisfactory answer to a question

First Observation

When I met Susan in August of 1972, it was in a camp-type setting. There were about fifty children at camp. Each child had a counselor, who participated in all activities with the child. The activities included swimming, art, music, religion, organized games, hikes, campfires, and story time. These activities were held in different buildings or in different parts of the buildings. There was a daily schedule for each activity, with a designated time that the activity would begin.

I found Susan to be a very slow-moving adult. It was impossible to motivate her to move faster in anything she did. The slowness covered all activities.

At meal time, Susan would go through two to four false fork- or spoon-to-mouth movements before the food got into her mouth. If she was
in any way distracted, the motions would begin again. She was always
the last one to finish eating her meal. This applied to all meals.

In a game setting, she would never move fast enough to really
participate. She resisted any type of help. She would not hold on to
anyone's hand or be helped by a slight push or pull. If ignored, she
would not enter into the activity on her own.

In a craft situation, she was very negative if anyone tried to
help her. If she were painting or gluing and someone tried to put their
hand over hers to help her, she would pull her hand away.

She rejected any show of physical affection. If someone tried
to hug her or hold her hand or just put their hand on her shoulder, she
would stiffen her body and take their hand away. I felt she needed this
show of affection, so if I were going to hug her or touch her, I would
first tell her what I was going to do. In the beginning, she did resist,
but toward the end of camp she would accept it.

I found her extremely frustrating to work with, in that there
seemed to be no way to motivate her.

During the summer of 1973, I found that I would again be working
with Susan during camp. I felt that she might benefit from a behavior
modification program.

Home Visit
July 1973

I had been told that Susan had regressed and thought the home
situation might be a good place to possibly observe this regression.
I set up an appointment with her mother.
The mother said that Susan had slowed down in all activities. It had become almost impossible for her to participate in family activities. She was verbalizing very little with the family. She had begun to wet the bed in the mornings before she got up. It was obvious from the description that Susan had regressed.

At this time, Susan appeared to be very pale. She did not stand up straight. She was stooped over and would not lift her head for eye contact when someone spoke to her.

The mother appeared to be very concerned about Susan and her present condition. She seemed very nervous and fearful that they were not doing the right things to help Susan.

During the day, Susan did very little at home. It took her an hour to get up in the morning, put her bathrobe and slippers on and get downstairs. At night, it would take her two hours to go upstairs, put on her pajamas, wash up and come back downstairs.

The mother said that when Susan first returned home from school, she would walk downtown by herself. She would often go to work with her mother and do simple filing work or filling envelopes. Susan had been knitting. She would go to activities in the community. In her present state, she had stopped doing all of the above activities.

Susan's sixteen year old sister had noticed that Susan did not seem to want to do anything. The two girls at one time had done many things together.

The family could not pinpoint when Susan began to really slow down. It seemed to be around May of 1972. It had been suggested to the family by the director of the school Susan had attended that Susan attend a nearby center for a complete evaluation. There had been concern expressed
by the mother that there might be something physically wrong. However, Susan had had a complete physical examination; nothing was found to explain the present behavior.

The mother noted that Susan did not like help in anything she did. When getting ready to go someplace, the family would have to start her an hour early so she would be ready when it was time to leave. No one in the family seemed to try to hurry her.

As stated before, Susan rejected any kind of physical show of affection. The mother said that they tried not to touch her because they knew she did not like this.

When preparing to take a step, Susan would move as if she were going to step on something sharp that would hurt. When she did take a step, it would only be one or two and then she would stop. It took her many minutes to get ready to move. She would straighten her shirt, touch her hair and move her hands in a twisting motion. If distracted while in the process of taking a step, the preparation would begin again.

**Siblings**

Susan has an older brother, a younger brother and younger sister, ages twenty-six, twenty-four and sixteen respectively.

The brothers seem to accept Susan and try to include her in family activities. Before Susan began to show signs of regression, she participated in more activities with her brothers. In conversations about her family, Susan rarely mentioned her brothers.

