



1969

Effects of Hospitalization Upon the Child

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EFFECTS OF HOSPITALIZATION UPON THE CHILD

by

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In the Department of Nursing
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PREFACE

I feel that the subject of this paper is important to all in the medical profession--especially those who work closely with children in the hospital. I chose this particular topic because I wanted to learn a great deal more about children's reactions to hospitalization, so that I might put this information to use as a pediatric nurse. In my limited experience with pediatric nursing, I have seen many avoidable situations which I felt were traumatic for the child. Empathy was the main feeling I had at the time; I knew few principles to support my feeling. In undertaking this paper I sought to learn "why" every child must be considered individually.

In part of this paper I have reported on sixteen research studies which have been concerning the effects of hospitalization upon the child. This was the total number of such studies I was able to locate. Other sources I consulted are also listed in the bibliography. Although these were not specific studies, I found much background material and general suggestions about childhood hospitalization in them.

The following book was used in writing this paper:

Turabian, Kate. A Manual for Writers. Chicago: University of Chicago Press, 1967.

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INTRODUCTION

The following pages are divided into three parts. The first part is a survey of research studies which have been done concerning the effects of hospitalization upon the child. These studies are arranged in order of publication--from the first study published in 1945 to the last one, which was published in 1968. A conclusion follows the individual reports of these studies.

The second part of the paper consists of a small-scale study which I conducted myself. It was done for personal interest and does not strictly follow research techniques. See Appendix I for the procedure used. Analyses by Dr. Pape and Dr. Sedarat (both I. W. U. professors) are included. My own table of observations is also included. I did not attempt to evaluate these groupings I found because I think most of them are self-explanatory and I have had no background in such analyzing.

The last part consists of recommendations which I feel are based on the facts learned from the research I did for this project.

PART I

SURVEY OF RESEARCH STUDIES

CHAPTER I

RESEARCH STUDIES

I. SPITZ, R. A. "HOSPITALISM"

This study is important because it concentrates on the first year of the child's life--a time rarely studied by researchers. Although this study is concerned with the effect of continuous institutional care of very young children for reasons other than sickness, I chose to report on it because of the age of the children studied and the implications it may have for the hospitalized child.

"The term hospitalism designates a vitiated condition of the body due to long confinement in a hospital, or the morbid condition of the atmosphere."¹ Institutionalized children almost without exception developed psychiatric disturbances and became asocial, delinquent, feeble-minded, psychotic, or problem children. The two factors considered responsible for this were lack of stimulation and absence of the child's mother.²

As mentioned earlier, very young children have not been the subjects of research. This was because researchers

¹Rene A. Spitz, "Hospitalism," The Psychoanalytic Study of the Child, I (1945), 53.

²Ibid., p. 54.

did not have a method of evaluating mental development during the first year of life. Later Hetzen and Wolf devised baby tests which could be used to evaluate development as a whole, expressed in terms of the development quotient.³ Utilizing this new criterion for evaluation, a study was conducted.

Material.--

The subjects for this study were 164 children confined to two different types of institutions situated in different countries of the Western hemisphere. This study concentrated on the first year of life.⁴

Procedure.--

A basis of comparison was established by investigating non-institutionalized children of the same age group in their parents' homes in each of the countries. Thirty-four of these were observed. A summary of the number of children in each of the four environments follows:

Environment	Nursery	Corresponding Private Background	Foundling Home	Corresponding Private Background
Number of Children	69	11	61	23

In each of these cases the Hetzen-Wolf baby tests were administered. Many of the tests, all the experiments, and

³Ibid., p. 55.

⁴Ibid., p. 56.

some of the special situations were filmed on sixteen millimeter film. In fact, 31,500 feet of film preserve the results of this study.⁵

Results.---

The results can be summarized as follows:

Type of Environment	Cultural and Social Background	Developmental Quotients	
		Average of First Four Months	Average of Last Four Months
Parental Home	Professional	133	131
	Village Population	107	108
Institution	Nursery	101.5	105
	Foundling Home	124	72

As can be seen from these results, the children in first three environments were well developed and normal at the end of their first year. However, the children in the fourth environment began at a high level, but deteriorated a great deal.

In addition to the manifestations of hospitalism suffered by the children in the foundling home, their resistance to disease was decreased also. In a survey of eighty-eight children from eighteen months to two and one half years, only two of the twenty-six children could speak a couple of words. Hardly any of them could eat alone, and all were incontinent.⁶

⁵ Ibid., p. 57.

⁶ Ibid., p. 59.

On the other hand, the children in the nursery (ranging from eight to twelve months) were very active and curious. They vocalized freely and some were able to speak a word or two. All understood the significance of simple social gestures, and all walked with support and some without it.⁷

Also, as part of this study, the environments in both the nursery and foundling home were studied. In the nursery the following points were important: each child had toys; the corridors were bright and gave the impression of warmth; and every child had his mother or a mother figure present. However, in the foundling home, there were no toys and the halls were black and deserted. Very often sheets were hung over the side rails of the beds, so the children could not see out at all. Due to lack of stimulation in such conditions, babies lie supine for long periods of time. In fact, oftentimes a hollow is worn into the mattress. In addition, there are only six nurses for forty-five babies.⁸

In conclusion, it can be seen that the children in the foundling home had a much better inherited developmental quotient than those of the nursery; however, they show a rapid fall, while those in the nursery showed a steady rise.

⁷Ibid., p. 60.

⁸Ibid., pp. 62-64.

II. Spitz, R. A. "Hospitalism: A Follow-up Report"

This follow-up was done to determine further the condition of the individual children in the Foundling Home, since the previous study showed such remarkable results concerning these children.

The Foundling Home was visited at four-month intervals for two years. During these visits, four procedures were carried out: nursing personnel were asked a series of questions; the behavior of each child was observed; movies were taken; and body measurements (weight, height, and occipital circumference) were taken. The questions concerned three sections of the personality.

- (1) bodily performance (could he sit, stand, or walk)
- (2) intellectual capacity (could he eat and dress alone)
- (3) social relations (number of words spoken and if spoken and if toilet trained)⁹

Only a small number of the children in the original study could be seen. In the previous study a total of ninety-one children from birth to three years were studied. In the first

such as an epidemic of measles, intercurrent sickness, and cathexia. By the end of the second year, seven more of these had died. This is a mortality rate of over thirty-seven per

R. A. Spitz, "Hospitalism, A Follow-up Report,"
The Psychoanalytic Study of the Child, II (1946), 113.

cent in two years. An additional thirty-six children could not be studied: twenty-three were taken back into their families, seven were adopted, two were placed in children's institutions, and four could not be accounted for. In short, only twenty-one of these originally seen were still at the institution. Of these the youngest was two years, and the oldest was four years, one month.

Data on Development

A.	Bodily development	
1.	Incapable of any locomotion.....	5
2.	Sit up unassisted (without walking).....	3
3.	Walk assisted.....	8
4.	Walk unassisted.....	5
B.	Handling materials	
1.	Cannot eat alone with spoon.....	12
2.	Can eat alone with spoon.....	9
3.	Cannot dress alone.....	20
4.	Can dress alone.....	1
C.	Adaptation to demands of environment ¹⁰	
1.	Not toilet trained in any way.....	6
2.	Partially toilet trained.....	15
D.	Speech development	
1.	Cannot talk at all.....	6
2.	Vocabulary of two words.....	5
3.	" " three to five words.....	8
4.	" " twelve words.....	1
5.	Uses sentences.....	1

Conclusion.--

As can easily be seen, the mental development of these twenty-one children is very retarded. The number of children and their ages can be summarized as follows:

¹⁰Ibid., p. 114.

Age (in years)	Number of children
2.4-2.8.....	12
2.8-3.2.....	4
3.2-4.1.....	5

Of all these children, only three fall into the weight range of a normal two year old child. Also, only two have attained the length of a normal child of that age. Consequently, the physical development of these children appears to be that of a child half their age.

In the previous study it was stated that the psychological damage of maternal deprivation of those in the Foundling Home was irreparable. This was found to be true. When the children became fifteen months of age, they were placed in a more favorable environment. Even though the children now had more stimulation, the process of deterioration was progressive.¹¹ Whether this damage can be repaired by therapeutic measures remains to be investigated.

Nursery.---

As a rule children left the nursery when they were one year old. However, it was found that twenty-nine stayed longer than a year. The age at which they left varied from the thirteenth to the eighteenth month. This means that the oldest of them was half a year younger than the youngest child in the follow-up in the Foundling Home and two and

¹¹Ibid., p. 115.

one-half years younger than the oldest. However, these nursery children were much further ahead in development. They ran around, dressed and undressed themselves, fed themselves, spoke a few words, understood and obeyed commands, and older ones showed a consciousness of toilet requirements. All played games with each other and with the observer. In all of these children, tests showed that developmental quotients had surpassed the normal age level.¹²

In the three and one-half years of study in this nursery, one hundred twenty-two infants were followed for about a year. During this time not one child died. Past records were studied, and it was found that during the last fourteen years, three children had died (one of pneumonia and two of pyloric stenosis).

In conclusion, it is evident to the reader that institutional care can be of high quality. It was also recommended that the methods used in the Foundling Home be evaluated.¹³

¹²Ibid., p. 116.

¹³Ibid., p. 117.

III. Jessner, L., G. E. Blom, and S. Waldfogel

"Emotional Implications of Tonsillectomy
and Adenoidectomy on Children"

In this study 143 children were observed undergoing tonsillectomy and adenoidectomy. The only criterion for selection was accessibility for follow-up.¹⁴

Procedure.--

Each child was seen at the time of admission. The mother was interviewed by a psychiatric social worker who sought specific information regarding the child's development, previous experiences of stress, and preparation for operation. Each child was observed at intervals during hospitalization by a child psychiatrist. In addition, the nurses made notations of the child's reaction to the ward. When possible the mother and child were seen in follow-up interviews within one week or two, at the end of one month, and at longer irregular intervals.¹⁵

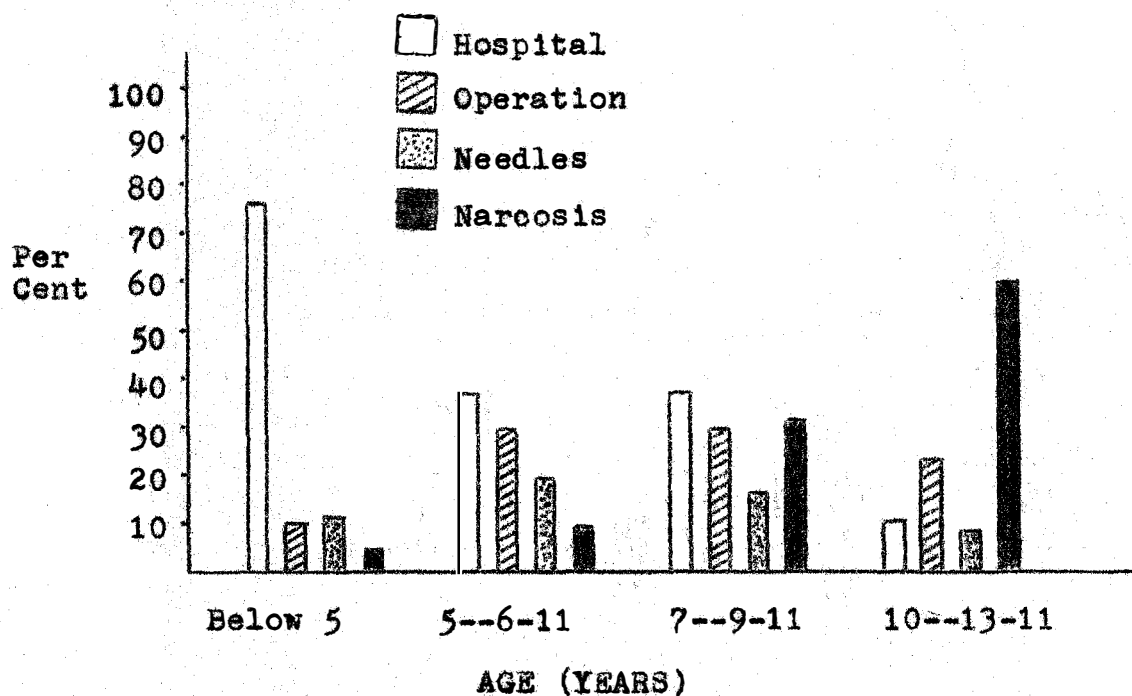
In this sample there were eighty boys and sixty-three girls. The following table shows the ages of the children when they had their operation.

¹⁴Lucie Jessner, G. E. Blom, and S. Waldfogel, "Emotional Implications of Tonsillectomy and Adenoidectomy on Children," The Psychoanalytic Study of the Child, VII (1942), 126.

¹⁵Ibid., p. 127.

Age at Time of T. & A.	Male	Female	Total
Under 3	3	2	5
3	9	3	12
4	9	6	15
5	15	14	29
6	8	9	17
7	8	8	16
8	6	6	12
9	5	5	10
10	6	3	9
11	5	1	6
12	4	1	5
13	1	3	4
14	1	2	3

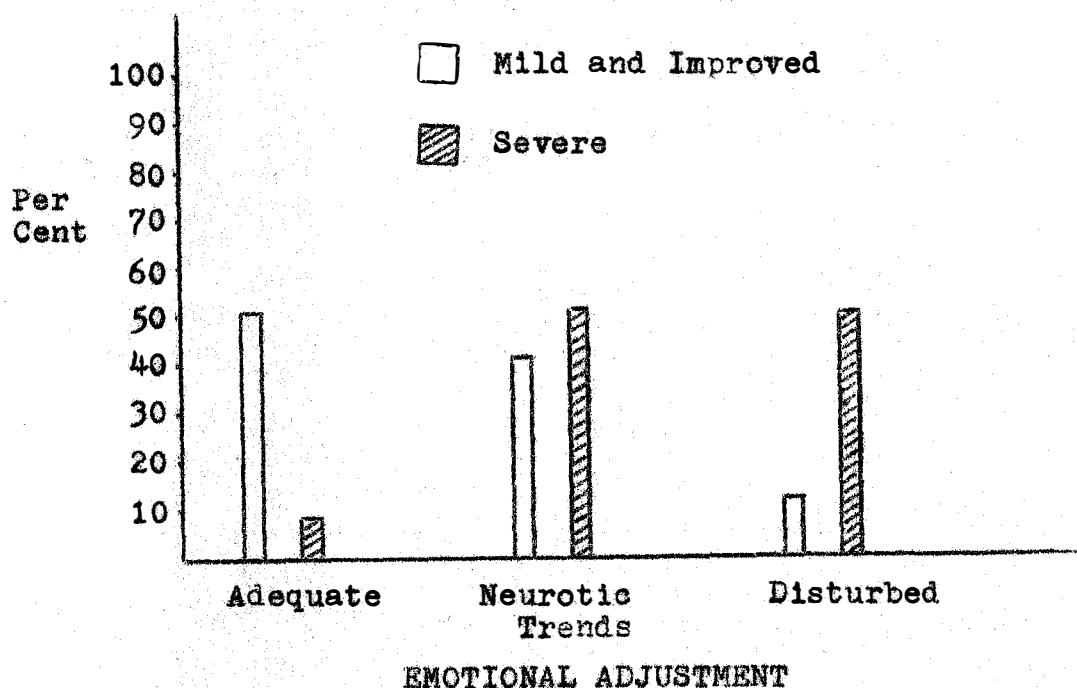
FOCUS OF ANXIETY FOR DIFFERENT AGE GROUPS¹⁷



¹⁶Ibid., p. 141.

¹⁷Ibid., p. 142.

RELATION OF EMOTIONAL ADJUSTMENT TO POST OPERATIVE REACTION¹⁸



Conclusion.--

Although this experience did arouse anxiety in all of the children, most were able to master the experience without any serious emotional consequences. does not include the possibility of a delayed reaction or later reactivation. However, in some, striking behavior changes occurred, and some persisted for months and even years after the operation. Also, in a very few cases definite improvement in emotional adjustment seemed to occur following the operation.

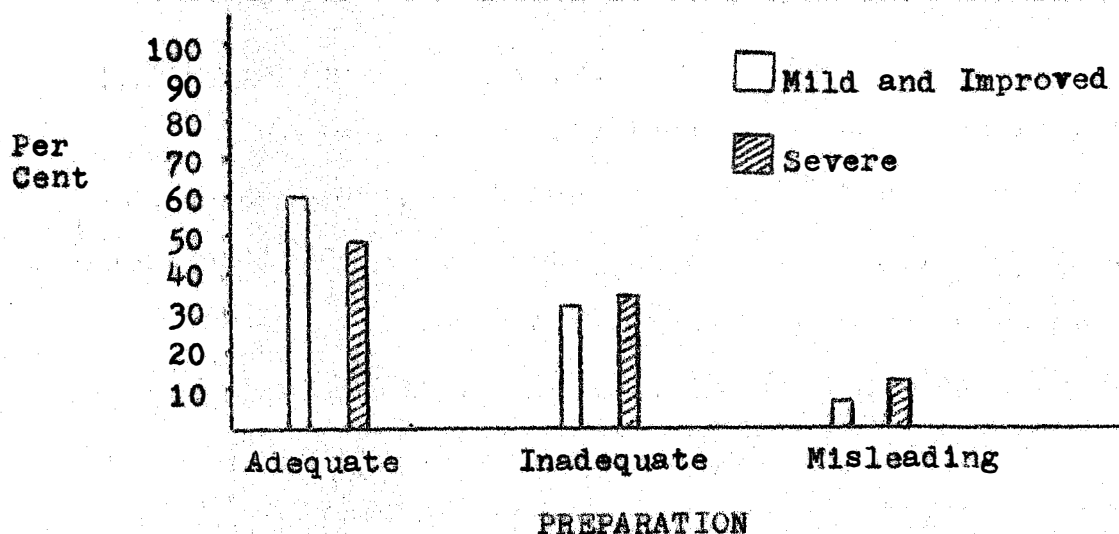
Twenty-five post operative reactions were severe; this included thirteen boys and twelve girls, and was fairly equally distributed among age groups. The types of severe

¹⁸Ibid., p. 143.

reactions were:

- A. Eating disturbances
 - 1. Overeating
 - 2. Undereating
- B. Sleep disturbances
 - 1. Screaming; nightmares
 - 2. Difficulty in going to sleep
- C. Speech disturbances
 - 1. Voice change
 - 2. Refusal to talk
- D. Tics and mannerisms
- E. Fears: hospital, white coats, death, etc.
- F. Regressive behavior
 - 1. Increased dependency
 - 2. Wetting, soiling, etc.¹⁹

RELATION OF PREPARATION TO POST OPERATIVE REACTION²⁰



In short, the majority of children had mild reactions lasting one week to ten days after the operation. They were demanding, irritable, depressed, and had occasional nightmares

¹⁹Ibid., p. 143.

²⁰Ibid., p. 146.

and other sleep disturbances. They also had fears of abandonment and mutilation.²¹ "The effectiveness with which the child can use his defenses is influenced by the extent to which the adults comprehend that even such a minor surgical procedure has a great emotional impact."²²

²¹Ibid., p. 166.

²²Ibid., p. 168.

IV. Jackson, Katherine, et. al., "Behavior Changes
Indicating Emotional Trauma in
Tonsillectomized Children"

For three years, 140 children (from three to eight years of age) were studied before and after tonsillectomy to learn whether and under what circumstances this experience is associated with behavior changes which indicate emotional trauma.²³

Method.--

Since the method was described in an earlier report, only a summary was given in this article. A psychiatric social worker held conferences with the mother and child to determine the child's behavior and emotional status. These interviews took place before tonsillectomy, in the immediate post operative period, and after three months. The data gathered in these

composed of three pediatricians, the social worker, and the anesthetist. Consulting with the committee were two psychoanalysts, a psychologist, and a public health pediatrician. About half of the children were anesthetized by a person with special knowledge and experience in emotional problems.

Problems.--

The validity of the information obtained by the social worker depends on the intelligence and emotional maturity of the mother, the emotional balance of the child, and the ability of the social worker to evaluate both.²⁴

²³K. Jackson, et. al., "Problem of Emotional Trauma in Hospital Treatment," Pediatrics, XII (1953), p. 23.

²⁴Ibid., p. 23.

A second problem also arose; at first the investigation was planned to be a controlled study. At times this proved to be impossible. The social worker received cooperation only when he offered reassurance; therefore, the interviews became almost identical. At first the doctors had planned to divide their time between two hospitals; however, since one hospital concentrated on emotional problems, doctors preferred to send their patients to this one. Lastly, the methods used by the anesthetists differed.

The third major problem was that of compiling and reporting data. Since the sample was made up of patients of certain surgeons, all tended to be of similar economic level, social status, and race.

Also, numerical evaluation of the findings was often impossible. Only in objective signs (such as nightmares or bedwetting) could there be mathematical comparison before or after the hospital experience. Finally, the "unlimited number of variables which is present in any consideration emotional problems made it impossible to state categorically that any one observation was the undisputed result of any single factor."²⁵

Findings.--

In more than half of the one hundred forty children,, the behavior either showed no change of any kind or was improved. About thirty per cent showed a mixed reaction

²⁵Ibid., 24.

with improvement in some traits and disturbance in others. In most of these the improvement was predominant.²⁶

An index system of scoring was used. The children who showed only improved behavior had indices of nine or less. A child with no change had an index of ten. One who showed deterioration in one category would have an index of eleven. In the case of a mixed response, a child whose disturbance was compensated for by improvement, the index would be ten. If the improvement outweighed the disturbance, the index would be nine or less. On the other hand, if the deterioration was predominant, the index would be eleven or more.