Susan's younger sister seems to play a very important role in Susan's life. When talking about her family, Susan mentions her sister's
name more than any other family member. It was observable that the sister was very concerned with Susan's problems. The sister spent a great deal of time with Susan, trying to get her to participate in activities.

Home Setting

Susan's home is located in a middle-class neighborhood. The home is neat and well-kept both inside and outside.

Susan's bedroom, which she shares with her sister, is upstairs. The room is nicely decorated and very cheerful.

There was a family room on the first floor, where Susan spent the major part of the day. The room contained a record player, television and furniture. On the coffee table were some of Susan's possessions: an autograph book, paper, crayons and a scrap book. Susan's mother said that although the room provided many sources of entertainment for Susan, she rarely used any of these things during the day.

Relationship With Non-Family Members

Susan's mother and father both work, so during the day a housekeeper looked after Susan. The woman appeared to be a very warm person. She shared the family concern for Susan. Susan's performance was no different with the housekeeper than with the family.

Relationship With Father

I was not able to talk to the father about Susan, but other family members stated that he was a very patient man. As with the other members of the family, he was concerned and wanted the best for Susan. However, the care and handling of Susan seemed to be mainly with the mother and sister.
Impression of Home Environment

After visiting the home, it was obvious that Susan's material needs were provided. The family wanted what was best for Susan, but were not sure what was appropriate when situations arose. They questioned hurrying Susan because it was obvious that she resisted this. At times, they ignored her slowness, hoping that the lack of attention would cause her to behave appropriately. Other times, Susan was hurried verbally, thus receiving negative attention. The family appeared to be inconsistent in their methods of handling Susan.

While I was at the home, Susan's mother proceeded to talk about Susan, both negatively and positively, while Susan was in the room. I got the impression that the mother was so concerned about Susan that she did not even realize that this could have an effect on Susan.

In general, it appeared that Susan needed something to motivate her. It was felt that if her present behavior continued, she would become more withdrawn.
CHAPTER IV

BEHAVIOR MODIFICATION PROGRAM

A Behavior Modification approach was used with Susan because it was felt that it could provide the stimuli needed to motivate Susan. The expectations for Susan in the Behavior Modification Program were totally different and more demanding than she was accustomed to in the home environment. If she could obtain success, then perhaps her parents would realize that Susan was capable of more desirable behaviors. As a result, they would raise their level of expectancy for her.

Behavior Modification

Modification of behavior is not a new technique. Man has been modifying the behavior of fellow man since the beginning of time. A compliment for actions or appearance is going to reinforce that behavior to happen again. A negative statement is going to show that the behavior is not acceptable, thus reducing further such behavior or causing it to continue, depending on the individual and situation.

What is new is the interest shown and the methods used in carrying out behavior change.

It is significant that during the past decade, when it is becoming increasingly evident that mankind must find new and innovative ways of solving ever-increasing problems, that interest and research in Behavior Modification theory and techniques has burgeoned at a rate unparalleled in the history of psychology. It is during this period that we have seen Behavior Modification taken out of the animal laboratory and placed where it rightfully belongs—in the classroom, in the clinic, in hospitals and in homes. During a time when man has little margin for error, we
have finally begun to recognize and utilize the precise and ob­jective techniques which this body of theory provides and thereby attempt to remove chance factors, which we can ill-afford, from the learning process.\textsuperscript{1}

There are several steps in effectively changing an individual's behavior. The first is to select the behavior to be changed. It must be considered how the changed behavior will enable the individual to function on a more desirable level.

Teach behavior that will be useful or relevant in activities which will follow the present situation and which will therefore be reinforced by natural, existing contingencies and will not require the agent or the special program for its maintenance.\textsuperscript{2}

The next step is to develop a method to measure and record the present behavior. This step is known as baseline. It is an important step in that it is essential to know how often or in what way the behavior occurred in order to prove in the end that the behavior has changed.

After selecting the behavior and taking baseline, the next step is to set up a procedure to change the selected behavior. It is at this time that rewards or punishments are brought in to reinforce the desired change. The method of reinforcement must, again, be appropriate for the individual and the situation. In many classrooms, teachers use token reinforcers. These could be stars, checkmarks, etc. Token reinforcers can be seen. They are often on display for everyone in the classroom to see. Another very effective reinforcer is social attention. A smile, an encouraging word, physical contact or a compliment can do just as much as a material reinforcer with many individuals.

\footnotesize\textsuperscript{1} Robert H. Bradfield, \textit{Behavior Modification--The Human Effort} (California: Dimensions Publishing Company, 1970), p. V.

\footnotesize\textsuperscript{2} Ibid., 27.
Perhaps the most important thing in changing behavior is being consistent. If a procedure is set up, it must be carried out as planned. The reinforcement must be given at, and only at, appropriate times.

Decisions regarding the schedule by which you (parents) reinforce are usually made unconsciously. Unfortunately, these tend to depend on your mood, how much the behavior irritates you, your general personality factors, and your consistency in carrying out the schedule. It would be better if this were not so. Decisions by you should be made very deliberately, at a conscious level. They have a direct bearing on the rate at which the child learns a new behavior, and on the ease with which he returns to an old undesirable behavior.\(^3\)

Data must be taken while carrying out the procedure. There are different methods for taking the data. A stopwatch may be used if measuring how long the behavior continues. A timer may be used if a certain amount of time has been given for the behavior. Many teachers use children's work for a measure of the behavior. Parents use charts with stars to measure when tasks are completed. Again, the method depends on the individual and the situation.

The data can be transferred to a graph to give one the total picture of the individual's progress. "By graphing compiled observational data, the behavior modifier creates a visual representation of the level of the behavior observed."\(^4\)

When it is observable that the behavior has changed, the question arises as to how to continue the desired behavior without the reinforcement.

Intermittent schedules of reinforcement are more effective and efficient in maintaining behavior once higher rates have been


established. In intermittent reinforcement, only certain responses are reinforced. One advantage of intermittent reinforcement is that it is more resistant to extinction than continuous reinforcement. That is, if reinforcement stops, the behavior will continue for a longer time following intermittent reinforcement than it will following continuous reinforcement.\textsuperscript{5}

In intermittent reinforcement the individual becomes accustomed to only being reinforced once in a while. However, the desired behavior will still be maintained if used correctly.

There are many other procedures used in methods of Behavior Modification. It can become a very time-consuming procedure, but it does not have to be to be effective.

**Description of Camp Program**

The camp program was for a two-week period during the summer. The camp was held at a residential school in the Mid-West, the same school that Susan attended for twelve years.

About fifty campers and fifty counselors participated in the program. Each camper had a counselor. The counselor participated in all activities with the camper. The total group was divided into four smaller groups, according to age. Each camper experienced a one-to-one relationship with a counselor and a peer relationship with the other campers in the group.

Each group had a daily schedule of activities. These activities included: swimming, story telling, music, arts and crafts, hiking, religious education, organized games, campfires and free time.

There was a leader for each activity, who planned and directed the activity.

Susan and I were in Group 4. Our daily schedule was as follows:

7:00--Rise
7:25--Flag Raising
7:30--Breakfast
8:00--Making Beds and Chores
8:30--Morning Prayer
9:00--Organized Games
9:40--Snack and Mail
10:00--Religious Education
10:30--Art
11:30--Clean-Up for Lunch
11:45--Lunch
12:30--Nap for Campers
    In-Service for Counselors
1:00--Free Play for Campers
2:00--Music
2:30--Story
3:00--Swim
4:30--Mass
5:00--Supper
6:00--Hike
7:00--Organized Games
8:00--Campfire
9:00--Bedtime

It was very important for the campers and counselors to get to the activities on time, so that they could begin as scheduled.
Description of Procedures Used

Procedure #1

The first goal set for Susan was to get her to start walking. If Susan were left alone, she would make no attempt to move. She would, as stated before, move her hands in a twisting motion, touch her hair or straighten her shirt.