No child with an index of eleven or below showed sufficient change in behavior to be considered adversely affected. In thirteen cases the index was twelve or above. However, in all of these, the past history also indicated behavior changes which were due to emotional trauma.

Among the children staying at the hospital where the staff gave special emotional considerations and special anesthetists, four were in the high index group. The ratio of high index in this group is one to nineteen. In the cases treated at the hospital without special anesthesia, the ratio of high index is one to eight. Among the cases treated at other hospitals the ratio is one to five.

The personal history of each child was evaluated in order to learn if there were any other traumatic experiences

²⁶Ibid., p. 25.

in the child's life which may have influenced the reaction to this hospital experience. Three main groups were compiled for the evaluation:

- I. Serious threat to the integrity of the home, such as known serious emotional inadequacy in a parent or serious marital disturbance.
- II. Previous potentially traumatic experience, such as early separation from the mother including hospitalization, death of a parent or sibling or noticeable congenital abnormality.
- III. Any aspect of this hospitalization which might add to the possibility of emotional trauma, such as excessive treatments, absence of the parent or unwise handling by hospital personnel.²⁷

In cases where none or one of the above factors is present, one child in twenty-six is found in the high index group. Where there are two or three factors the ratio is one to six and seven tenths, or four times as high. In hospitals where the staff is concerned with psychological aspects of hospitalization, one child in eight had a high profile index. In hospitals where no special care is taken in this area, the ratio is one to fourteen.

Not much difference is found in the incidence of high profile index among those four years of age and older. The three year olds showed a higher incidence of minor behavior disturbances; however, none were found in the high profile group.

Summary.--

In short, ninety-one per cent seemed either benefited or scarcely affected by the experience.²⁸

²⁷Ibid., p. 27.

²⁸Ibid., p. 27.

V. Prugh, Dane G., et. al., "A Study of the Emotional
Reactions of Children and Families to
Hospitalization and Illness"

"With current improvements in medical management has come an increasing awareness among pediatricians of the importance of the psychological aspects of hospital care."²⁹ The attitudes and qualifications of ward personnel who apply preventive techniques are even more important than these techniques themselves.³⁰

Previous investigations have centered upon emotional reactions of children rather than parents. However, it was recognized that the child's reaction may reflect the attitudes and anxieties of the parents.³¹

Purpose.---

This study was undertaken to evaluate:

1. the nature of the immediate reactions and modes of adaptation of children and parents to the impact of hospitalization on a medical ward in a children's hospital
2. incidence and character of long range emotional reactions of children and families to the experience of hospitalization
3. the degree of modifiability of such reactions with the use of an experimental program of ward management.³²

²⁹Dane G. Prugh, et. al., "A Study of the Emotional Reactions of Children and Families to Hospitalization and Illness," American Journal of Orthopsychiatry, XXIII (1953), 70.

³⁰Ibid., p. 71.

³¹Ibid., p. 72. ³²Ibid., p. 73.

Method.---

Criteria for selection: Two groups of 100 children each were selected; one control group and one experimental group were utilized. All were two to twelve years old and required diagnosis and treatment. Most had acute illnesses and were in the hospital for short periods of time. Both groups were matched as closely as possible in relation to age, sex, diagnosis, and other factors.³³ No child was included in the study if he did not stay in the hospital for more than forty-eight hours, and only children who had been hospitalized earlier for only brief periods were included. However, it was necessary to have only a minimum of hospital experience within the last year and none within the past six months. Only fifty children were available for final study because of difficulty of follow-up and criteria given above.

RELEVANT STATISTICS FOR BOTH GROUPS³⁴

Age (years)	Control			Experimental		
	Male	Female	Total	Male	Female	Total
2-4	8	10	18	7	9	16
4-6	5	5	10	7	7	14
6-10	9	10	19	8	9	17
10-12	<u>3</u>	<u>0</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>
	25	25	50	23	27	50

³³Ibid., p. 73.

³⁴Ibid., p. 74.

	Control	Experimental
Average length of stay	8.08 days	6.01 days
No. of children with previous hospitalizations	21	20
Nature of adjustment prior to hospitalization		
Maximal	56%	34%
Limited	42%	54%
Inadequate	22%	12%
	100%	100%

During the control period a base-line study of the control group was done for four months. This involved the traditional program of ward management. Parents were allowed to visit only two hours per week, and they were not often encouraged to help with the care of the child. Next, the experimental program was put into effect. This included daily visits for parents, early ambulation, a special play program with a nursery school teacher, psychological preparation and support during potentially traumatic procedures, and parental aid in care of the child.³⁵

In control and experimental periods, similar techniques of observation were utilized. First a detailed history (including reactions of parents and the child to illness) was obtained. The psychologist, play supervisor, head nurse, and other professional personnel recorded the child's actions. In interviews an attempt was made to learn the child's feelings toward illness and hospitalization.

³⁵Ibid., p. 75.

Follow-up studies were done at three weeks, three months, and at later intervals after discharge from the hospital. Information was obtained on behavior of all of the children for at least six months. Especially noted were the child's state of health, his adjustment after discharge, fantasies and defensive maneuvers, parental attitudes, and psychological effects in family due to changes in the child's behavior.³⁶

Six criteria were used for judgments of many variables affecting the child:

- (1) degree of reaction (severe, moderate, and minimal)
- (2) degree of stress encountered (severe, moderate, and minimal)
- (3) previous adjustment of the child (maximal, limited, or inadequate)
- (4) nature of mother-child relationship (satisfying, moderately satisfying, or unsatisfying)
- (5) child's adjustment to hospital situation (adequate, difficult, or inadequate)
- (6) parents' adjustment to hospital situation (adequate, difficult, or inadequate)³⁷

Results.--

All of the children in both groups did show some reaction to hospitalization. Ninety-two per cent of the children in the control group were in the moderate and severe reaction categories. Sixty-eight per cent showed these reactions in the experimental group.

In a further breakdown of these categories, the experimental group showed a significantly lower percentage of severe immediate reactions to hospitalization (14% as opposed to 36% in the control group), with a much higher percentage of minimal reactions (32% as opposed to 87% in the control group). Moderate reactions were approximately equal in both groups.³⁸

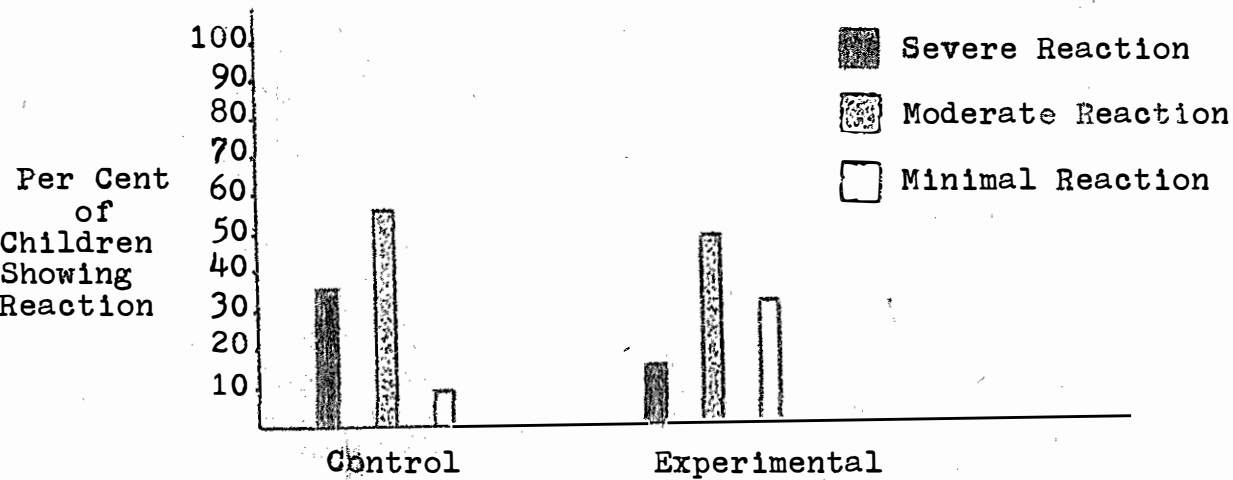
³⁶Ibid., p. 77.

³⁷Ibid., pp. 77-79.

³⁸Ibid., p. 79.

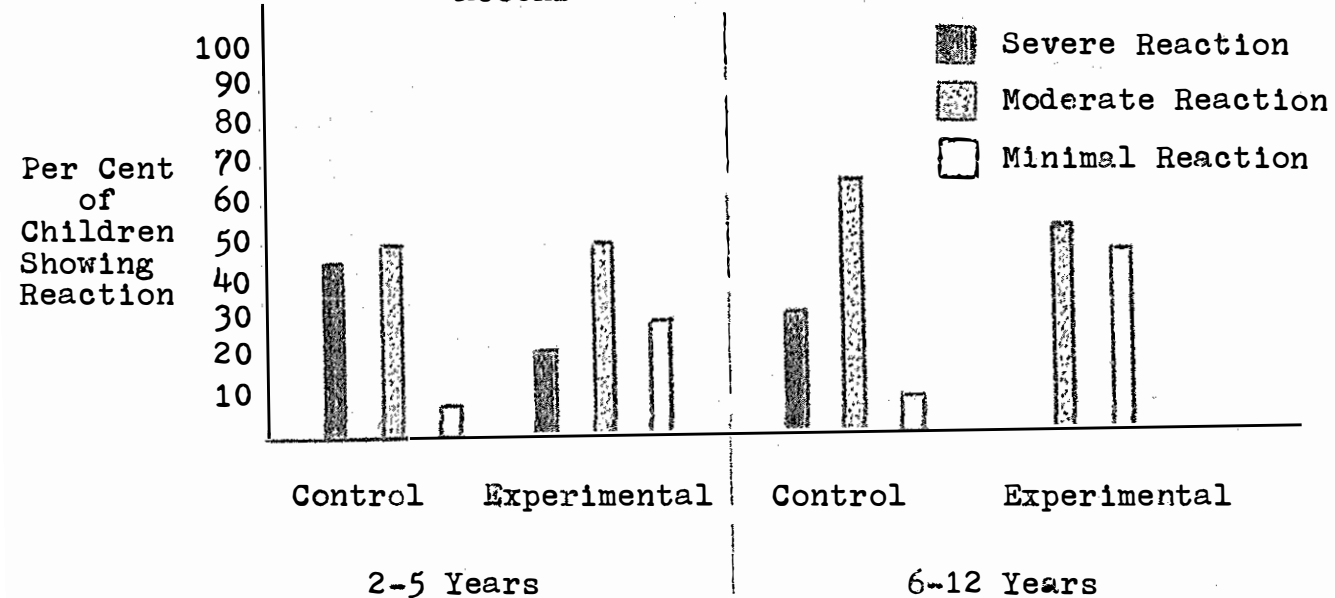
Further results can be summarized in the following tables.

TOTAL DEGREE OF REACTION TO HOSPITALIZATION³⁹



DEGREE OF REACTION TO HOSPITALIZATION

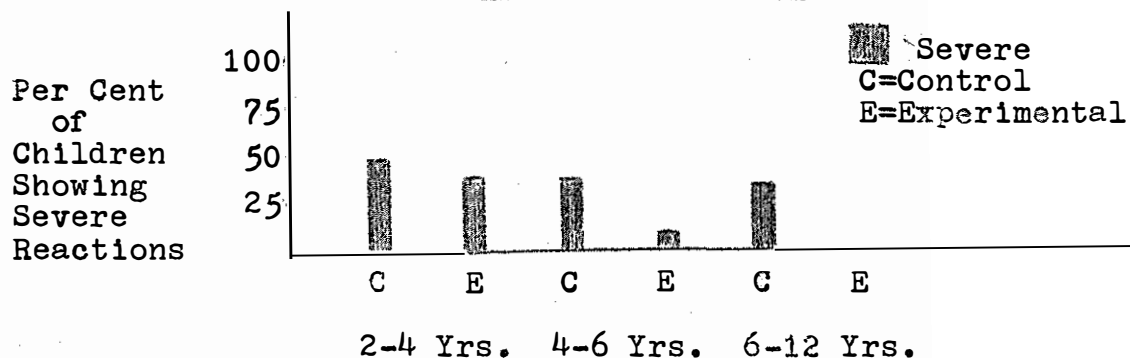
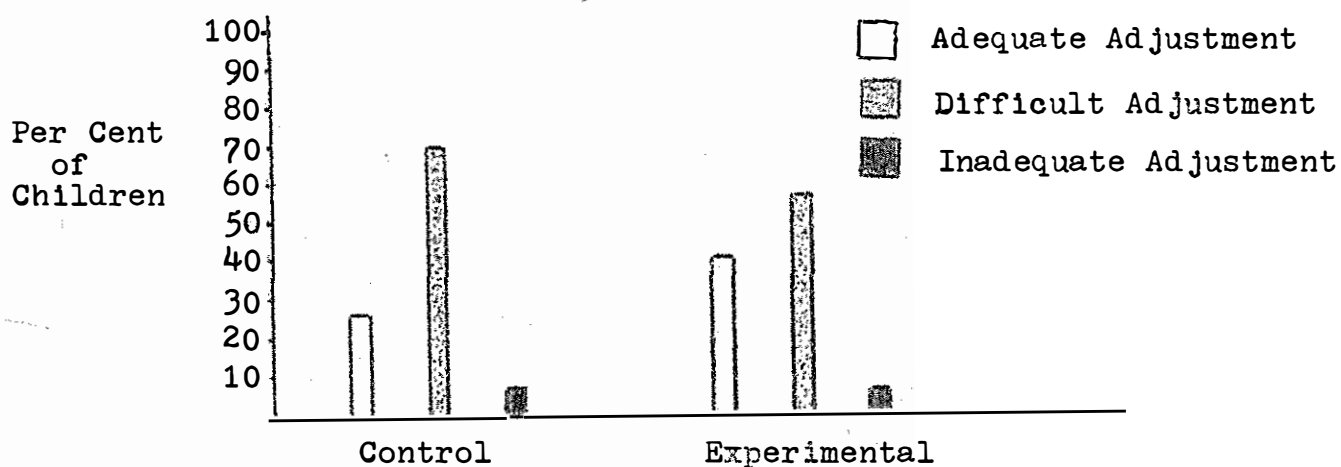
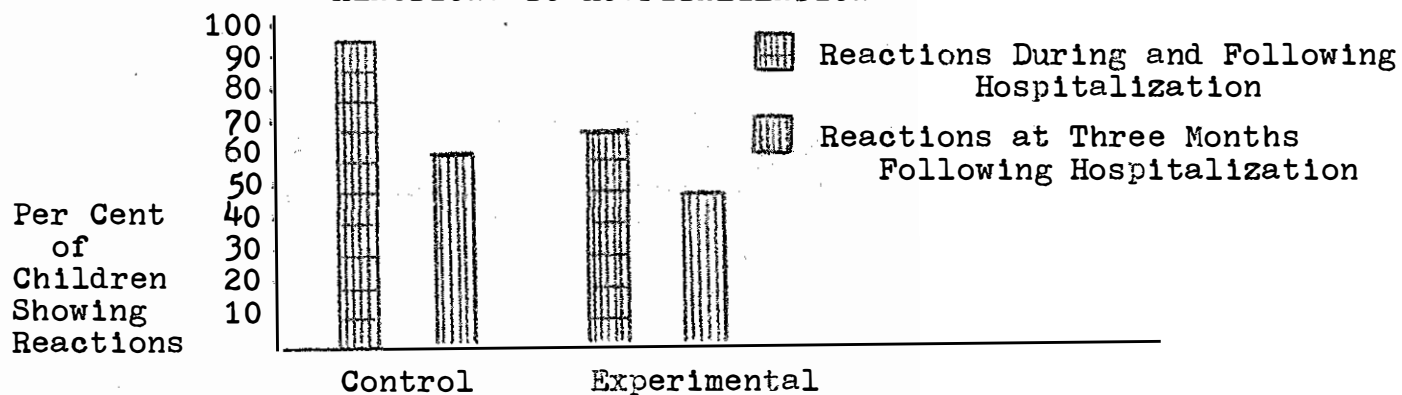
ACCORDING TO AGE LEVEL⁴⁰

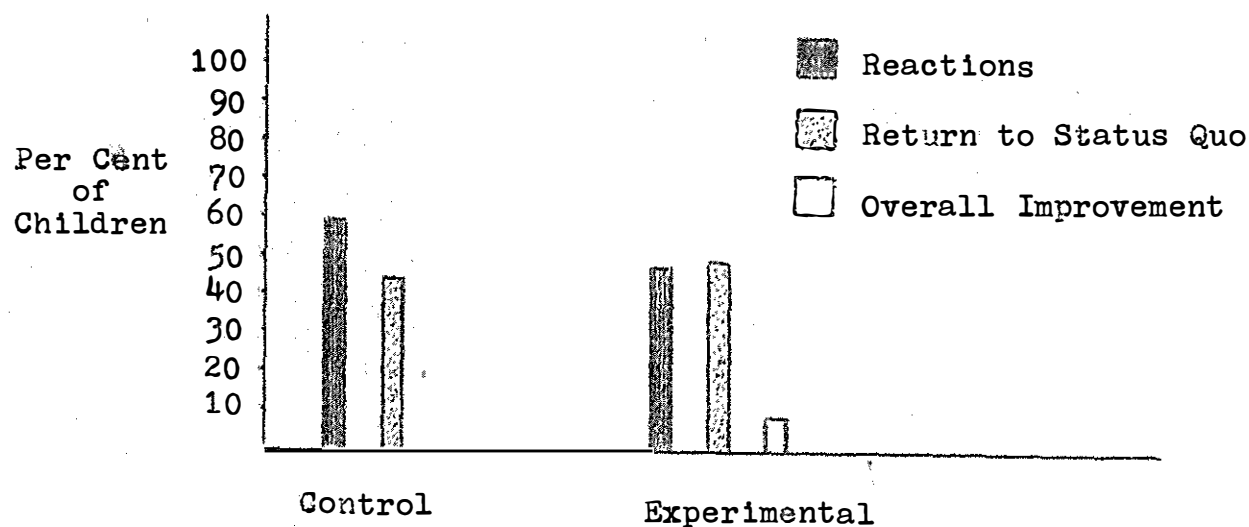


³⁹Ibid., p. 80.

⁴⁰Ibid., p. 81.

INCIDENCE OF SEVERE REACTIONS TO HOSPITALIZATION

ACCORDING TO AGE LEVEL⁴¹ADJUSTMENT OF CHILDREN TO HOSPITAL WARD⁴²REACTIONS TO HOSPITALIZATION⁴³⁴¹Ibid., p. 82.⁴²Ibid., p. 83.⁴³Ibid., p. 84.

DURATION OF REACTIONS BEYOND THREE MONTHS⁴⁴

No significant differences in degree of reaction according to sex of the child were noted.⁴⁵ In general, children with limited capacity for adaptation showed the most difficulty in adapting to the ward and showed the most severe reaction to hospitalization. Some who adjusted well in the ward situation had severe reactions after discharge.⁴⁶ An interesting finding was that three months after discharge, nearly half of the children still disturbed in both groups were under four years of age (41% and 45% in the control and experimental groups respectively). Including the children from four to six, fifty-four per cent of the experimental group still showing disturbances were under six years of age.⁴⁷

⁴⁴Ibid., p. 85.

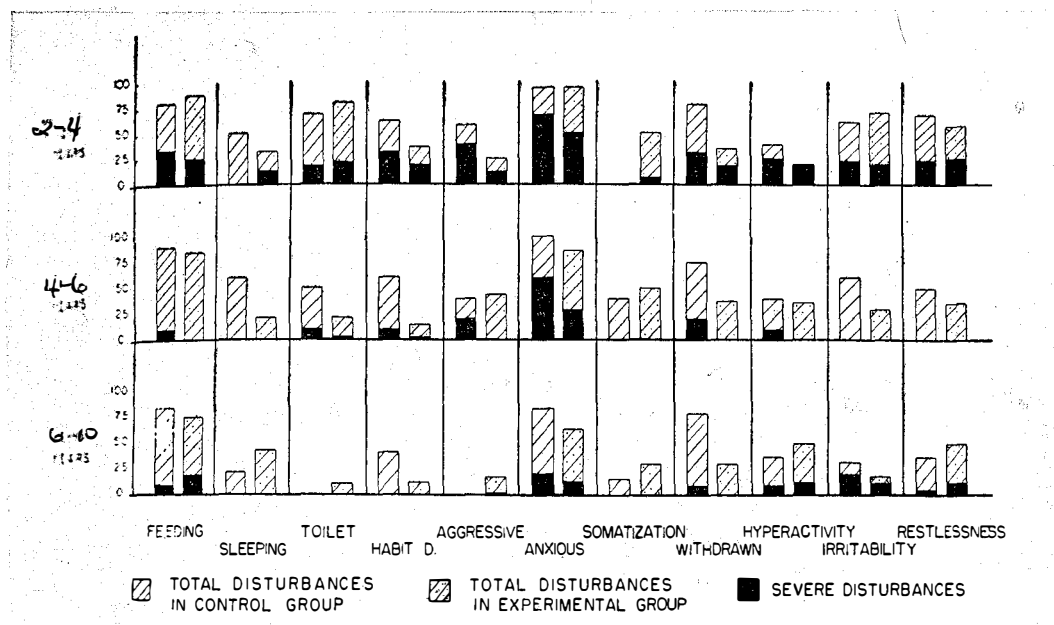
⁴⁵Ibid., p. 80.