It was impossible to get a baseline on her beginning to move because she would not move on her own.

To accomplish the goal, the following procedure was explained and reviewed several times. She was shown a kitchen timer, which was set to ring in five minutes. If Susan started walking before the timer went off, she would be rewarded with a star and verbal praise. If, at the end of the day, she had earned five stars, she would earn an ice cream cone or a candy bar.

However, if Susan did not start walking before the timer went off, she would be pushed from behind or pulled by the wrist to the set destination.

Procedure #2

The second goal set up was to get Susan, once she had accomplished the first goal, to walk faster in order to get to activities on time.

Baseline was taken on some of the distances, as seen on Table 1. A comparison is shown between Susan's time and the time it took me to walk the same distance. To establish my walking time, I walked the distance three separate times. The first two times I walked by myself; the third time I walked while carrying on a conversation with a companion. I then averaged the three times to come up with the figures shown.
TABLE 1
BASELINE OF SUSAN'S WALKING TIME
AS COMPARED TO MINE--PROCEDURE 2

<table>
<thead>
<tr>
<th></th>
<th>Susan's Time</th>
<th>My Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building A to Pool</td>
<td>25 mins. 12 secs.</td>
<td>3 mins. 45 secs.</td>
</tr>
<tr>
<td>Pool to Building B</td>
<td>40 mins. 20 secs.</td>
<td>3 mins. 30 secs.</td>
</tr>
<tr>
<td>Dining Room to Playground</td>
<td>15 mins. 6 secs.</td>
<td>1 min.</td>
</tr>
<tr>
<td>Playground to Campfire</td>
<td>25 mins. 23 secs.</td>
<td>2 mins. 13 secs.</td>
</tr>
<tr>
<td><strong>Total Mins. &amp; Secs.</strong></td>
<td><strong>106 mins. 55 secs.</strong></td>
<td><strong>10 mins. 28 secs.</strong></td>
</tr>
</tbody>
</table>

During the second procedure, a kitchen timer and a stopwatch were used. The timer was set for a certain number of minutes, depending on destination. At the same time, the stopwatch was set to measure how long it took to walk to the set location. It was hoped that Susan would beat the timer in getting to the destination.

When she was successful in beating the timer, a star and verbal praise were given. The total number of stars at the end of the day earned a reward. In the beginning, I determined the reward to be earned. At times, Susan would show an interest in riding on the merry-go-round or visiting with a friend. These activities would then be set as a reward to be earned.

Results Observed During Camp Program

The first goal, to get Susan to start walking, was met in a day and a half. As mentioned in Chapter III, Susan resented being pushed
in any way. She, therefore, resented being pushed or pulled when the timer went off. For the first day and a half, Susan did not meet the criteria to earn a star or verbal praise. She was pushed or pulled to every activity.

At noontime of the second day, I had set the timer to go from art class to the dining room. The timer went off and I began to push Susan from behind. She took a few forced steps, but then became very rigid. She then moved beside me, took hold of my hand, and started walking with me.

For the remainder of the two weeks, Susan took my hand when it was time to walk to a new setting. She would initiate the beginning steps.

The following conversation took place on the evening that our first goal was accomplished. We were swinging on the swings when the conversation took place.

Susan: "Jane, I know why you push me. It's because you want to help me."
Jane: "Do they push you at home?"
Susan: "No."
Jane: "Would you like them to push you?"
Susan: "Yes."

The above conversation seems to show that Susan equated the pushing and pulling with someone caring about her and wanting to help her.

The second goal was met, in that Susan did begin to walk faster. I think she could have improved even more; but with the limited time, this was impossible.
Table 2 shows a sampling of Susan's walking times. The Table also shows the total number of minutes and seconds of walking time. As is shown, the time spent walking was almost cut in half from the third day to the twelfth.

TABLE 2

SAMPLING OF SUSAN'S WALKING TIME DURING CAMP PROGRAM

<table>
<thead>
<tr>
<th>Day</th>
<th>3rd</th>
<th>6th</th>
<th>9th</th>
<th>12th</th>
<th>Difference 3 to 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dorm to Breakfast</td>
<td>9/3</td>
<td>6/39</td>
<td>7/30</td>
<td>4/36</td>
<td>4/27</td>
</tr>
<tr>
<td>Breakfast to Chapel</td>
<td>4/21</td>
<td>3/15</td>
<td>3/4</td>
<td>2/13</td>
<td>2/8</td>
</tr>
<tr>
<td>Chapel to Games Field</td>
<td>9/20</td>
<td>7/11</td>
<td>7/10</td>
<td>6/34</td>
<td>2/46</td>
</tr>
<tr>
<td>Games Field to Snack</td>
<td>11/23</td>
<td>8/15</td>
<td>5/50</td>
<td>5/19</td>
<td>6/4</td>
</tr>
<tr>
<td>Snack to Religious Education</td>
<td>7/28</td>
<td>5/30</td>
<td>6/0</td>
<td>5/24</td>
<td>2/4</td>
</tr>
<tr>
<td>Religious Education to Art</td>
<td>8/3</td>
<td>5/14</td>
<td>5/10</td>
<td>4/48</td>
<td>3/15</td>
</tr>
<tr>
<td>Art to Dining Room</td>
<td>7/12</td>
<td>5/11</td>
<td>4/40</td>
<td>4/30</td>
<td>2/42</td>
</tr>
<tr>
<td>Music to Story</td>
<td>5/19</td>
<td>4/19</td>
<td>3/20</td>
<td>3/14</td>
<td>2/5</td>
</tr>
<tr>
<td>Story to Pool</td>
<td>7/45</td>
<td>6/48</td>
<td>6/20</td>
<td>5/34</td>
<td>2/11</td>
</tr>
<tr>
<td>Mass to Supper</td>
<td>3/27</td>
<td>3/1</td>
<td>2/13</td>
<td>1/10</td>
<td>2/17</td>
</tr>
<tr>
<td>Campfire to Bed</td>
<td>13/36</td>
<td>12/30</td>
<td>10/3</td>
<td>9/47</td>
<td>3/49</td>
</tr>
<tr>
<td><strong>Total Minutes and Seconds</strong></td>
<td>110/6</td>
<td>74/26</td>
<td>65/53</td>
<td>57/5</td>
<td>53/1</td>
</tr>
</tbody>
</table>

Other Areas of Progress

Because of the regressive state Susan was in, it was impossible to measure and take data on all areas. With much encouragement from me,
as well as many other people in the camp program, Susan did improve in many areas. I will describe some of these areas.

It took Susan an hour and a half to eat the following meal: tuna casserole, roll, applesauce, cookie and milk. It was felt that Susan could eat faster. A kitchen timer was set for forty-five minutes. If Susan did not finish her meal before the timer went off, what was left of the meal would be taken away from her. Susan soon showed she could beat the timer and finish her meals. Toward the end of the program, the timer was taken away.

Susan did not want to go swimming. At first she had to be forced into the pool. Once she was in the water, she did have a good time by splashing other people, throwing a ball and using the kickboard.

At the beginning of camp, Susan would not talk to the other campers and counselors. As she began to gain confidence in herself, she began to converse and join in activities with the others.

One of the male counselors was very instrumental in bringing out Susan's personality. He began calling her "his beautiful brown eyes." She would laugh when he said this to her. Her mother later told me that it had been a long time since anyone in the family had seen her laugh.