⁴⁶Ibid., p. 81.

⁴⁷Ibid., p. 85.

To summarize, children under four years of age and children who had relatively unsatisfying relationships with their parents, who had undergone very severe stress in the hospital, and who had shown the greatest difficulty in adapting to the ward milieu were those who tended to show persistent signs of emotional disturbance at three months following hospitalization.⁴⁸

COMMON TYPES OF DISTURBANCES DURING HOSPITALIZATION⁴⁹



It was noted that diagnostic procedures necessitating a departure from the ward and from familiar ward surroundings were particularly disturbing to younger children, representing a repetition of separation from parents. The fear verbalized most frequently was that of needles.⁵⁰

Following discharge, most of the regressive behavior in the younger groups tended to subside quickly. The most

⁴⁸Ibid., p. 86.

⁴⁹Ibid., p. 87.

⁵⁰Ibid., pp. 94-95.

common continuing disturbance was anxiety over separation from parents. While their children were in the hospital parents visited as follows:

	Control	Experimental
Visited regularly (weekly for control, daily for experimental)	80%	74%
Visited infrequently	---	18%
No visiting observed	20% 100%	8% 100%

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Also, the common conception that children whose parents visit frequently cry more was proved to be erroneous in the experimental part of the study because the children knew their parents would return.⁵²

In short, "although a persistently traumatic effect of an emotional nature arising from hospitalization does not seem to be inevitable, the possibility of such an effect appears great enough to warrant the application of special prophylactic measures."⁵³

⁵¹Ibid., p. 98.

⁵²Ibid., p. 99.

⁵³Ibid., p. 103.

VI. Godfrey, Anne, "A Study of Nursing Care Designed to Assist Hospitalized Children and Their Parents in Their Separation"

This study is concerned with the problem of separation, which requires adjustment on the part of the parents and the child. This particular study was done at the Vanderbilt University Hospital. The question they sought to answer was: "What, if anything, can the nurse do to assist children, aged two to six, and their parents, on the pediatric division, toward making a more comfortable adjustment when the parents leave at the end of the visiting period?"⁵⁴

Hypothesis.--

It is believed that separation at the end of the visiting period can be emotionally more comfortable for the child and his parent if the nurse is readily available to assist them during the visiting period and at the departure of the parent, and if she remains with the child thirty minutes after the departure of the parent, provided she purposefully gears her nursing care toward assisting them in their separation.⁵⁵

This study is of particular importance because "of all the psychological problems that small children have,

⁵⁴Anne Godfrey, "A Study of Nursing Care Designed to Assist Hospitalized Children and Their Parents in Their Separation," Nursing Research, IV (October, 1955), 52.

⁵⁵Ibid., p. 52.

probably one of the most difficult to resolve is that of separation from their parents." Therefore, children suffer in two respects: due to separation from their parents and due to the hospitalization experience itself. However, this feeling is by no means one sided. Being separated from their children is also an emotional disturbance for parents.⁵⁶

Reactions of children to the absence of their parents are varied. They may cry for half an hour or longer after they leave and may cry off and on all day. In younger children the crying is more of a screaming, accompanied by much motor activity, attempts to get out of bed, throwing toys on the floor, and rejection of nursing personnel who come to assist. Some children withdraw and go to sleep; others show no interest in the environment and suck their thumbs or a piece of cloth, masturbate, or just sit forlornly in bed. Still others sit in bed and anxiously look out the doorway into the hall for their mother.⁵⁷

Method.--

This experiment took place on a general forty-two bed pediatric unit in a general university hospital. Patients range in age from one day to fifteen years, and the average number of patients is thirty. Data for this study was collected on forty-one of the fifty patients involved when they had been in the hospital less than eight days. Visiting

⁵⁶Ibid., p. 54.

⁵⁷Ibid., p. 56.

periods were held daily for one-half hour and for one and one-half hours on Sunday.

Definition of Terms.--

- (1) week--this is considered as Monday through Friday
- (2) child situation--a situation confined to the child, aged two to six years, hospitalized on the pediatric unit. It is further confined within the time span of the beginning of a visiting period through thirty minutes beyond the end of that period.⁵⁸

Selection of Group.--

There were twenty-three cases in the control group and twenty-seven in the experimental. The age range of two to six years was chosen because it was felt that the pre-school child and his parents have the most separation anxiety. No attempt was made to match the experimental and control groups according to sex, diagnosis, previous hospital experience, previous emotional adjustments, length of present hospital stay, or number of children in the hospital room. It was hoped that the large number in each group would minimize these variables.

Control Conditions.--

Control conditions were those existing under usual ward conditions during a visiting period, at the parent's departure and for thirty minutes after the parent had left. Nurses may or may not have been present.

⁵⁸Ibid., p. 57.

Experimental Conditions.--

Here a definite plan of nursing care had been devised. A nurse, or student nurse was with the child during the visiting period, at the parent's departure, and for thirty minutes after the parent had left. Her ultimate goal was to assist the child and his parents at time of separation.

Ten student nurses acted as observers and recorders. All recorders were prepared in a similar manner. All had courses in Growth and Development and Dynamics of Behavior. Also, all had psychiatric nursing and pre-school experience.

Summary of Data.--

Two comparisons were made: control versus experimental; and comparisons within the control and experimental groups.

Control versus Experimental Comparisons.--

Children scored higher under experimental conditions than under the control, but the difference was not significant. For parents, the control group score was slightly higher than the experimental. Comparisons according to the different groupings of number of children in the room showed no significant differences for either children or parents.

Comparisons within Control and Experimental Groups.--

When comparing one age to another within the control and experimental groups, there is a significant increase in the child's score with his increasing age, for both control and experimental groups.

Due to the small number of cases available, it cannot

be interpreted from the findings whether there was a true difference in control versus experimental comparisons.

Also, since there was no attempt to equalize the number of cases in the control and experimental groups with respect to age, these distributions did not turn out to be very well balanced. Results would have been more applicable if variations such as these would have been controlled.⁵⁹

The conclusions may be summarized as follows:

- (1) When children in control and experimental groups were compared, the difference was in favor of the experimental, but not significantly so.
- (2) Children who were two years old felt significantly better under experimental than under control conditions.
- (3) Children on their second day of hospitalization felt significantly better under experimental than under control conditions.
- (4) The parents of these children felt about the same under the control as they did under the experimental conditions when they left their children at the end of the visiting period.⁶⁰

Therefore it may be said that the hypothesis of the study is true for two year olds and for children on their second day of hospitalization, but has not been proven for any groupings of parents.⁶¹

⁵⁹Ibid., p. 66.

⁶⁰Ibid., p. 67.

⁶¹Ibid., p. 67.

VII. Erickson, Florence, "Reactions of Children to Hospital Experience"

This study was done to observe children's feelings about procedures of bodily intrusion. Since Freud has emphasized that children repeat in their play all that makes a great impression on them, the play interview was used in this study.

Pre-school children were selected; they were in the stage of development in which intrusion seems to be more threatening. In fact, "a hospital experience at this age level is likely to be interpreted by the child as punishment, or even as an attempt to eliminate him."⁶²

Setting up Study.--

Twenty hospitalized children, all four years of age, were divided into two groups of ten each. Those in the first group were interviewed three times following discharge from the hospital: at one week, one month, and two month intervals. Those in the second group were interviewed every other day during hospitalization plus one week, one month, and two months after hospitalization. In addition, ten nursery school children who had not been hospitalized served as a control group; each of these children was inter-

⁶²Florence Erickson, "Reactions of Children to Hospital Experience," Nursing Outlook, VI (September, 1958), 501.

viewed one time in the nursery school playroom. Also, there were five boys and five girls in each of the three groups. Those in the first two groups were hospitalized for not less than two nor more than twenty days.

Method.--

Three categories of intrusive procedures were chosen: oral, anal, and cutaneous. Clinical equipment such as a hypodermic syringe, a thermometer, medicine cups, and other things used for intrusive procedures were given to the children in the play interview. Also provided were small toys and dolls representing the nurse, doctor, mother, father, boy, and girls. Each doll was dressed, and all except the shoes was removable.

Interviewing Technique.--

The time allowed for each interview was one hour; however, if a child finished in less than that time, no attempt was made to encourage him to continue to play. The observer wore a white uniform and was known as a nurse to the children. She recorded all of the child's conversation and action without approving or disapproving of what he chose to do unless it became dangerous.

In the first interview, she introduced herself and asked if the child would like to play while she did some writing. She then removed the toys from the bag, assembled the hypodermic syringe and removed the thermometer from its holder. In later interviews, the child removed the toys himself.

Results.--

Children who had not been hospitalized were more active in their play--engaging in a wider variety of play activities. On the other hand, those who had been hospitalized were more listless, easily distracted by sights and sounds, and moved more slowly and deliberately. Not until the third home interview was the play of the children who were hospitalized comparable to the play of the children in the control group. However, the hospitalized boys did not reach the level of the activity of those in the control group in any interview.⁶³

The children in both the hospitalized and control groups gave medicines as though the oral route was the accepted way to give them; in fact, they gave these with much the same feelings they gave feedings. The tongue blades were used for probing by the children in all three groups. Anal procedures were interpreted as though they were bad or indecent. Also, most of the children tended to avoid the thermometer the first time they saw it. None of the boys and two of the girls took rectal temperatures on doll figures during the first hospital interview. One boy said, "My mommy take it in my mouth. Nurse don't. She afraid you bite it." Most who had enemas showed dislike for this procedure, and most rejected the equipment.

Most of the children in all three groups reacted to

⁶³Ibid., p. 502.

the hypodermic syringe as though it were a dangerous weapon. A few put it back into its case and closed the lid. However, most of them could not resist handling it, talked about it incessantly, and tried to gain enough courage to use it on doll figures. All but one eventually used it on a doll. Some "clinked their teeth and rammed the needle into a doll, even screwed it around, while others gently pricked dolls with it."⁶⁴ Also, there was no indication that the children understood that the purpose of sponging was to cleanse. Those who had received intravenous fluids or blood transfusions interpreted these procedures as painful and gave no indication that they understood why they were done.

The data presented clear evidence that the majority of the children studied perceived no protective intent of the adults behind the procedure, but rather considered them as hostile in intent with the exception of procedures in the oral area.⁶⁵

⁶⁴Ibid., p. 503.

⁶⁵Ibid., p. 504.

VIII. Blom, G. "The Reactions of Hospitalized
Children to Illness"

The fears of a child may prolong his illness. Awareness of this by the nurse should help her to individualize her care as much as possible. One reaction to illness is the concentration of psychic energy on the illness and body. However, "improvement in health is usually followed by a spurt in development as the emotional energy previously bound up in the illness is released, and there is a resumption of interest in activities and people."⁶⁶ Another common reaction is that of guilt, since illness is perceived as a punishment. Some make an initial adjustment to the hospital, but prolonged separation from parents and repeated medical procedures cause a break down in the strength of the child.

The Child Psychiatry Unit of the Massachusetts General Hospital has been engaged in the following study for a number of years. The significance of tonsillectomy is the basis of this study. There were two goals in the study: to determine how children reacted to brief hospitalization and a minor operation.

⁶⁶Gaston E. Blom, "The Reactions of Hospitalized Children to Illness," Pediatrics, XXII (1958), 590.

Subjects and Method.--

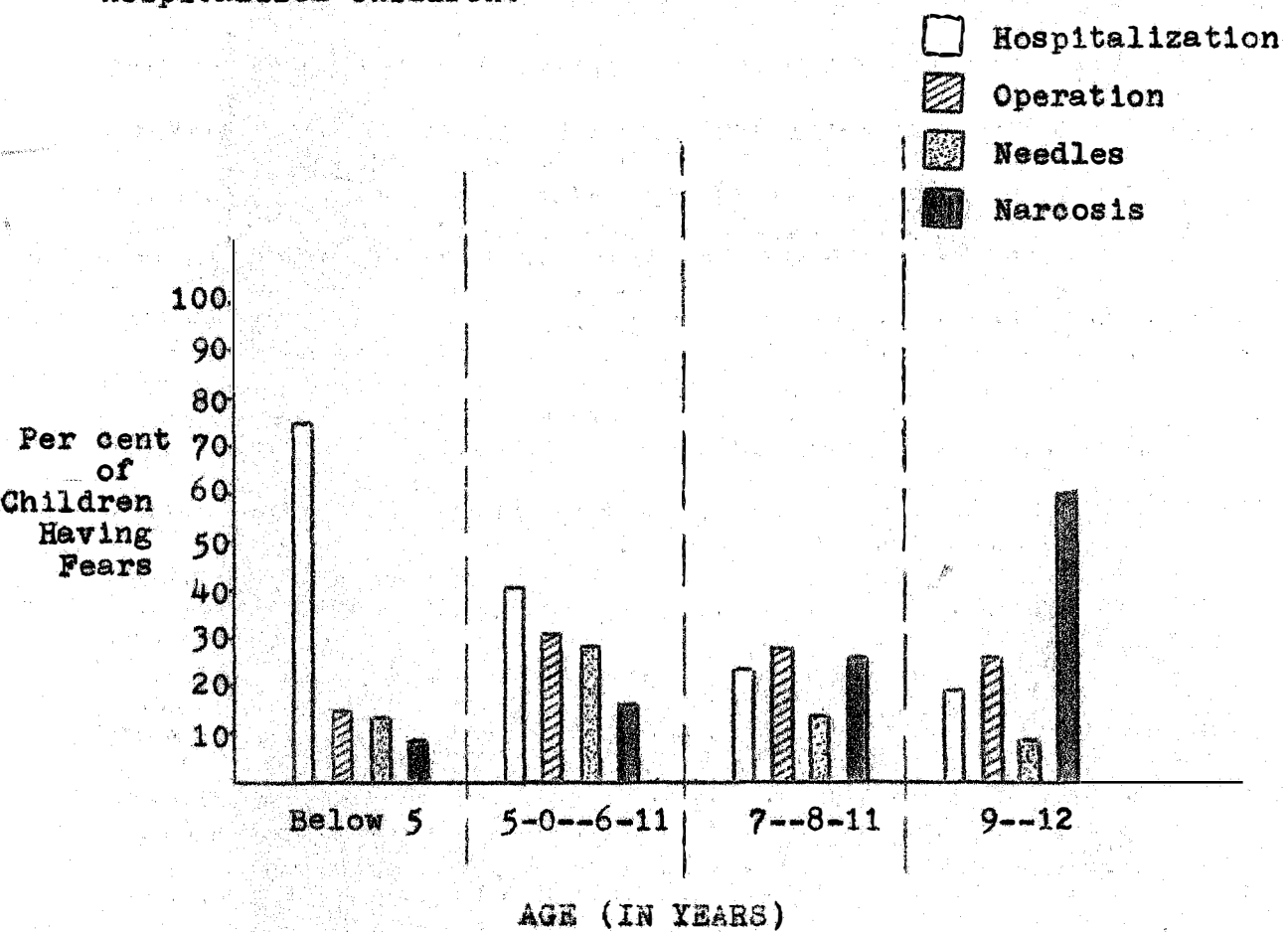
Initial psychiatric observations were made of one hundred forty-three unselected children from the age of two to fourteen years while they were undergoing tonsillectomy. The majority were five to seven years, and the sex distribution is equal. Forty of these children were followed for four years.

Results.--

A universal finding was the existence of fantasy meanings to the operation. The main focus of anxiety about the procedure shifted with age. The foci of anxiety were hospitalization, the operation itself, needles, and narcosis. Narcosis was most disturbing to older children since it represented a threat to self control. Many also showed a transient emotional reaction post operatively lasting from one week to ten days consisting of sleep disturbances, reluctance to eat, mild anxiety symptoms, and regressive behavior. Severe post operative reactions lasting less than two weeks were rated in twenty-five of one hundred forty-three children. Six had traumatic reactions.⁶⁷ However, these had neurotic trends before the operation, and not all disturbed children reacted severely. There was little difference between boys and girls. Also, there was no significant difference in relation to preparation (accurate information given to the child) to post operative reaction.

⁶⁷Ibid., p. 594.

The following chart summarizes the main fears of hospitalized children:⁶⁸

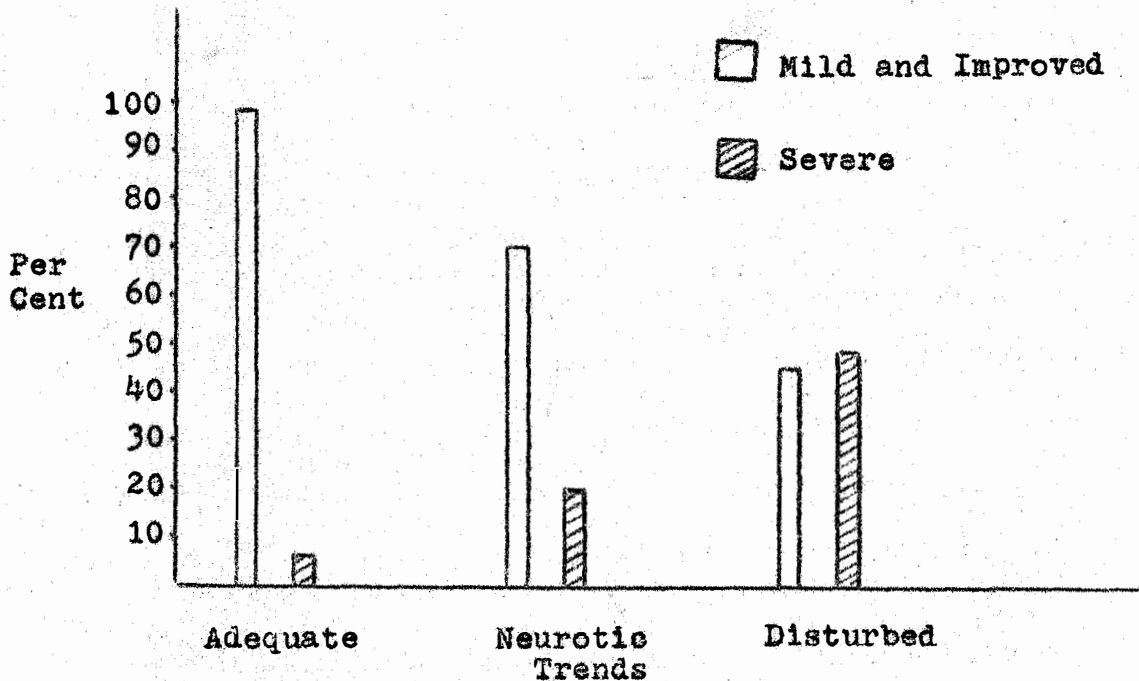


Some specific disturbances and the number who manifested them are:

Fears.....	14
Eating disturbances.....	9
Sleep disturbances.....	9
Speech disturbances.....	5
Regressive behavior.....	5
Tics and mannerisms.....	3

⁶⁸Ibid., p. 595.

Emotional adjustment can be summarized as follows:⁶⁹



BEHAVIOR BEFORE HOSPITALIZATION

In summary, the emotional reactions of the hospitalized child to illness are determined by the nature and degree of stress from both realistic and unconscious sources and the balance of forces within the child, his parents, and the hospital environment which facilitate or impede adaptation.⁷⁰

⁶⁹Ibid., p. 596.

⁷⁰Ibid., p. 599.

IX. Schaffer, H. R. and W. M. Collender, "Psychologic Effects of Hospitalization in Infancy"

In this study only infants less than twelve months are included. The main focus of interest is in the effects of the age variable within this range. Only short term hospitalizations are included.

Subjects.--

There were seventy-six infants ranging in age from three to fifty-one weeks. The length of hospitalization ranged from four to forty-nine days (mean=fifteen days). Their care was geared to medical and physical needs and thirty-seven were visited daily. Eighteen were visited three to five times a week; fifteen, once or twice weekly; and six, none at all.⁷¹ Observations focused on two periods: first three days and last three days.

Method.--

Observations were done in two hour sessions and contained a feeding and the daily visiting hour. At first the infant was observed alone, then in contact with the observer, and finally his reaction to a toy was noted.

⁷¹H. R. Schaffer and W. M. Collender, "Psychologic Effects of Hospitalization in Infancy," Pediatrics, XXIV (October, 1959), 529.

Results.--

Reactions to hospitalization fell into two distinct categories: one less than seven months and the other more than seven months.

A. Initial period in hospital: The older group showed overt distress in the form of crying, but there was not much crying in the younger group. Also, there was acute fretting in the elder group, whereas the younger children accepted their new environment without protest. The younger group had a normal amount of mobility; yet the older ones were either extremely underactive or overactive.

The most important difference between the two age groups is provided by the type of relationship with the observer. The younger group was normally responsive, but in the older group this response was lacking. As the mother leaves, there is no sign of protest in the younger group, but the older children exhibit loud, prolonged crying. The younger are responsive to toys, yet the older ones were unresponsive much of the time.⁷²

B. End period in hospital: There was more vocalization found in the older group. There was more negativism found in the older group in a relationship with the observer. Both groups responded to their mother. Also, both groups responded to toys.⁷³

⁷²Ibid., p. 532.

⁷³Ibid., p. 535.

After discharge all seventy-six infants were visited at home. Extreme preoccupation with the environment was found in the younger group. Even some mothers failed to make contact with their children at this time. This only lasted from thirty minutes to four days. Overdependence was the main characteristic of older infants. Somatic problems lasted 14.69 days in the older group and 2.96 days in the younger group.⁷⁴

In conclusion, "separation from the mother cannot be automatically regarded as a traumatic experience for all young children, but must be related to the particular stage of development of the individual."⁷⁵

⁷⁴Ibid., p. 536.

⁷⁵Ibid., p. 538.

X. Levy, Edwin, "Children's Behavior Under Stress and
its Reaction to Training by Parents to
Respond to Stress Situations"

This study is concerned with young children's reactions to stress. It is concerned with the relationship between the children's reactions and previous training to respond to stress situations. The stress situation selected for this study was a two day period of hospitalization for minor surgery. According to principles of learning, children trained for stress should possess more adjustive techniques in this stress situation.⁷⁶ The question considered here is

whether a general kind of training can take place in learning to respond to stress. Adjustive behavior is defined as that which indicates the child is accepting of the situation although under some tension and capable of carrying on social participation.⁷⁷

Method.--

Controlled interviews with parents and observations of children were used in this particular study. The situation selected for study was hospitalization for tonsillectomy; and the study was done in a large children's hospital.

⁷⁶Edwin Levy, "Children's Behavior Under Stress and its Relation to Training by Parents to Respond to Stress Situations," Child Development, XXX (March, 1959 to December, 1959), 307.

⁷⁷Ibid., p. 310.

Subjects.--

The children were all between the ages of four years and eight years, nine months. There was a total of thirty-nine children, sixteen boys and twenty-three girls. The average age for all was between six and seven years. To guarantee that the hospitalization was a new stress, children with previous overnight hospital experience were not included.

In the data collection process, information on training done by the parents for general stress situations and this hospitalization was obtained. Next the children's reactions during hospitalization were observed.⁷⁸ The observations on the children were carried out by the nursing staff. The parents were interviewed to determine the nature of training their children had been given for stress situations. Also, they were asked about new and potentially stressful situations in which their children had been involved in the past. The questions on preparation for hospitalization attempted to bring out the nature of training and specific areas discussed. They were also asked how much they thought their child knew about the hospitalization.

Six judges analyzed the data on parent interviews and observations on the children. All were trained clinical psychologists.⁷⁹

⁷⁸Ibid., p. 311.

⁷⁹Ibid., p. 313.

Results.--

If training had been effective, positive reactions were assumed since the child had the necessary responses available. "The results indicated that the training and preparation children receive for general stress situations appears to bear little relationship to their behavior during a particular stress situation such as hospitalization."⁸⁰ "Regardless of the preparation for hospitalization or the absence of it, most of the children appeared to go through the entire experience without marked distress."⁸¹

Behavior in the hospital followed a pattern. On the day of admission almost all of the children were conforming, playing and accepting the situation. The first tension appeared at sleeptime. Then the children required encouragement from the nurses. No child was upset enough to require sedation. On the second day the greatest range of behavior reactions occurred when they experienced the most stress. On the third day, the reaction was much like that on the first.⁸²

Even though these children have gone through hospitalization without distress, there is still the possibility that results of the hospitalization might be revealed at a later time. A few postoperative interviews were held with mothers, and they almost all reported clinging and subdued behavior

⁸⁰Ibid., p. 319.

⁸¹Ibid., p. 320.

⁸²Ibid., p. 320.

for a week following the operation. They did not talk of their experience to their parents or their friends. One reason may be the fact that most of these children were from families in the lower economic group; and, therefore, they may have learned to accept stress as part of daily living. Another possibility is that Negro children in a hospital staffed mostly by white medical personnel may hide their feelings for fear of disapproval.

It was also found that few of the parents thoroughly prepared their children for stressful experiences. The parents saw them as a part of living and did not feel their children needed special preparation.

In short, although it was found that teaching of general stress situations did not affect reaction to hospitalization, specific teaching about hospitalization did help.⁸³

⁸³Ibid., p. 323.

XI. Rie, Herbert, et. al., "Tutoring and Ventilation:
A Pilot Study of Reactions of
Hospitalized Children"

This study focuses on reactions of children hospitalized for rheumatic fever to attempts to teach them about their illness and to opportunities to express their concerns.

Setting.--

All of the children had rheumatic fever and were hospitalized at La Rabida Sanitarium.

Subjects.--

The sample consisted of twenty-five newly admitted patients. Twelve patients were assigned to the tutorial group and thirteen to the ventilation group. The mean ages of the two groups were 116.4 months and 121.8 months respectively. The age range was eight to eleven years. Two control groups of rheumatic fever patients in the same hospital were also used. Control Group I consisted of 29 boys and 26 girls. Control Group II consisted of 11 boys and 17 girls. The age range did not differ significantly from the two experimental groups.⁸⁴

⁸⁴Herbert Rie, et. al., "Tutoring and Ventilation: A Pilot Study of Reactions of Hospitalized Children," Clinical Pediatrics, III (October, 1964), 582.

Procedures.--

In the tutorial meetings the children were taught the facts about rheumatic fever. Routine procedures were also discussed and questions from the children about their disease were permitted.

In the ventilation method the children were encouraged to explore the concerns they had about being hospitalized and ill. Their own questions and comments were utilized as the focus of discussion. There were no restrictions on the range of issues discussed.⁸⁵

Results.--

Both the tutorial and ventilation groups recognized a greater number of correct statements about rheumatic fever after the experimental procedure than they had before. Children in the second control group showed no change in such knowledge at the second testing.

One very important result was observed: there was no difference in the amount of knowledge gained by the two experimental groups at the time of admission or after experimental procedures. The tutorial group had a lower anxiety score after the experimental procedures; however, there was no difference between the two anxiety scores of the ventilation group. In fact, the scores were almost identical.⁸⁶

⁸⁵Ibid., p. 583.

⁸⁶Ibid., p. 584.

Summary.---

Because of the small sample used, these results are only suggestive. The tutorial procedure reduced anxiety and increased knowledge. The ventilation meetings communicated to the children that it is acceptable to be concerned about a variety of things, and to ask questions.⁸⁷

⁸⁷Ibid., p. 585.

XII. Vernon, David and Jerome Schulman,

"Hospitalization as a Source of
Psychological Benefit
to Children"

There has been a great deal of concern over the psychological effects of hospitalization on children, but this interest is usually centered about upset. "Less attention has been devoted to the possibility that hospitalization may be psychologically beneficial."⁸⁸

Method.---

A questionnaire dealing with changes in children's behavior following hospitalization was devised as part of a larger study at Children's Memorial Hospital. It consisted of twenty-eight items and was mailed to the parent one week after their child's discharge. The items were of the following type:

- (1) Does your child make a fuss about going to bed at night?
- (2) Does your child seem to be afraid of new things?
- (3) Does your child have temper tantrums?
- (4) Does your child follow you everywhere around the house?

For each item the parent compared the child's behavior

⁸⁸David Vernon and Jerome Schulman, "Hospitalization as a Source of Psychological Benefit to Children," Pediatrics, XXXIV (1964), 694.

before hospitalization with that of the week after hospitalization.⁸⁹ With that

Subjects.--

The subjects range in age from less than one month to eight years, eleven months. Usable questionnaires were received from about one half of the children's parents.

The sample was divided into three groups: zero to five months; six months to three years, eleven months; and four years to eight years, eleven months. The results can be summarized as follows:

PERCENTAGE OF CHILDREN UPSET, STABLE AND IMPROVED FOLLOWING HOSPITALIZATION

Age	0-5 mos.	6 mos.-4 yrs.	4-8 yrs.	Total
Upset	20%	41%	26%	31%
Stable	75%	41%	62%	55%
Improved	5%	18%	12%	14%
Total	100%	100%	100%	100%

Therefore, "contrary to expectations, the data suggest that pre-school children are more likely to benefit psychologically from hospitalization than are either younger infants or older children."⁹⁰

⁸⁹Ibid., p. 694.

⁹⁰Ibid., p. 695.

XIII. Mahaffy, Perry, "The Effects of Hospitalization
on Children Admitted for Tonsillectomy
and Adenoidectomy"

"The purpose of this experimental study was to investigate the possibility of improving the hospital care for children by involving the parents (in this instance the mother)."⁹¹

Problem.--

It is generally accepted that children between two and four react to the separation from their parents with fear. On the other hand, children between five and ten exhibit individuality in their reactions. Today most hospital environments make the parents feel uncomfortable and helpless, and nurses and doctors do not usually allow parents to converse with them freely.

This author was concerned over the fact that nurses staffing the hospital unit used in this study did not meet the child's emotional need for a continuous assuring relationship. A functional assignment method was used; there was not one nurse whose specific job was to discuss the child with his parents or to cherish the child and give him love and security.⁹²

⁹¹Perry Mahaffy, "The Effects of Hospitalization on Children Admitted for Tonsillectomy and Adenoidectomy," Nursing Research, XIV (1965), 12.

⁹²Ibid., p. 13.

Theory.---

This study was based on the belief that if an experimental nurse would listen to parents and help them care for their own children, their distress and, consequently, that of their children would be reduced.

It was predicted that experimental nursing of the parent would reduce distress in the child as measured by: (1) a lower systolic blood pressure, pulse rate, and temperature; (2) less frequent incidence of crying and vomiting; (3) a greater amount of, and ease in taking oral fluids; and (4) a shorter duration of time between operation and first voiding.⁹³

In addition, the child's distress was measured after he returned home, through a questionnaire given to the parents.

Subjects.---

A sample of forty-three children was randomly selected from a group of children in a pediatric surgical unit of an urban hospital. All were between the ages of two and ten, were admitted for tonsillectomy and adenoidectomy, and had no previous hospitalization. This sample included twenty-one experimental patients and twenty-two controls.

Method.---

The experimental nurse, besides carrying out the routine nursing admission procedure, tried to determine the mother's needs and to provide her with the help and information that would meet her needs and enable her to cope with the immediate situation.⁹⁴

The hospital unit personnel admitted the control group, and routine nursing care was given to them.

⁹³Ibid., p. 13.

⁹⁴Ibid., p. 14.

Vital signs were used as an index of emotional state. Their vital signs reflect the effect of stress without being inhibited as with adults. The mean of each vital sign was established for the experimental and control groups at specific periods of hospitalization.⁹⁵

After discharge of the child, the parents were asked to fill out a questionnaire so their children's emotional reaction could be evaluated. There was an 87.75% return--eighteen from experimental group mothers and nineteen from control group mothers.

Results.--

At admission there was no significant difference between groups for any of the vital signs. However, as hospitalization progressed, the differences in vital signs became much greater.

The results can be summarized in the following tables:

⁹⁵Ibid., p. 15.

Table 1. Comparison of Mean Temperatures of Experimental and Control Groups of Children ⁹⁶

GROUPS	ADMISSION	PRE- OPERA- TIVELY 8 P.M.	POST- OPERA- TIVELY 8 P.M.	DISCHARGE
Experimental	99.528	99.276	99.971	99.233
Control	99.436	99.750	100.627	99.709
Probability*	p < 0.10	p < 0.01	p < 0.005	p < 0.005

* One-tailed probabilities computed by unpaired "t" test for difference between means.

Table 2. Comparison of Mean Systolic Blood Pressure of Experimental and Control Groups of Children ⁹⁷

GROUPS	ADMISSION	PREOPERATIVELY		POSTOPERATIVELY		DISCHARGE
		6 P.M.	8 P.M.	2 HOURS*	8 P.M.	
Experimental	112.95	112.57	109.42	110.95	108.95	104.76
Control	110.86	122.00	121.90	120.72	127.54	121.59
Probability**	p < 0.10	p < .005	p < .0005	p < .01	p < .0005	p < .0005

* Two hours after the child was returned to the unit from the recovery room.

** One-tailed probabilities computed by unpaired "t" test for difference between means.

Table 3. Comparison of the Mean Pulse Rate of Experimental and Control Groups of Children ⁹⁸

GROUPS	ADMISSION	PREOPERATIVELY		POSTOPERATIVELY		DISCHARGE
		6 P.M.	8 P.M.	2 HOURS*	8 P.M.	
Experimental	103.05	102.47	95.80	111.43	100.28	94.28
Control	105.00	109.09	110.09	119.36	122.41	112.27
Probability**	p < .10	p < .025	p < .0005	p < .05	p < .0005	p < .0005

* Two hours after the child was returned to the unit from the recovery room.

** One-tailed probabilities computed by unpaired "t" test for difference between means.

⁹⁶Ibid., p. 16.

⁹⁷Ibid., p. 16.

⁹⁸Ibid., p. 16.

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Table 4. Comparison of Mean Oral Fluid Intake in cc's for Experimental and Control Groups of Children

GROUPS	INTAKE FIRST SEVEN HOURS WITH MOTHER PRESENT**	INTAKE FIRST NINE HOURS
Experimental	629.0476	805.2380
Control	400.6818	537.5000
Probability*	$p < 0.0005$	$p < 0.0005$

* Probabilities were based on the computations of a one-tailed "t" test for difference between means.
 ** All mothers in both experimental and control groups were present for the first seven hours.

Table 5. Comparison of Ability to Take Oral Fluids for Children in Experimental and Control Groups 100

GROUPS	GREAT EASE	EASE	DIFFICULTY	GREAT DIFFICULTY	TOTAL
Experimental	7	13	1	0	21
Control	1	5	6	10	22

One-tailed probability $p < 0.001$, computed by Kolmogorov-Smirnov test.

Table 6. Comparison of Mean Number of Hours From End of Operation to First Voiding* for Experimental and Control Groups of Children 101

GROUPS	MEAN HOURS
Experimental	4.000
Control	7.227
Probability**	$p < 0.0005$

* All children voided before being taken to the operating room.
 ** One-tailed probability computed by unpaired "t" test for difference between means.

Table 7. Comparison of Incidence of Postoperative Vomiting for Children in Experimental and Control Groups 102

GROUPS	NO VOMITING	VOMITING ONCE	VOMITING MORE THAN ONCE	TOTAL
Experimental	19	2	0	21
Control	12	3	7	22

One-tailed probability $p < 0.005$ computed by Chi-square test.

⁹⁹Ibid., p. 17.

¹⁰⁰Ibid., p. 17.

¹⁰¹Ibid., p. 17.

¹⁰²Ibid., p. 17.

Table 8. Comparison of Incidence of Crying (Before and After Bedtime, Postoperatively) for Children in Experimental and Control Groups

103

BEFORE BEDTIME				
GROUPS	NO CRYING	CRYING ONCE	CRYING MORE THAN ONCE	TOTAL
Experimental	15	4	2	21
Control	6	7	9	22
Probability* $p < 0.0005$				
AFTER BEDTIME				
GROUPS	NO CRYING	CRYING ONCE	CRYING MORE THAN ONCE	TOTAL
Experimental	18	1	2	21
Control	9	6	7	22
Probability* $p < 0.005$				

* One-tailed probabilities computed by Chi-square test.

Table 9. Post-Hospitalization Questionnaire (Part 1) Comparison of Answers by Mothers of Children in Experimental and Control Groups*

104

QUESTION	GROUPS	YES	NO	DON'T KNOW	
1. Has your child run a fever since he or she returned home from the hospital?	Experimental Control	4 10	14 8	0 1	
		p < 0.05**			
		YES—MORE THAN ONCE	YES—ONCE	NO	
2. Have you had to call a doctor for your child since he or she returned home?	Experimental Control	1 1	2 7	15 11	
		p < 0.10**			
		ONE DAY	TWO OR THREE DAYS	FOUR DAYS TO ONE WEEK	LONGER THAN ONE WEEK
3. How long was it after your child returned home before it seemed as if he or she had recovered from the operation?	Experimental Control	2 2	6 3	10 5	0 9
		p < 0.005**			
		YES	NO		
4. Since your child has returned home, has he or she done anything or behaved in any way which has been worrisome for you?	Experimental Control	3 8	15 10		
		p < 0.05**			

* Based on 37 returns, 18 from experimental group mothers and 19 control group mothers. Discrepancies in totals are due to the fact that some mothers did not answer all questions.

** One-tailed probabilities computed by Chi-square test.

Table 10. Post-Hospitalization Questionnaire (Part 2—Behavioral Manifestations From Anxiety in Response to the Hospital Experience) Comparisons of Answers by Mothers of Children in Experimental and Control Groups

105

QUESTION	GROUPS	MORE THAN USUAL	ABOUT THE SAME	LESS THAN USUAL	DOES NOT APPLY
Disturbed Sleep	Experimental Control	3 14	3 2	2 0	10 8
		$p < 0.05^*$			
Seems Afraid of Doctor and Nurses	Experimental Control	1 8	9 2	0 2	7 6
		$p < 0.01^*$			
Won't Leave Mother	Experimental Control	2 5	5 3	0 0	11 9
		$p < 0.05^*$			
Crying	Experimental Control	4 9	8 4	0 0	7 6
		$p < 0.10^*$			

* One-tailed probabilities computed by Kolmogorov-Smirnov test. All probabilities are based on the distribution of children with the first three categories, excluding those to whom the question did not apply.

104 Ibid., p. 18

105 Ibid., p. 18.

Conclusion.---

"It is recognized that this sample is small and does not permit one to draw generalizations from the results."¹⁰⁶

The implication of this study is that nurses ideally should undertake the responsibility for making the hospital environment less anxiety-provoking and thus reduce these symptomatic behavioral actions and provide for a better hospital stay with a better and shorter recovery period.¹⁰⁷

In short, if the mother can participate in her child's care, there will be fewer symptoms of anxiety in the child.

¹⁰⁶Ibid., p. 17.

¹⁰⁷Ibid., p. 17.

XIV. Sipowicz, Raymond and David Vernon, "Psychological Responses of Children to Hospitalization"

To provide additional data on the effects of hospitalization upon the child, the present study concentrates on the behavior of twins. To do this, hospitalized twins were compared to non-hospitalized twins with respect to behavior following hospitalization. It was hypothesized that hospitalized twins would show more behavior indicative of psychological upset than the twins at home.¹⁰⁸

Three assumptions were made:

- (1) that the hospital twins and home twins were the same, or similar, in their behavior prior to hospitalization.
- (2) that mothers could accurately compare the behavior of their children during the one week period following hospitalization.
- (3) that the hospitalization of one twin did not constitute stress for his co-twin.¹⁰⁹

Method.--

A twenty-eight item questionnaire was used to assess behavior. It was concerned with behavior in six areas: general anxiety, separation anxiety, sleeping, eating,

¹⁰⁸Raymond Sipowicz and David Vernon, "Psychological Responses of Children to Hospitalization," American Journal of Diseases of Children, CIX (March, 1965), 228.

¹⁰⁹Ibid., p. 229.

aggression, and withdrawal. It was mailed to the parents six days after discharge.

Subjects.---

The subjects were twenty-four pairs of twins. One of each pair had been admitted to the hospital.

Results.---

In sixteen of the twenty-four pairs, the hospitalized twin was judged to be more upset than the home twin. In three pairs there was no overall difference. In five pairs the home twin was considered to be more upset than the hospital twin.¹¹⁰

This study had assumed that the hospitalization of one twin did not cause stress for his co-twin. The parents were asked to describe any change in the behavior of the home twin while the other twin was in the hospital. Changes were noted in thirteen of the twenty-four pairs of twins. In ten of these the absence of the other twin and/or his mother (while she visited at the hospital), was apparently upsetting to the home twin.¹¹¹

¹¹⁰Ibid., p. 229.

¹¹¹Ibid., p. 230.

XV. Shrand, H., "Behavior Changes in Sick
Children Nursed at Home"

Because illness itself can cause psychological effects altering the child's behavior, a pilot study was done to learn how often this happened.

Subjects.--

A group of children who were ill enough to be hospitalized were referred by their physicians to the Home Care Unit of St. Mary's Hospital in London. The duration of each illness varied, but strict bed rest was never enforced. Also, there were no dietary restrictions, and most medicines were pleasant tasting and given by mouth. These children were cared for by their own mothers under the supervision of their own doctor supported by the Home Care Unit.¹¹²

Methods.--

A "yes-no" questionnaire was sent in November, 1963, to the mothers of 100 consecutive children referred to the Home Care Unit during the preceding six months. Fifty were

¹¹² H. Shrand, "Behavior Changes in Sick Children Nursed at Home," Pediatrics, XXXVI (October, 1965), 604.

satisfactorily completed and returned. The changes in behavior which are usually blamed on hospitalization were listed and the mothers were asked whether they had observed any of these changes in their own children. In June, 1964, a similar questionnaire was sent to an additional 100 mothers, and fifty-five were completed satisfactorily. The results of both groups were so similar that they were combined into one study of one hundred five children--fifty-five boys and fifty girls.

Most of the mothers stated they would rather have their sick children at home once they were assured that no more could be done for them in the hospital. They did not mind the extra work and were less anxious.¹¹³ Of the ten mothers who normally worked outside the home, nine made arrangements to stay at home with their children. In only five instances did siblings object to the ill child taking much of the mother's time and attention. Each of these five developed psychological changes and two of these mothers resented nursing their children at home.¹¹⁴

Results---

INCIDENCE OF OVERT CHANGES IN BEHAVIOR¹¹⁵

Group	Age (yrs.)	No. of children	No. of children with behavior changes
A	1-4	33	19
B	4-6	20	7
C	6-12	36	8
Total		89	34

¹¹³Ibid., p. 604.

¹¹⁴Ibid., p. 605.

¹¹⁵Ibid., p. 605.