By the end of the two-week period, Susan's physical appearance had changed. She was standing straighter. She was relating to the campers and counselors.
CHAPTER V

FOLLOW-UP AND FINAL IMPRESSIONS

During the two-week camp program, Behavior Modification proved to be a successful method in working with Susan. Not only did I feel it was successful, but several other people involved in the program noted a change in her behavior. Susan was moving faster and carrying herself with more confidence.

After the first week of the program, I scheduled a conference with Susan's mother and younger sister. During the meeting, I outlined the procedure used with Susan and the success to that date. The mother was very encouraged with the progress and asked how this could be implemented at home. I suggested possible procedures dealing with rewards.

My strongest recommendation was that Susan should have a complete evaluation. This had been suggested in the past by other people who had worked with her and observed her regressive state. I felt that as a result of the evaluation, an appropriate program could be set up for Susan so that she could continue to be motivated and achieve success.

Follow-Up Since Camp Program

Susan was evaluated by a multi-disciplinary team at a center in the Mid-West.

The following are summaries of the individual team evaluations.

The Psychiatric Evaluation described Susan as maintaining her body in a depressed position. It was felt that Susan was in contact with
reality and did understand what was going on around her. The report stated that Susan was controlling her family by her regressive behavior. It was suggested that the problem could be organic or possibly a delayed grieving process since her separation from the private school she had attended and where she had also gone to camp for two summers. It had been reported by the parents that Susan had functioned at a higher level when she returned home from the camp setting, but soon regressed.

The recommendation of the psychiatrist was that Susan be hospitalized to eliminate possible organic causes. Susan was hospitalized shortly after Thanksgiving and stayed in the hospital until February.

The Pediatric Summary showed a great deal of concern for Susan's severe weight loss and depression. The following shows Susan's loss of weight over a period of years.

<table>
<thead>
<tr>
<th>Date</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966</td>
<td>117 pounds</td>
</tr>
<tr>
<td>May 1972</td>
<td>105 pounds</td>
</tr>
<tr>
<td>May 1973</td>
<td>85 pounds</td>
</tr>
<tr>
<td>August 1973</td>
<td>93 pounds (after camp program)</td>
</tr>
<tr>
<td>November 1973</td>
<td>72 pounds</td>
</tr>
</tbody>
</table>

Susan was treated for anorexia nervosa (refusal to eat). During hospitalization, it was found that Susan's thyroid gland was not functioning properly. She was given medication for this; however, there were no changes in behavior noted.

The Behavioral Summary noted that Susan did respond to Behavior Modification. It was found that Susan responded best to social reinforcers, such as body contact, praise or a smile.
During the evaluation by the Behavioral Unit, Susan was required and expected to perform to certain standards. It was felt that these requirements were not present in the home setting. Susan was able to perform to the set standards.

The Behavioral evaluators felt that, given the appropriate conditions, the present regressive behavior could possibly be stopped and reversed.

It was recommended that possible placement be found for Susan so that a program could be carried out. Although Susan came from a family that loved her and was concerned about her, it was felt that it would be difficult for the family to systematically apply remedial methods.

Placement was found at a residential facility for adult retardates. Susan was enrolled at the facility in March 1974. She travels by bus daily from the facility to a Sheltered Workshop.

Improvements in her behavior have been noted, but progress is slow. However, this is to be expected due to the condition she was in.

Susan's case worker from the center where the evaluation took place said that a definite diagnosis has not been made as to the cause of her condition. There is still controversy as to whether the cause is organic or environmental.

What the future for Susan will bring is not known. If she is able to respond to treatment, she will be able to change her whole existence. She will be able to function on a higher level and become involved in many more of life's activities. However, if she does not continue to respond to treatment, then it is my opinion that she will regress to a lower functional level. If this happens, she will probably be institutionalized.
BIBLIOGRAPHY

Works Cited


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Sources Consulted