BEHAVIORAL CHANGES OBSERVED 116

	GROUP		
	A	B	C
(1) become clinging	12	4	3
(2) afraid to be alone	7	7	4
(3) afraid to go to bed	8	1	3
(4) feeding problems	6	2	1
(5) start wetting the bed	6	1	4
(6) other fears	6	0	4
(7) nightmares	4	1	4
(8) more babyish	3	2	2
(9) jealous of other children	2	0	2
(10) cold toward mother	0	0	0
(11) love mother more	9	6	8

In conclusion, it can be seen that over one third of the children showed behavior changes after the illness treated at home. Group A (1-4 yrs.) was especially vulnerable. Boys and girls were equally affected. Most of these changes lasted from a few days to a few months, but most of them disappeared after about two weeks. In short, most behavioral changes commonly associated with hospitalization and separation are also found in children nursed at home by their mothers; however, they are generally not as severe.¹¹⁷

¹¹⁶Ibid., p. 605.

¹¹⁷Ibid., p. 606.

XVI. Brain, D. J. and I. Maclay, "Controlled Study of
Mothers and Children in Hospital"

This particular study has been done in an effort to evaluate situations in which the mother remains with the child in the hospital.

Subjects.--

All children were less than six years of age and had been referred for tonsillectomy or adenoidectomy or both. The mothers of the children (1,000 in all) examined between June, 1964, and December, 1965, were asked if they would be willing to accompany their child into the hospital if a bed was available for them. Twenty per cent expressed a willingness to come; their children constituted both the experimental group whose mothers stayed in the hospital with them and the control group who were admitted unaccompanied. Allocation to the two groups was made by random selection. It had been decided to limit the study to children whose mothers were willing to accompany them into a hospital, because it was felt that the type of mother who agreed to this might be quite different to the type who was unable or unwilling to do so.¹¹⁸

¹¹⁸D. J. Brain and Inga Maclay, "Controlled Study of Mothers and Children in Hospital," British Medical Journal, I (February, 1968), 278.

Method.--

The same ward and staff were used for both groups. Each group was admitted for three days on alternate weeks. Therefore, the children in the control group would not feel jealous at the sight of mothers accompanying the children in the experimental group. Parental visiting of children in the control group was limited. While in the hospital, observations were made by two ward sisters and an anesthetist.

The mothers of all of the children in both groups were visited in their homes on three separate occasions. The first visit took place one month before admission; at this time a full medical and social history of the child was taken. An assessment was also made of the following: emotional state of mother, mother-child relationship, marital adjustment of the parents, and the home background. The second home visit was made two weeks after discharge and was concerned with any change in the behavior, habits, and physical health of the child since leaving the hospital. A third visit was made six months later.¹¹⁹

Results.--

There were 101 children admitted with their mothers in the experimental group. Ninety-six in the control group were admitted alone. Adjustment was defined as:

- (1) satisfactory--when the child indicated awareness of the reality of the situation in which he found himself and was not unduly disturbed.
- (2) unsatisfactory--when the child reacted to the

¹¹⁹Ibid., p. 278.

hospital situation with panic or by complete denial and withdrawal.

- (3) limited--when the child showed overt signs of emotional disturbance but was able to express his feelings to some extent and make a partial adjustment to the situation.

ADJUSTMENT OF CHILDREN IN HOSPITAL¹²⁰

Adjustment	Control		Experimental		Total	
	No.	%	No.	%	No.	%
Satisfactory	41	42.7	77	76.2	118	69.0
Limited	42	43.7	21	20.8	63	31.9
Unsatisfactory	13	13.6	3	3.0	16	8.1
Totals	96	100	101	100	197	100 [sic]

Results after discharge.--

Children were classified as:

- (1) disturbed--if any new behavior disorder or neurotic trait had been observed since admission to hospital.
- (2) undisturbed--if behavior was unchanged.

There was a highly significant difference between the two groups; the experimental group showed a lower incidence of emotional disturbance after discharge. When emotional disturbances were present, they lasted a shorter time in the experimental group.¹²¹

The individual types of disturbance reported by mothers after discharge were (in order of frequency):

¹²⁰Ibid., p. 278.

¹²¹Ibid., p. 278.

disturbed nights, clinging behavior, aggression and/or temper tantrums, crying, irritability, spitefulness toward siblings, nocturnal enuresis, fear of hospitals, school refusal, encopresis, refusal to go outside, fear of death, and babyish behavior.¹²²

INCIDENCE OF EMOTIONAL DISTURBANCE AFTER DISCHARGE¹²³

Emotional State	Control No. %	Experimental No. %	Total No. %
Disturbed	53 55.2	22 21.8	75 38.1
Undisturbed	43 44.8	79 78.2	122 61.9
Totals	96 100	101 100	197 100

DURATION OF EMOTIONAL DISTURBANCE AFTER DISCHARGE¹²⁴

Duration	Control No. %	Experimental No. %	Total No. %
Less than 2 wks.	19 35.8	13 59.1	32 42.7
2 wks.-6 mos.	23 43.4	9 40.9	32 42.7
More than 6 mos.	11 20.8	0 0	11 14.6
Totals	53 100	22 100	75 100

Eleven per cent of the children in the experimental group and twenty-three per cent in the control group had post operative complications.

¹²²Ibid., p. 279.

¹²³Ibid., p. 279.

¹²⁴Ibid., p. 279.

ATTITUDE OF 101 MOTHERS IN EXPERIMENTAL GROUP TOWARDS
GOING INTO HOSPITAL WITH THEIR CHILDREN AGAIN¹²⁵

Attitude of Mother	No.	%
Would go into hospital again	86	85.1
Would not go into hospital again	12	11.9
Uncertain	3	3.0

ATTITUDE OF 96 MOTHERS IN CONTROL GROUP TOWARD
THEIR CHILDREN'S HOSPITALIZATION¹²⁶

Attitude of Mother	No.	%
Would like to have gone into hospital	37	38.5
Glad she did not go into hospital	20	20.8
Felt it would have made no difference	39	40.6

I think that the most unfortunate result of this study is the fact that the staff was unanimous in their opinion: they did not want the mothers to stay with their children. They felt it was easier to carry out nursing procedures when the child was alone. Also, they felt that they were able to make more personal contact with the children when they were alone. Finally, they felt that a few of the

¹²⁵Ibid., p. 279.

¹²⁶Ibid., p. 279.

mothers were "difficult." It seems here that the staff neglected to give credit to all of the co-operative mothers.

In conclusion, it can be said that there was a "significant reduction in the incidence of emotional and infective complications when the child was accompanied by his mother."¹²⁷

¹²⁷Ibid., p. 279.

CHAPTER II

CONCLUSION

Certain conclusions can be drawn from the research studies reported upon in this paper. I realize that these studies do not constitute a complete search of the literature; however, considering the large number of times many of these points were mentioned in the studies, I would assume that they are quite representative.

I think one of the most important points to be gained is the fact that the pre-school child--especially the two-to four-year-olds--is the most apt to be adversely affected by the experience of hospitalization. Also, in this age group is to be found the highest incidence of severe reactions and, in accordance, the greatest number of fears. Six studies reported upon this; five agreed with this age range; one considered one to four years the most vulnerable period. One study also reported that this age group was most likely to benefit from hospitalization.

The pre-schooler is also most vulnerable to separation from his parents--the most common continuing disturbance. Of the three studies reporting this fact, all agreed. One must be aware of the other side also: parents often suffer from separation anxiety. This, in turn, causes the parents to

become anxious--a feeling which is not easily hidden from the child by his parents.

Therefore, the main problem seems to be twofold: the hospitalization experience itself plus the separation from parents--especially the mother.

Another conclusion which was brought out in four of the studies is the importance of the child's capability for emotional adjustment before this hospitalization. If the children had neurotic tendencies before admission, they were much more apt to be unable to master the hospital situation. None of the reports disagreed on this fact.

Two studies brought out this point: Not only the child's previous ability for adaptation, but also the amount of trauma the child undergoes in the hospital must be considered for each individual patient. Procedures especially harmful are those requiring bodily intrusion, especially anal and cutaneous procedures. Through play interviews it was learned that the oral route is acceptable to most children. In fact, oral medications are usually associated with food given at mealtimes. Procedures which involve taking the child away from the ward are quite stressful because they represent to him the separation from his parents, which is overwhelming at times.

Two studies reported upon the fact that many false ideas exist among hospitalized children. Some feel that hospitalization is a punishment, or even an attempt to eliminate them. Most see no protective intent in any of the

procedures done, but consider them as hostile with the exception of most oral procedures, as mentioned above. An almost universal finding is the fantasy meanings children have for operations. Very few understand the basic concepts of the operative procedure or the intent of it.

In one study it was found that teaching the child to cope with a general stress situation did not help, but specific teaching definitely did help. In another study two methods of explanation of facts were utilized and found helpful: the tutorial method, and the ventilation method--where one is encouraged to express individual fears and is helped to ask questions about these.

Three studies stated that all patients showed some reaction to hospitalization, but most of these reactions were only mild and lasted anywhere from thirty minutes to ten days. One of these studies stated that the majority of disturbances were very slight in degree; however another one stated that the majority of reactions were moderate and severe. In another study it was pointed out that in over one half of the cases, behavior showed no change or was improved.

Certain manifestations of adverse reactions were emphasized in seven of the studies. Some of these disturbances were found in relation to eating, sleeping, speech, and elimination. Regression was evident in many cases. In addition, tics and mannerisms, aggression, anxiety, withdrawal, hyperactivity, clinging to the mother, and fear of going to bed were often found. However, in most cases these reactions

are short-lived.

Three studies pointed out that fears can be categorized according to age. For the child less than five years of age, the hospital experience itself is the main focus of anxiety. The child from five to ten years has fears of the hospital, operative procedures, needles, and narcosis. In this age group the reaction is almost always individualized. Those from ten to fourteen years fear narcosis more than anything else.

Another point was evident in all six of the studies reporting on results of experimental and control groups. Those children in the experimental groups had less traumatic reactions than those in the control groups. For example, experimental conditions included: use of specially trained personnel who were aware of psychological implications of hospitalization, admission of mother with the child, increased visiting hours, special play programs, presence of the nurse when parents went home after visiting hours, and preparation for hospitalization beforehand. From such results it should be evident that changes are needed in many hospital pediatric units today.

PART II

GRADE SCHOOL STUDY

10
n

MARITA Mc DONALD Gr. 5



Miss Vaneck



Eddie Brennan

No





NO



EXIT

NO

R. 345



R. 862



R. 468



R. 403



Do You
need
a ride?

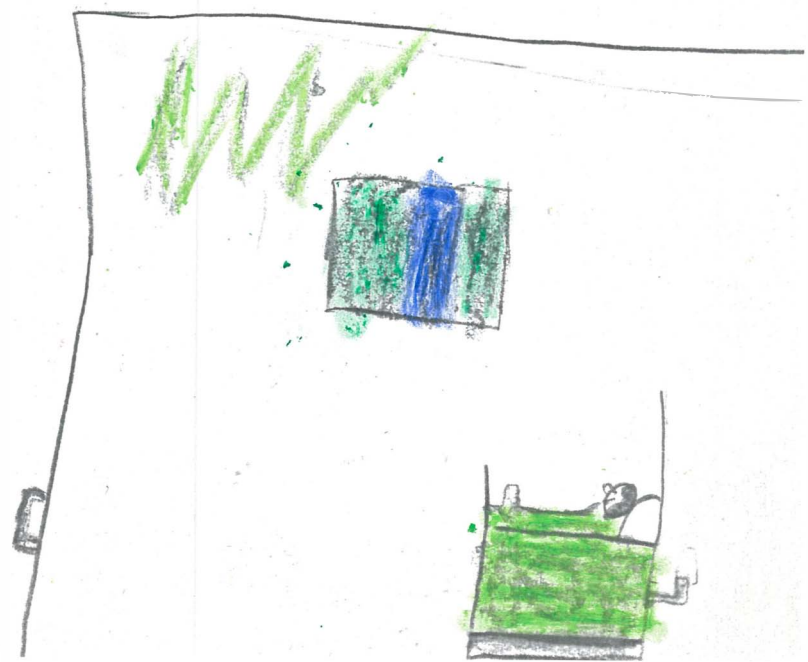
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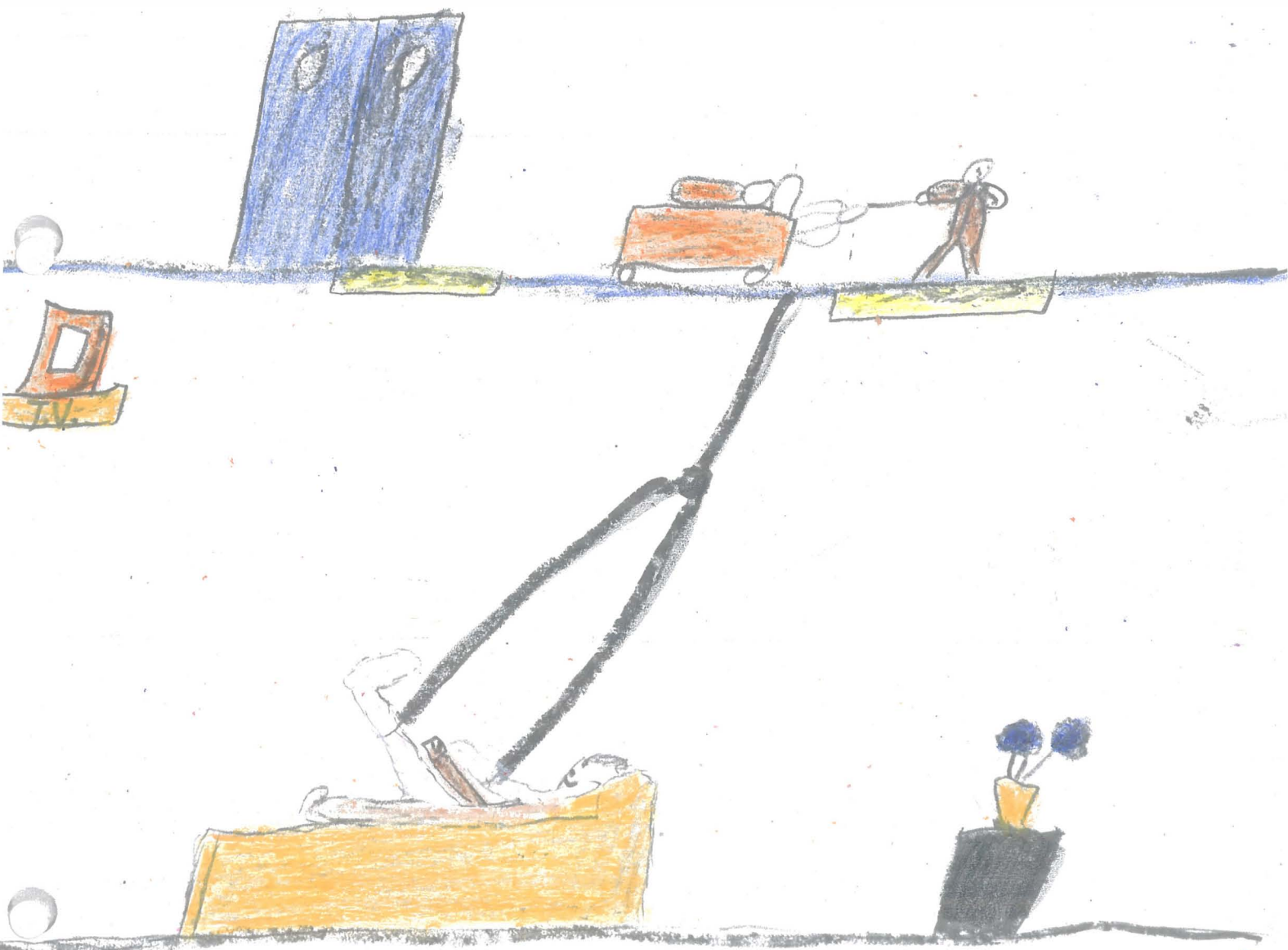
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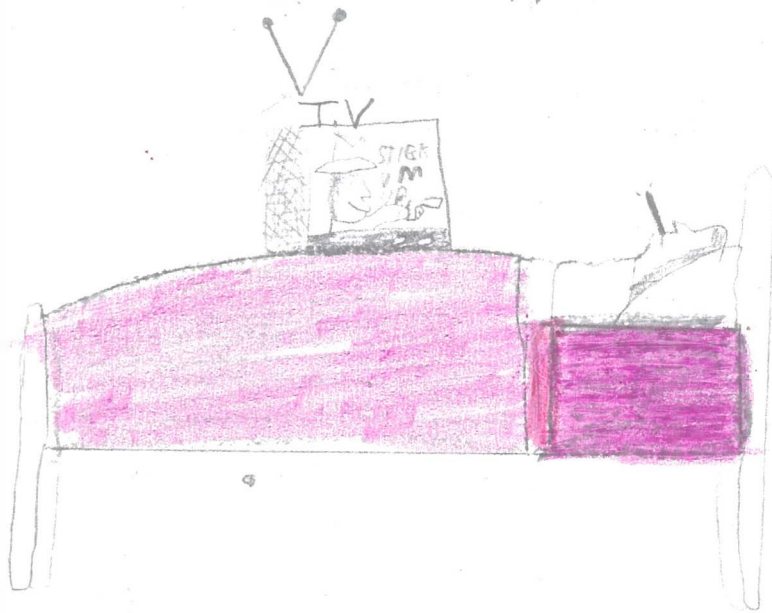
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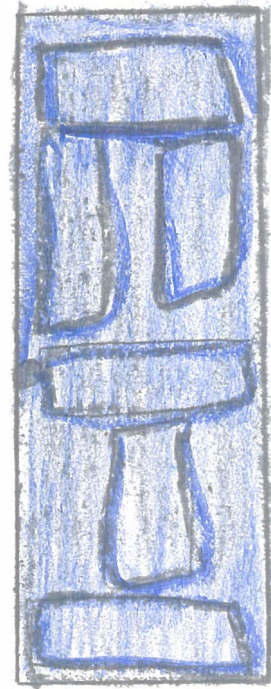
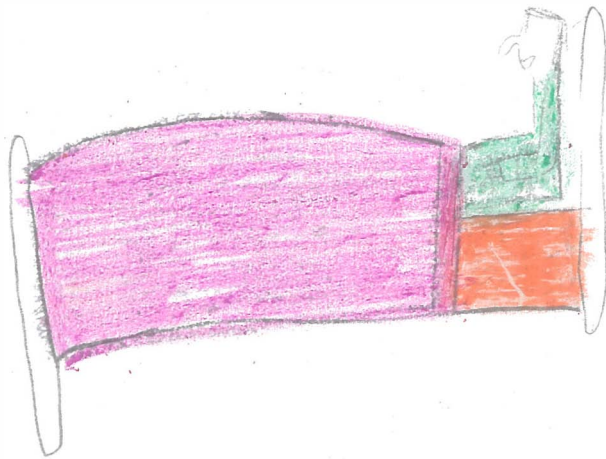
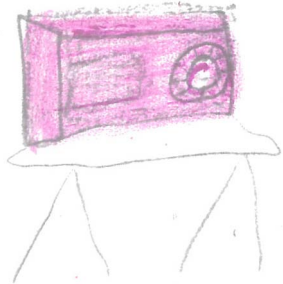






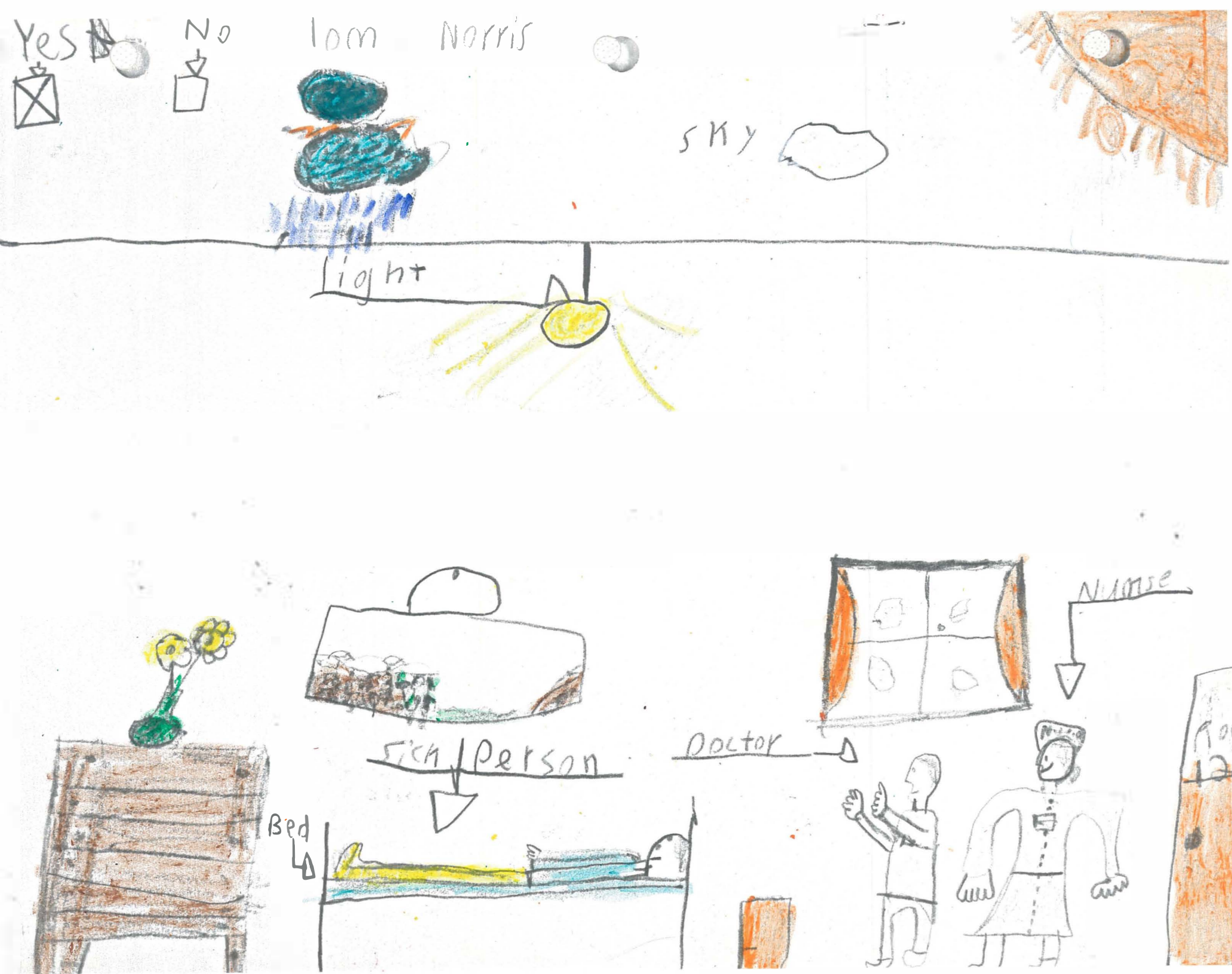
NO
SMOKING

NO



NO





Yes

No

Iom Norris

sky

light

Sick Person

Doctor

Nurse

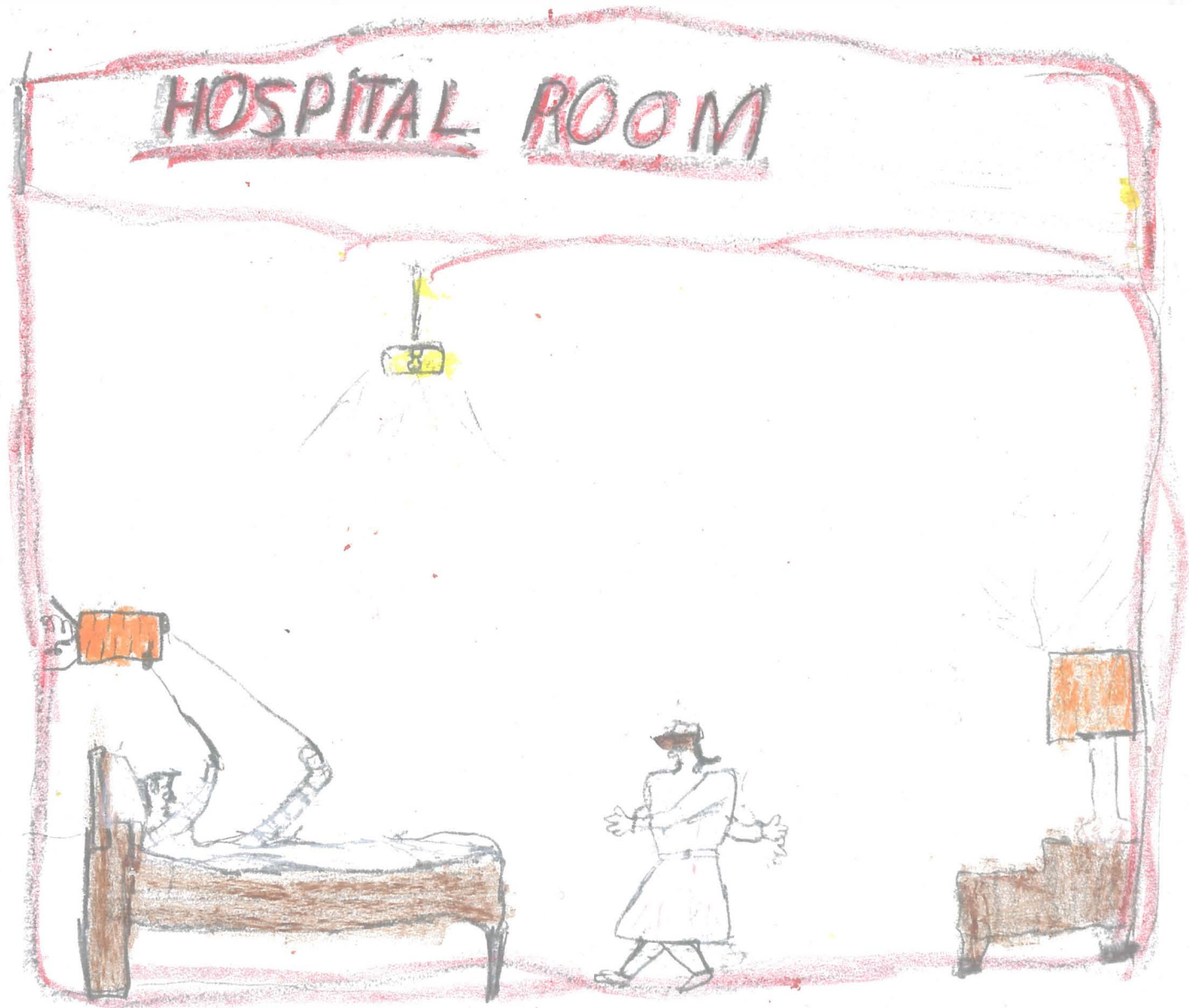
Bed

12

YES



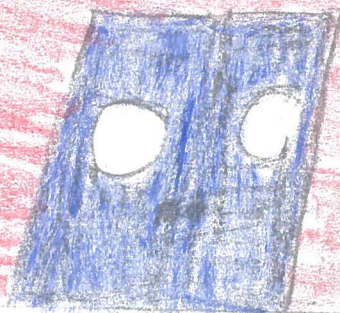
Tim Sutter



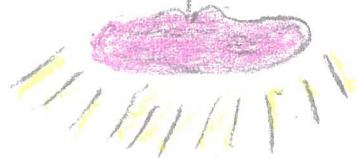
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Waiting Room

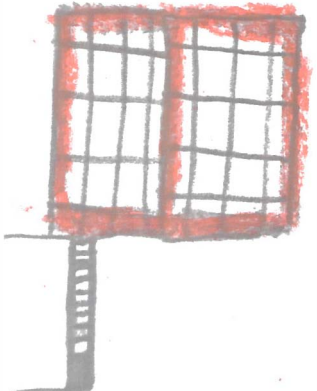
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operating room

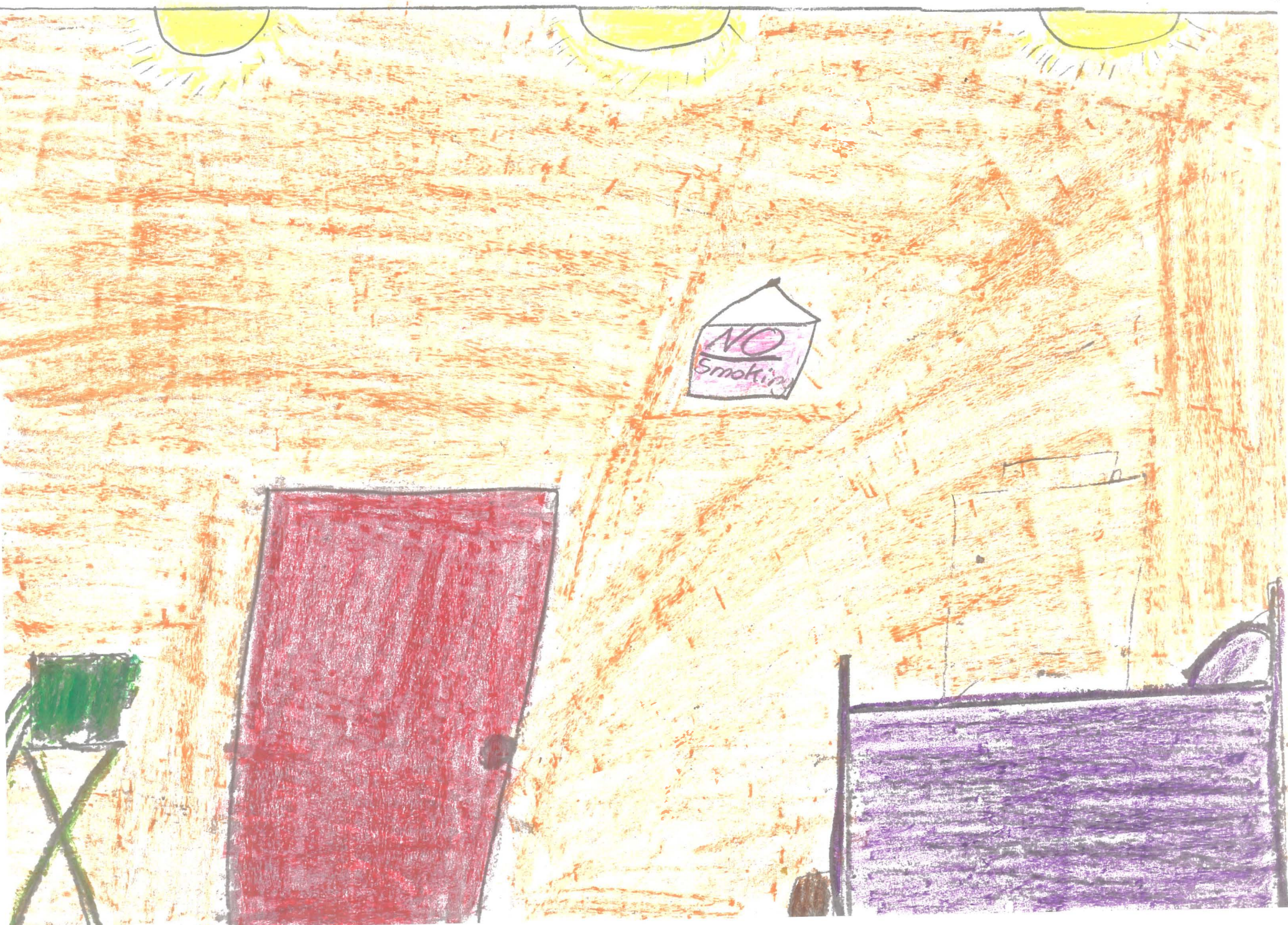


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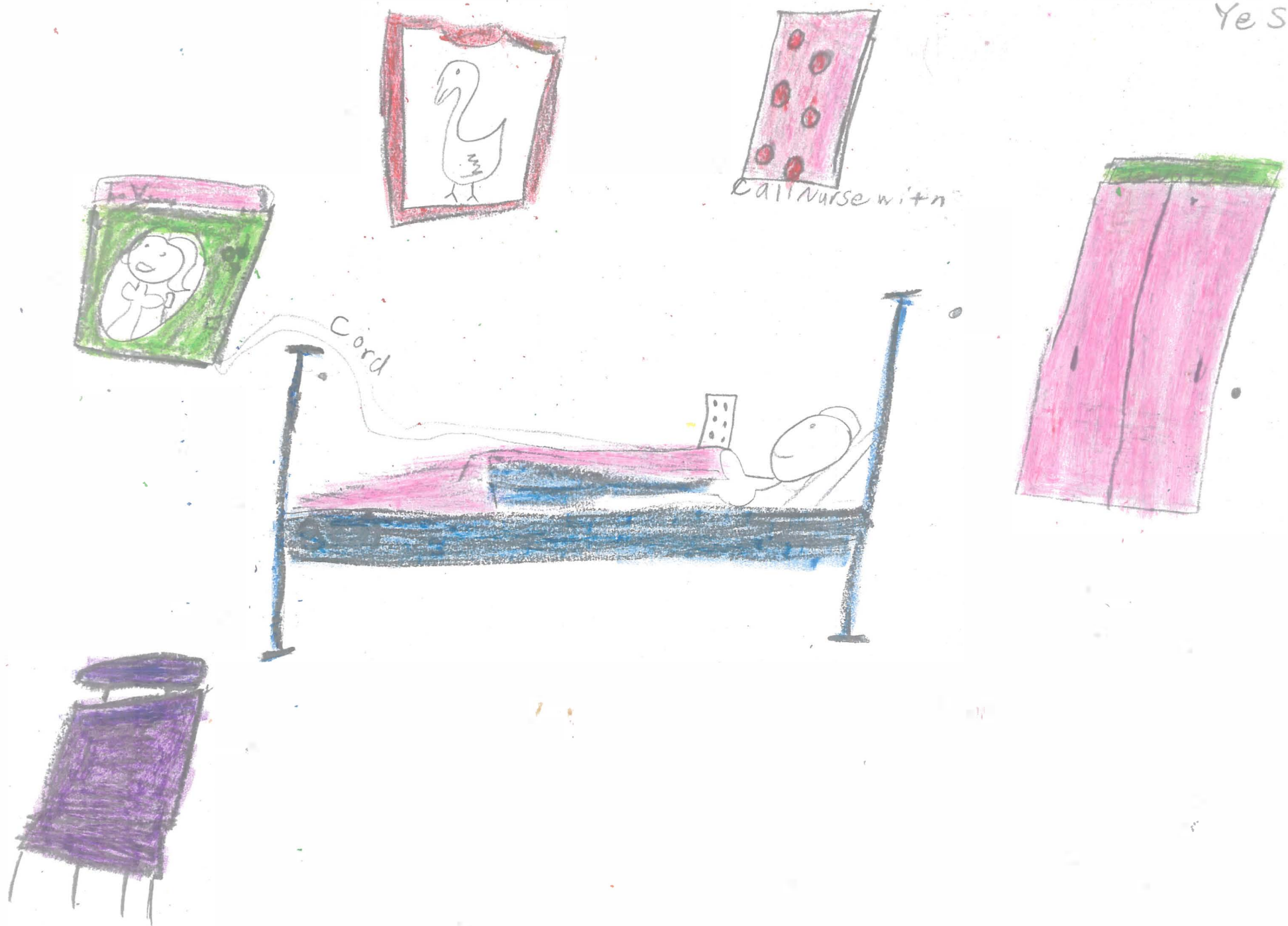


... Hospital

YES



Yes



Call nurse with n

Cord

yes

Kathy Bailey

YES

NURSE
NEEDED

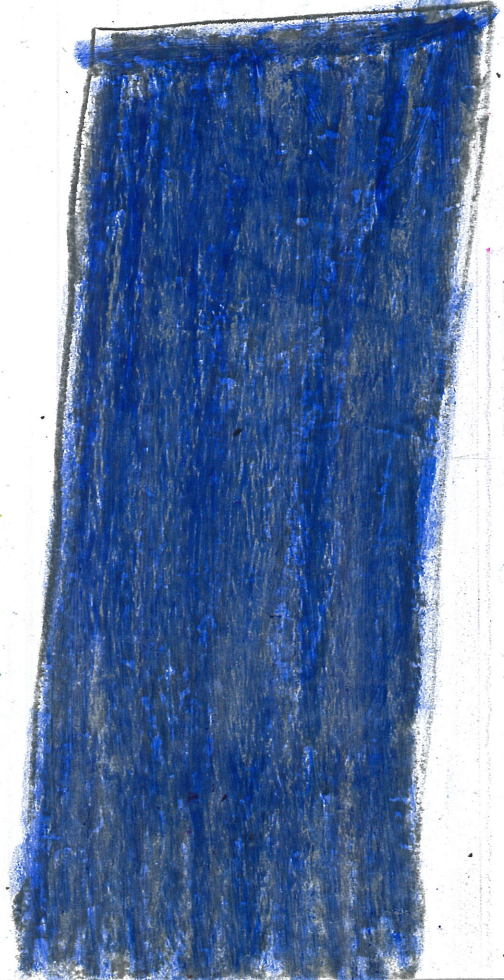


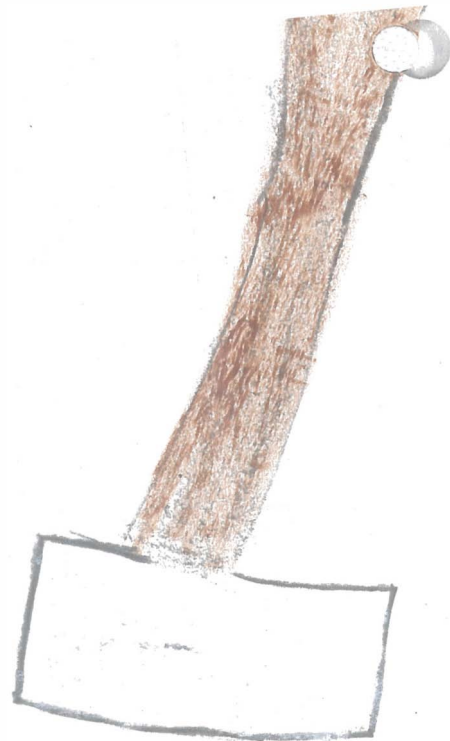
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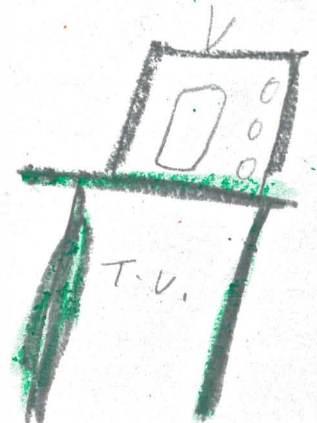
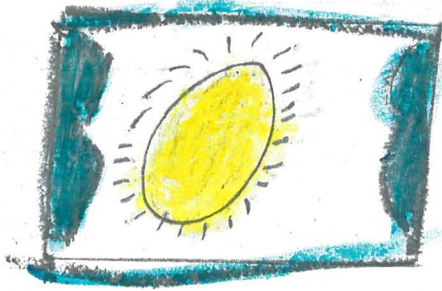
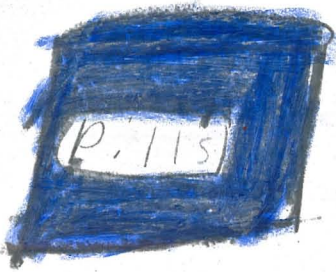
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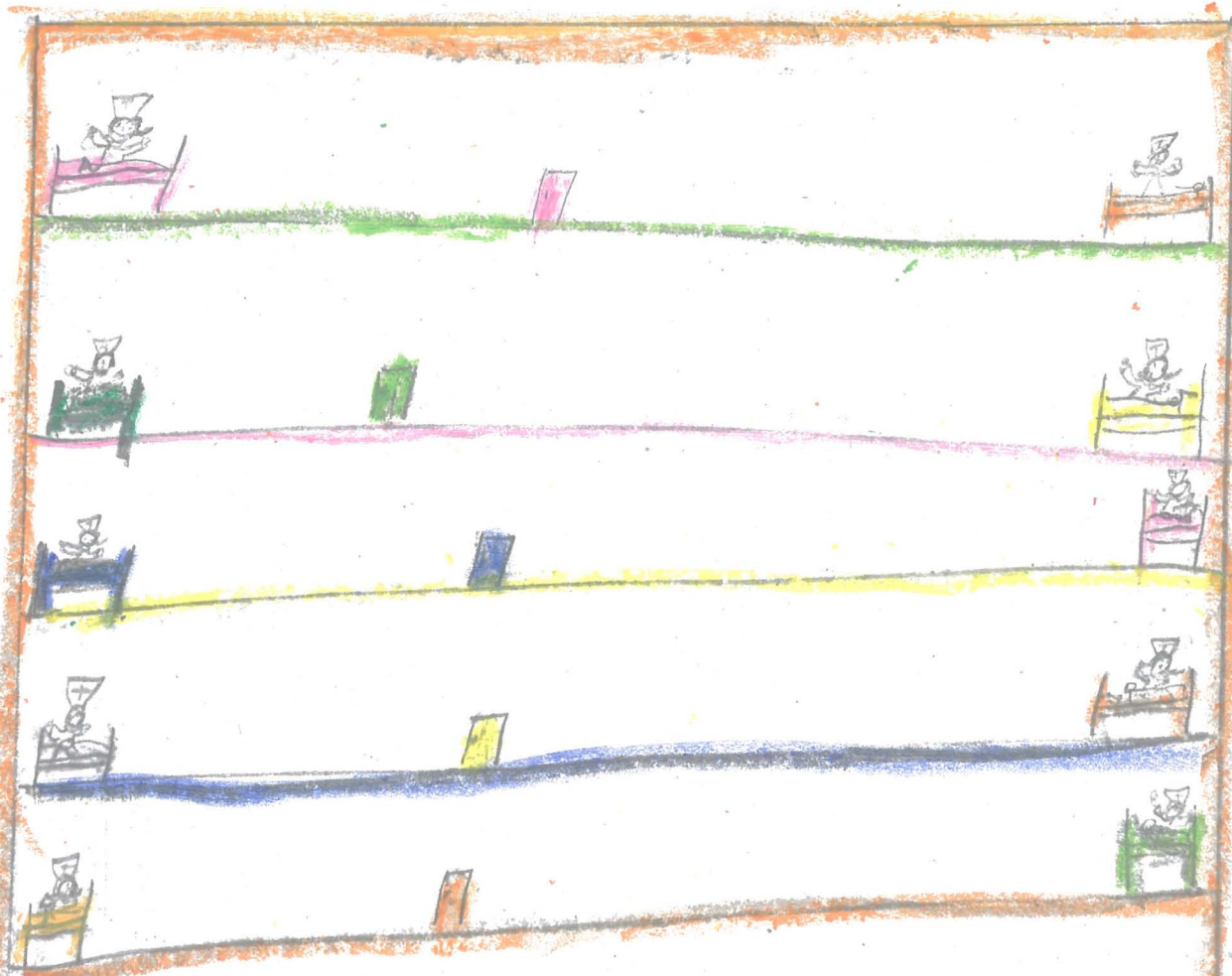
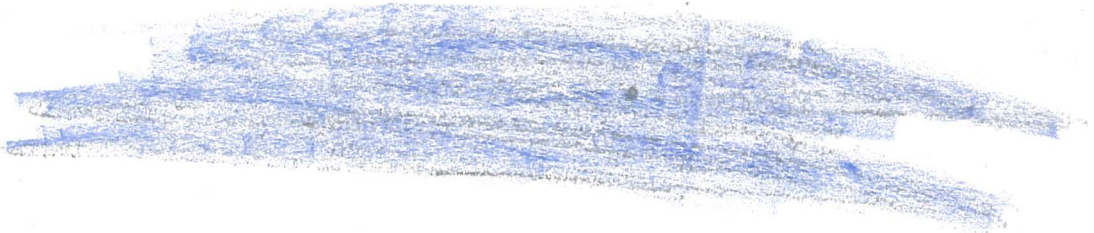
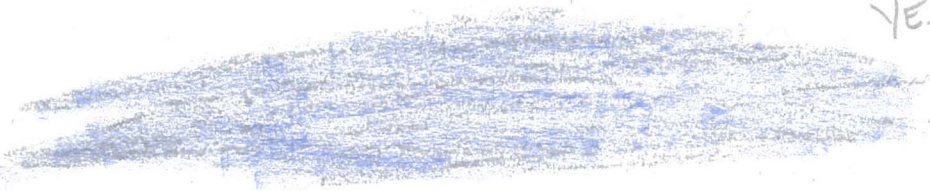


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YES

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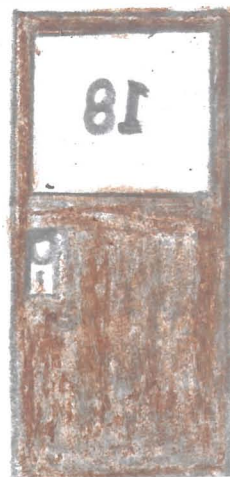


Waiting
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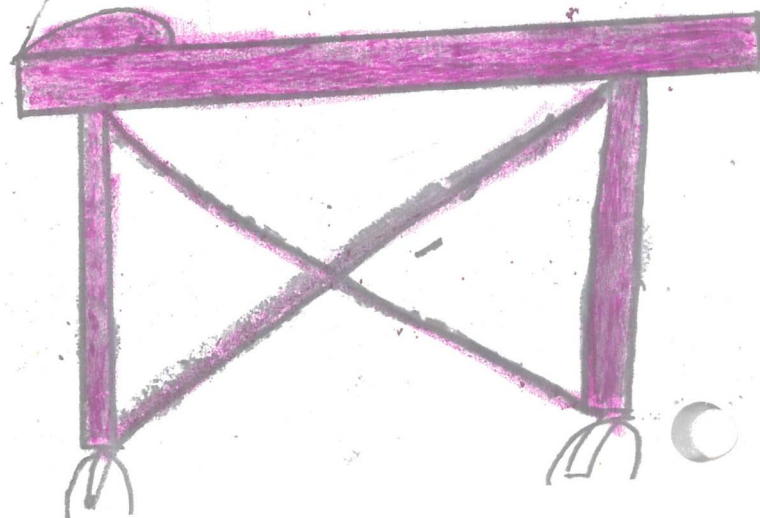
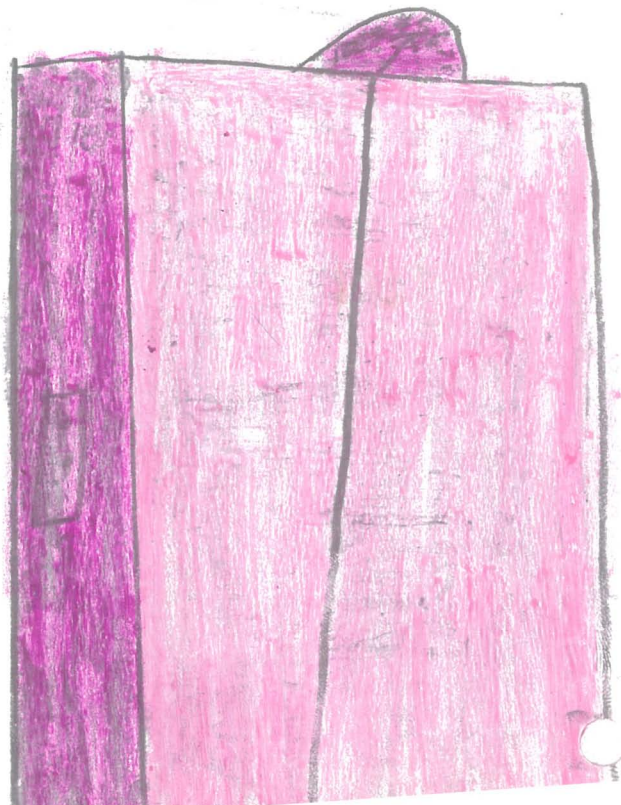
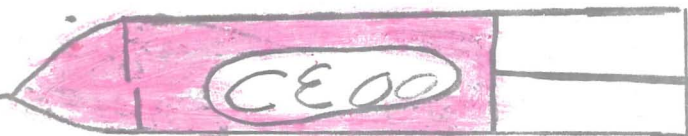
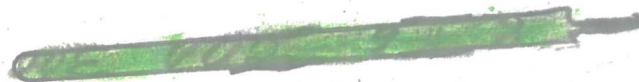


Carl Linzkey

yes



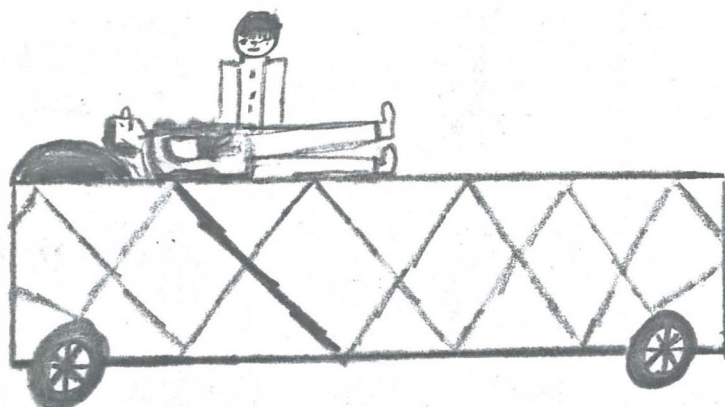
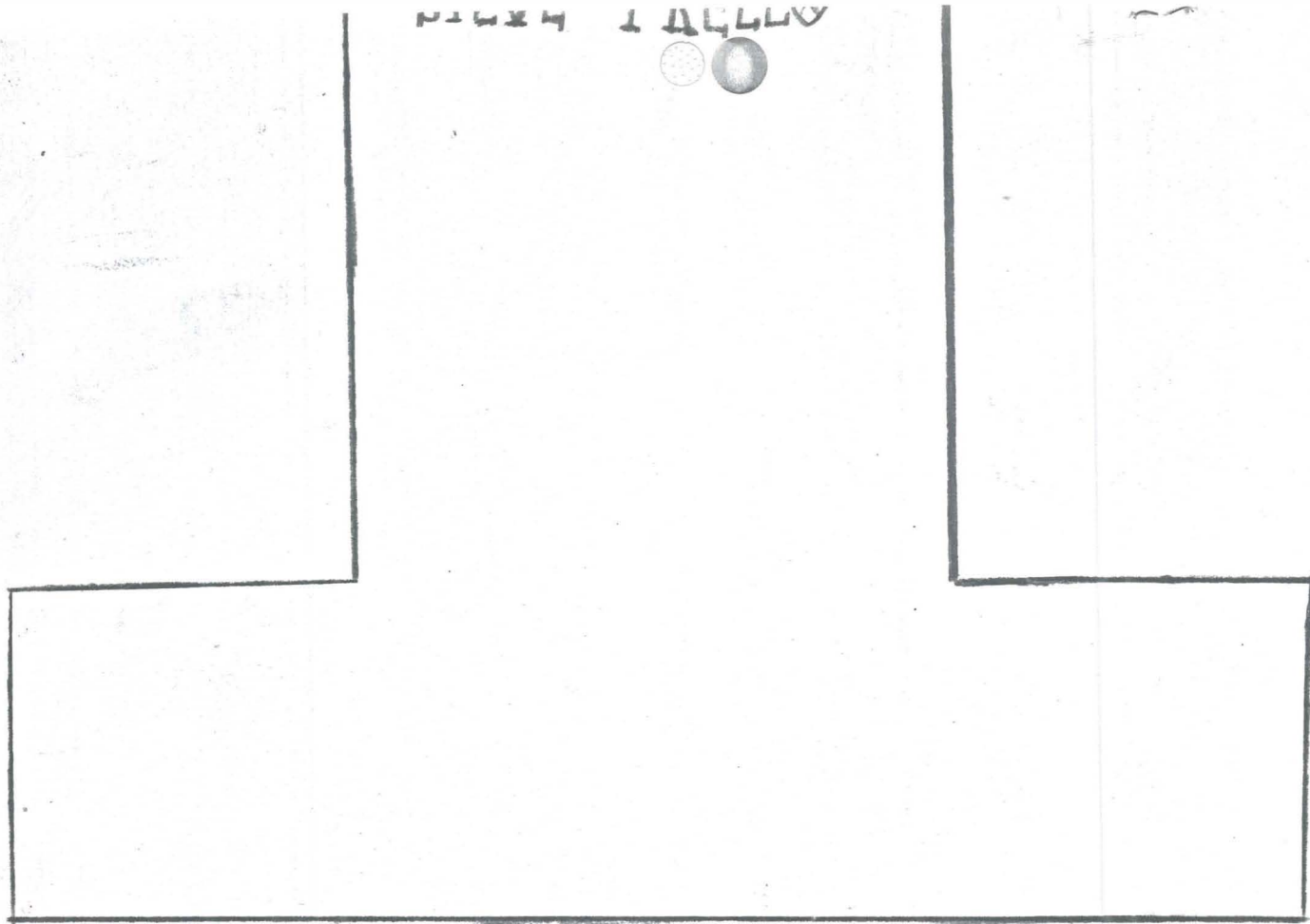
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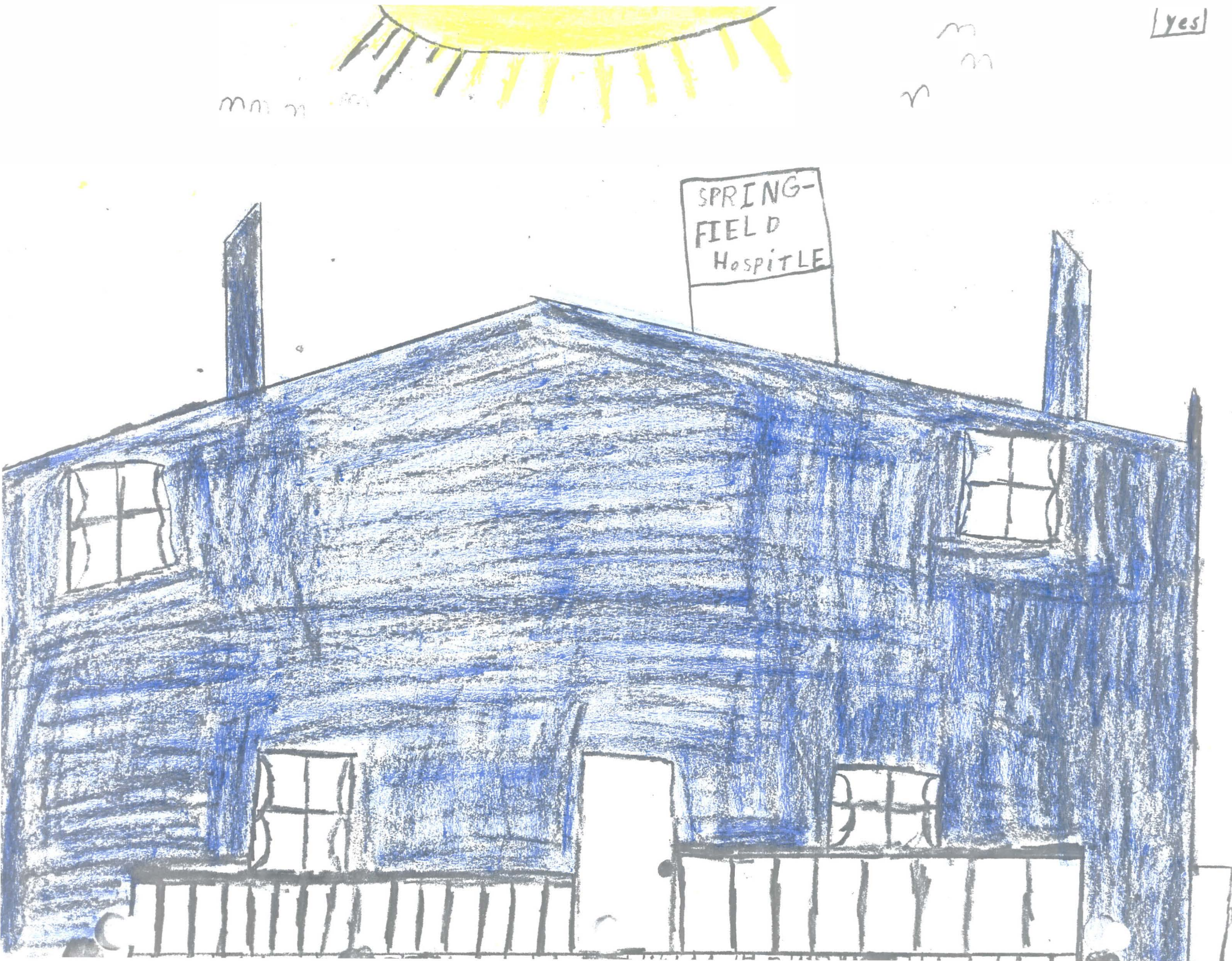
PICTURE 1 ALLEY

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YES



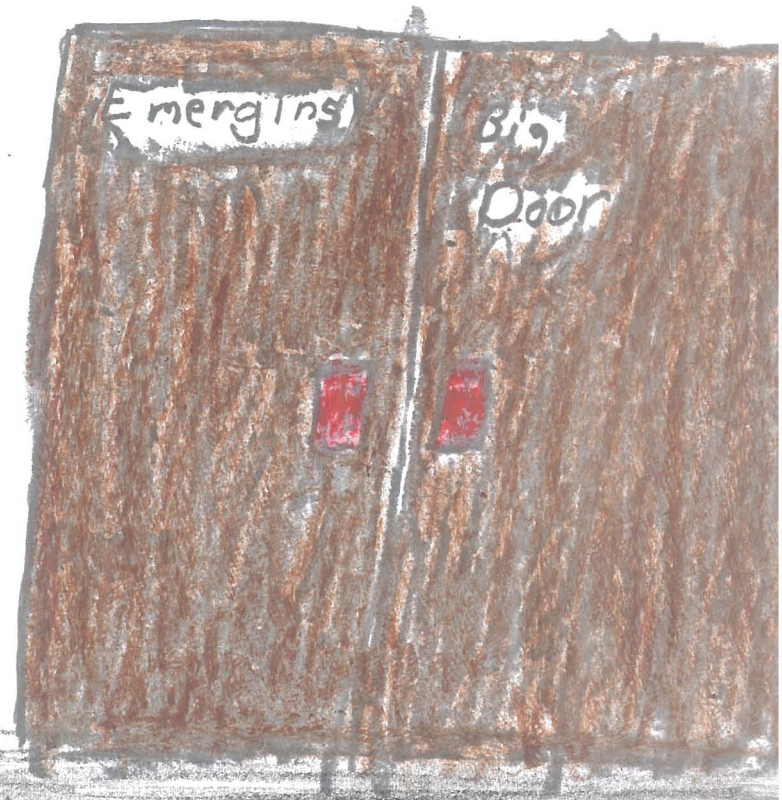
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Billy

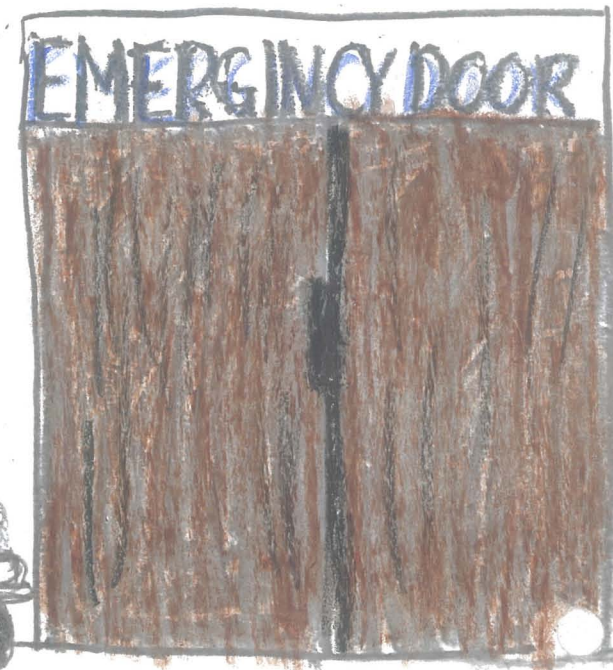
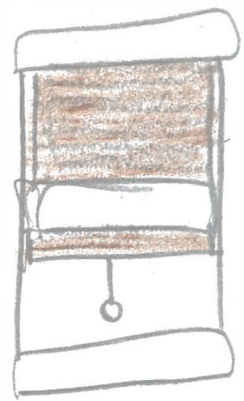
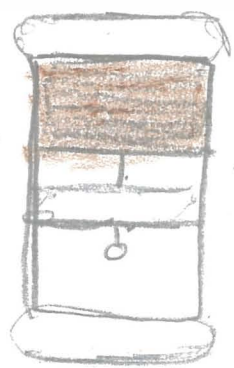
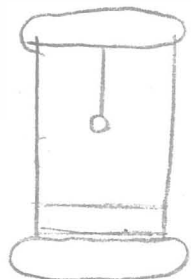
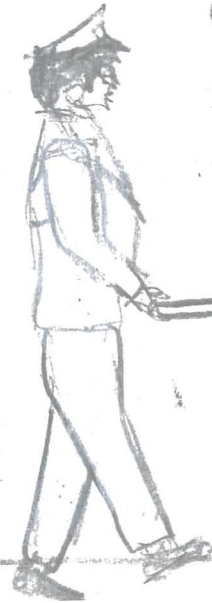
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Billy
Orenda



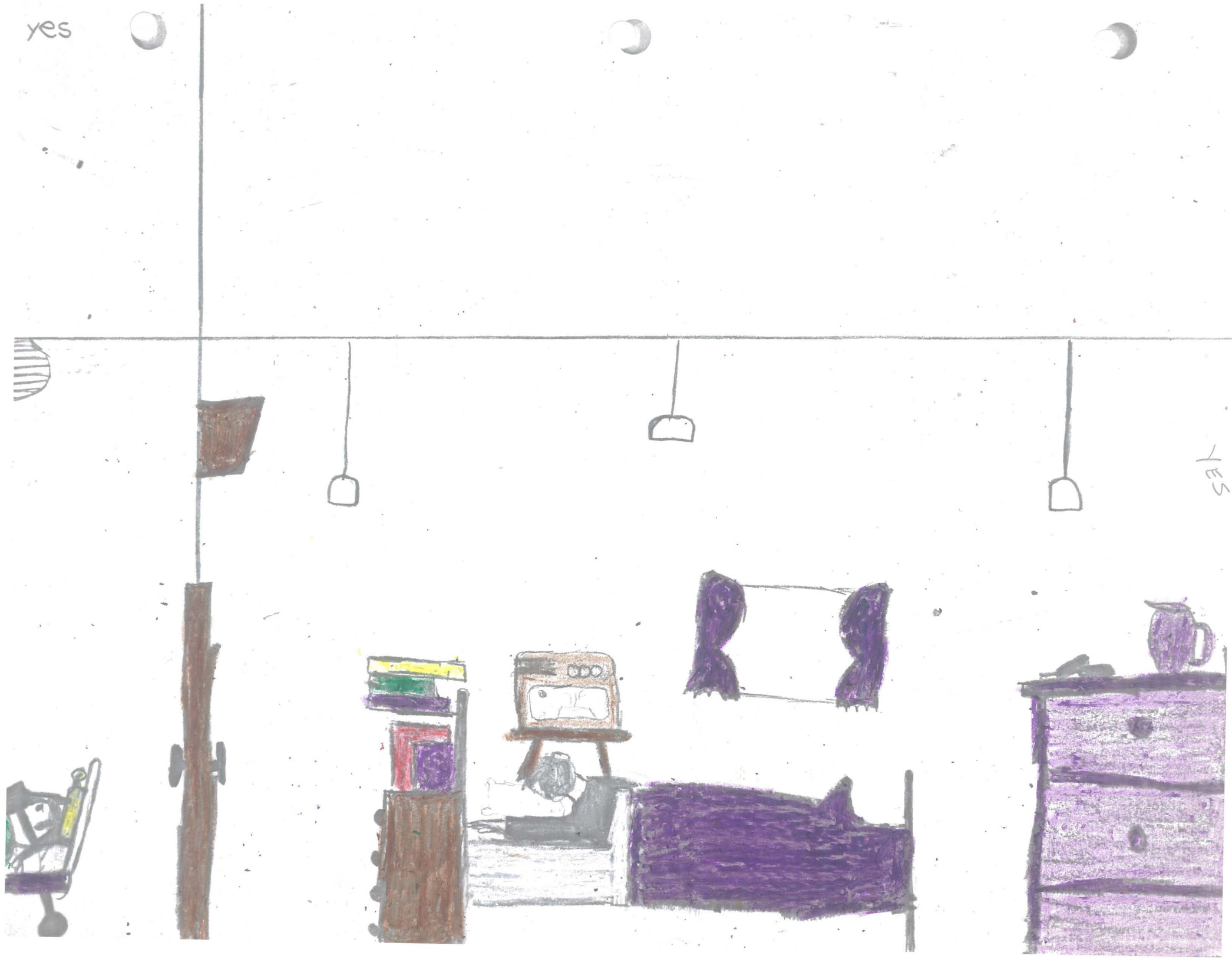
DIRT FROM OUT SIDE

YES

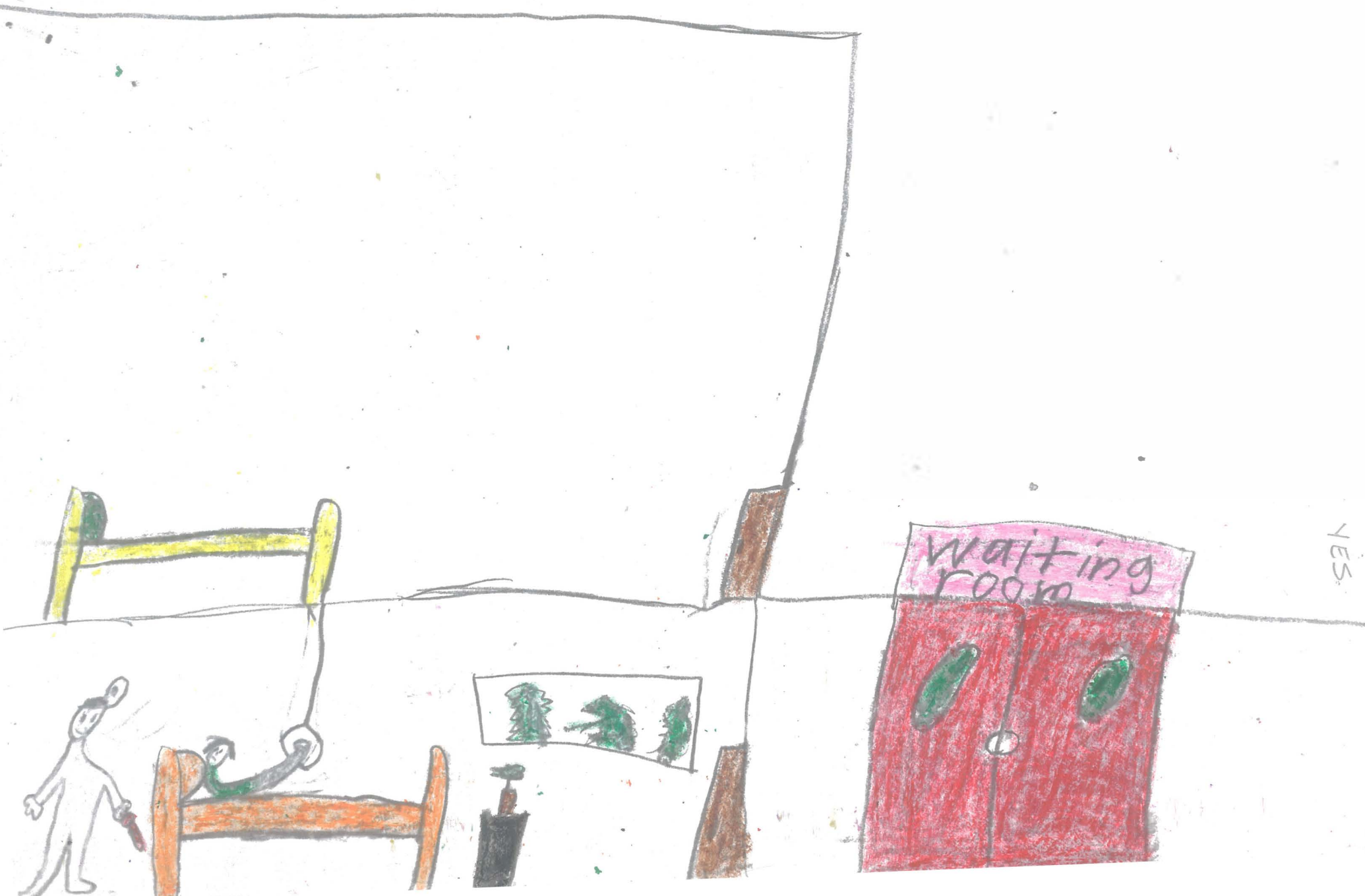


yes

yes



Yes

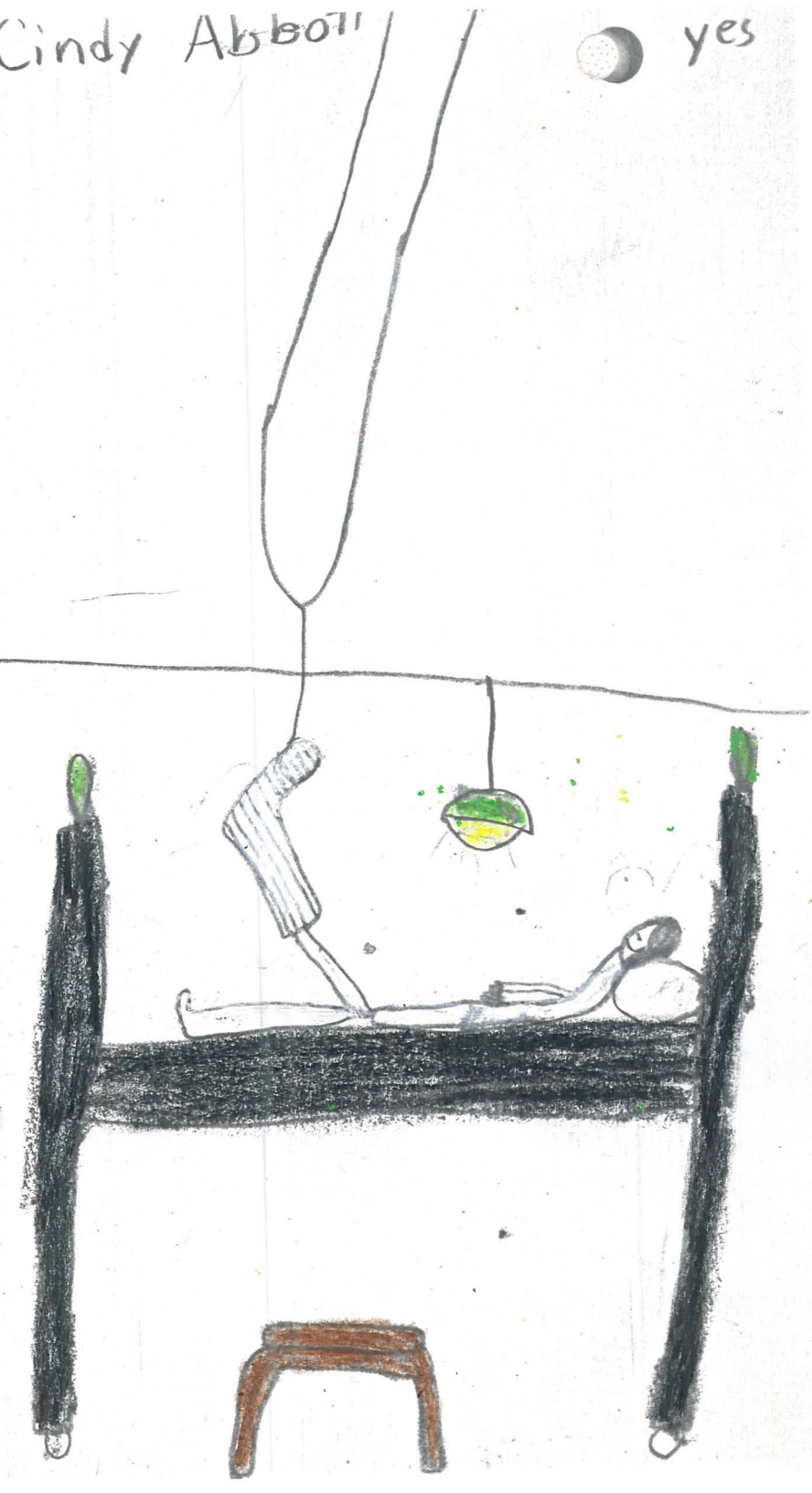
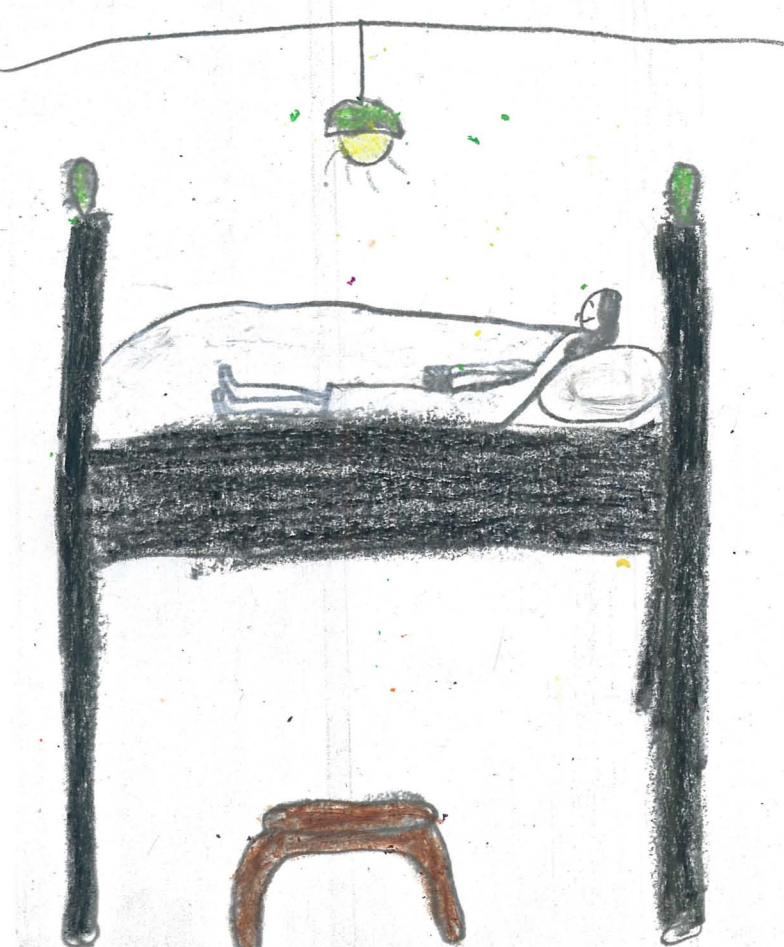
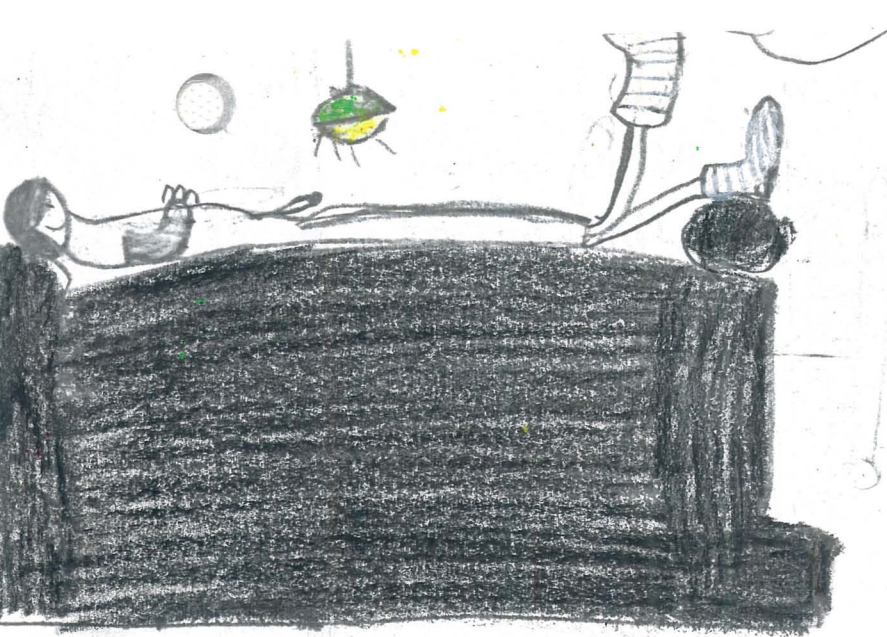


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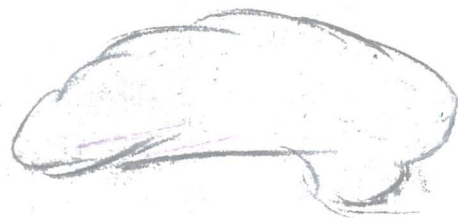


Cindy Abbott

yes



yes



By Melodie Diane Miller

yes



CHAPTER III

EVALUATION BY DR. PAPE

(I. W. U. Sociology Professor)

In his evaluation, Dr. Pape made the following eight generalizations.

- (1) Most of the pictures were very light.
- (2) Not much black was used. This color can be associated with trauma.
- (3) A television was drawn in many of the rooms-- indicating that many happy hours were spent watching television.
- (4) In general, the pictures were not negative at all.
- (5) All were bright and cheery.
- (6) The children evidently liked the hospital and nurses.
- (7) The only negative picture was the one with the very large needle on the side.
- (8) He had expected to see amputees and deformities in the pictures.

CHAPTER IV

EVALUATION BY DR. SEDARAT

(I. W. U. Psychologist in Education)

First of all Dr. Sedarat stated that he realized I was not conducting a research study by strict procedures, but he wanted to give me some recommendations about how such a study would have been conducted. He said that ideally the I. Q. of each child would have to be determined. Also, it would be important to know his home background. Finally he saw no need to have the children put "yes" or "no" on the front of the picture to indicate if they had been in the hospital before or not. This information could have been recorded elsewhere, because it may become influential on the judges as it did in his case.

He discussed eight major areas:

- (1) Absence of Human Figure--This can show interpersonal difficulty and guilt feelings. It can also be an indication that the child is withdrawn and shy.
- (2) Sex of Figure--This is significant according to the sex of the child who drew the picture. For example, if a boy drew a man, he has no problem identifying sexually. However, if a boy has drawn all girls, he is "mixed up" in sexual identification.

- (3) Number of Persons in Picture--One who has many figures tends to be an extrovert; he is more confident, displays less anxiety, and can generally accept many pressures. If he draws only one person or none at all, this can be an indication that the child is lonely and under pressure; he is scared and insecure; he usually keeps burdens to himself.
- (4) Outside or Inside of Hospital Drawn--If hospital is drawn from the outside, this indicates that he associates pain with the hospital; it was probably a frightening and painful experience for him. On the other hand, if he draws the inside, he probably got over the fear of hospitalization and generally faces problems well.
- (5) Some pictures indicated the patient going out of the hospital situation, while others had the patient going in. Those who drew the patient leaving associate a bitter and unpleasant experience with hospitalization. Those who indicate that the child is entering the hospital consider this to be a challenging experience; they are less frightened.
- (6) Size of patient in comparison to nurses--If the patient is small and the nurse is large, the patient feels inadequate, inferior, and overwhelmed. However, if the patient is larger, he is egocentric and gets over painful experiences.
- (7) Amount of Erasing--If much erasing was done, this shows anxiety on the part of the child in regard to the part

erased. For example, if the mouth is erased much, the child may feel that nurses are mean; the child may have been put in his place many times; he feels there are too many rules.

- (8) Number of nurses and doctors compared to number of patients--
If there are many personnel and one patient, the patient feels dependent, overwhelmed, and inadequate; he would not want to return. On the other hand, if there are many patients and one nurse, the patient feels secure; he knows the nurse is there to help him if he has problems.

Throughout this interview Dr. Sedarat stressed the fact that all of the points he gave me are just tendencies and the ideas of one person.

CHAPTER V

MY OWN OBSERVATIONS

Number of Pictures--	Number Who Have Not Been in Hospital (11)		Number Who Have Been in Hospital (24)	
		%		%
including a patient	9	82	17	71
with a nurse or doctor				
a. in room with patient	4	36	10	42
b. approaching room	3	27	0	0
with nurse or doctor smiling	6	54.5	5	21
including an elevator or exit sign	2	18	1	4
including windows	6	54.5	12	50
drawn from inside room	9	82	19	79
with a bright light	7	64	11	46
in which red was used	3	27	7	29
in which black was used	4	36	22	88.5
including flowers	4	36	5	21
including TV or radio	3	27	6	25
with patients in traction	2	18	4	17

CONCLUSION

Several conclusions can be drawn on the basis of the study which I carried out in the grade school. In general, I feel that most of these are healthy pictures of the hospital situation. They show a keen awareness of the environment through specific details. Most of these pictures were drawn from the inside of the hospital rather than from the outside; I think that if the latter had been true, it would have indicated that the hospital was quite threatening for the children. More of the children who have not been in the hospital pictured the nurse or doctor smiling. This tendency changed, however, for those who had been in the hospital. Therefore, I think it is important for medical personnel to be very conscious of each patient's awareness of personal countenance.

Other similar conclusions are evident. More of those who had not been in the hospital included an exit sign. They were evidently very aware of the possibility of leaving the hospital situation. Also, more of those who had not been in the hospital included bright lights in the picture. This surprised me somewhat; I would have thought that more lights would have been drawn in the pictures of those who had been hospitalized. Another observation which was different from what I would have expected was the fact that fewer of those who had been in the hospital included a patient in their pictures.

In conclusion, I realize this study is only a small

PART III

RECOMMENDATIONS

From all of the reading I have done, certain recommendations can be suggested. I realize that it would be difficult to employ all of these ideas in every pediatric unit, but I think they represent the ideal.

First of all, since separation from the mother is one of the greatest sources of stress for the child, it would be beneficial for the mother to be admitted with her child. In this way she could help with his care; also, she would be available at all times so that the nurse and/or doctor could explain to her helpful information concerning the illness.

If space would not permit the above situation, visiting hours should be greatly extended. The parents should be allowed to accompany the child through the admission procedure and for the first couple of hours in the ward. They should have several familiar items from home to leave in his bed with him. Also, it would help if the mother would bring one of his favorite foods that she has prepared at home.

The medical personnel must communicate with the child on his level. The nurse can explain to the child that it is not the wish of his parents to leave at a certain time every day, but rather it is a rule of the hospital. Even though parents say they will be back, very young children have no perception of "tomorrow." Sometimes parents can call and

leave a telephone message which can be relayed by the nurse; this will seem real to him. A "play lady" who has training in child development can help the hours between visits go faster.

The doctor's interaction with the child is also important. Too often a child cries the minute he sees a doctor entering the room. This is a good indication that previous experience with doctors has been traumatic for him. The doctor can tell the child that he shares his wish to go home and that he is trying to help him get better.

It must be realized that the period of hospitalization is difficult for parents also. It would be especially helpful if a student nurse could go to the home about three days before hospitalization to visit with the mother and child. Both mothers and children will probably find it easier to talk in the home environment. She could give them a preview of what his forthcoming experience will include. Ideally the same student nurse could admit the child and care for him pre- and postoperatively. If impossible to do this for all age groups, at least it should be done for those from two to six years of age, since they are most vulnerable to adverse psychological effects from hospitalization.

Very often the nurse must help the parents understand the emotional impact this experience has on the child. The parents may feel guilty--some feel the hospitalization is meant to be a type of punishment. The nurse must help the parents through such feelings, because anxiety in the parents

is readily detected by the child. In fact, the attitudes of those around the child can be more important than the medical procedures themselves.

Most important, each child must be cared for as an individual, not as a diagnosis. The stage of development (developmental tasks he has achieved) must be considered even more than his chronological age.

APPENDIX

APPENDIX I

In introducing my research topic to the students, I used the following procedure. The pictures for the study were done by children in the third grade at Holy Trinity Grade School in Bloomington, Illinois. Before class began I had a chance to visit with some of them. When the bell rang, Mrs. Richard Mann, their teacher, introduced me.

I told the students my name and that I was a student at Wesleyan and studying to be a nurse. I said, "I'd like for each of you to do me a favor and draw what you think the hospital is like. For example, if you had a friend, brother, or sister going to the hospital, and he asked you to draw him a picture of what it will be like, what would you draw?" The children had one hour in which to complete their drawing.

While they were drawing, I went around to each individual child and asked him if he had ever been in the hospital before--not including when he was born. The children then wrote "yes" or "no" in the corner of their papers.

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