

The Woman's College of
The University of North Carolina
LIBRARY



COLLEGE COLLECTION

CQ
no. 664

Gift of
PHYLLIS WARING ROLLINSON

ROLLINSON, PHYLLIS WARING. Toddler Behavior Patterns as Related to Mother Anxiety Levels. (1969) Directed by Dr. Helen Canaday. pp. 76

The purpose of this exploratory study was to determine the relationship between the anxiety level of the mothers of toddlers and the type of anxious behavior the toddlers displayed as they entered a group situation for the first time.

The anxiety level of ten mothers of newly enrolled toddlers in the toddler play group which is a part of the School of Home Economics at the University of North Carolina at Greensboro, was specified by the scores the mothers received on a fear inventory completed on the first days of a nine week study. The mothers were divided into a high and low anxiety group according to their scores. By matching the toddlers with their mothers, the children were classified as belonging to the high or low anxiety group.

Twenty-seven coping behavior activities of the toddlers were observed and recorded at five minute intervals for one hour each session for a total of twelve hours. The coping behavior activities were subclassified into three types: anxious behavior activities, less anxious behavior activities and least anxious behavior activities. The total time the child engaged in each type of these coping behaviors each hour was tabulated and an individual behavior activity pattern emerged. The mean total behavior activities for each type was calculated for the high and low anxiety groups in order that the two groups could be compared.

The results revealed that behavior activity patterns were all different. Both groups engaged in anxious behavior activity less time

W

on the last day of the study than on the first day of the study. Both groups coped with their anxiety successfully during the twelve days of observation. The mean behavior activity patterns of the high and low anxiety groups appear similar when illustrated on a line graph. A comparison of the mean anxious behavior activity pattern of the low anxiety group reveals a relationship between the anxiety level of the mothers and the total time each day their toddlers engaged in anxious behavior activity. On ten out of twelve days of the study, the low anxiety level mothers had toddlers who engaged in anxious behavior activity a lower percentage of the time than did the high anxiety high level mothers. On ten out of twelve days, the high anxiety level mothers had toddlers who engaged in anxious behavior activities a greater percentage of time than did the low anxiety level mothers. Therefore, it could be concluded that there is a relationship between the anxiety level of the mothers of toddlers and the type of anxious behavior the toddlers displayed as they entered a group situation for the first time.

APPROVAL SHEET

This thesis is titled "TODDLER BEHAVIOR PATTERNS AS
RELATED TO MOTHER ANXIETY LEVELS"
of the Faculty of the Graduate School at the University of North Carolina
at Greensboro.

by

Phyllis Waring Rollinson

A Thesis Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Master of Science

Greensboro
June, 1969

Approved by

Helene Casaday
Thesis Adviser

APPROVAL SHEET

This thesis has been approved by the following committee of the faculty of the Graduate School at The University of North Carolina at Greensboro.

Thesis Adviser

Helene Casaday

Oral Examination
Committee Members

John A. Edwards

Faye W. Grant

Nancy White

Helene Casaday

April 24, 1969
Date of Examination

ACKNOWLEDGEMENTS

I acknowledge with my sincere thanks and appreciation the interest and guidance of Dr. Helen Canaday, Chairman of the Advisory Committee and Major Advisor. Her continued encouragement and understanding throughout this project have contributed so much to its final completion. To Dr. John A. Edwards, whose time, patience and knowledge of behavior led to the analysis and interpretation of the research design, I am grateful. To the members of the Advisory Committee, Dr. Faye Grant, Dr. Nancy White, and Mrs. Rose Freedman whose creativity and unfailing confidence in the research meant so much, I am appreciative. Many thanks to my husband, Fred, whose business "know how" and faith in the successful finish of this study helped immeasurably, and to our children, Joan and Rick, whose continuous cooperation in all our family activities made it possible to complete this work. I am indebted to Mrs. Mildred Conrad, and Mrs. Elizabeth Green whose able proof reading and typing ability aided in the writing process, and to Mr. Louis Bledsoe, who prepared the line drawings for duplication. This research was accomplished through the efforts of the students, who observed the children and recorded the data, and the mothers of the newly enrolled toddlers, who completed the fear inventory and filled in the questionnaires, and through the cooperation of Mrs. Rose Freedman, the teacher in the toddler group where this study took place.

TABLE OF CONTENTS

	PAGE
ACKNOWLEDGEMENTS	iii
INTRODUCTION	viii
 CHAPTER	
I. REVIEW OF RELATED LITERATURE	1
II. A DESCRIPTION OF THE PRESENT STUDY	10
Reasons and Objectives	10
Basic Assumptions and Hypotheses	11
Subjects	12
Methods	12
The Observation and Recording Instrument for the Data	12
Tabulation of the Recording Sheet	14
Questionnaire	14
Tabulation of the Questionnaire	15
Administration of the Fear Survey Schedule	15
Scoring of the Fear Survey Schedule	15
The Coding of the Data	16
III. RESULTS OF THE STUDY	17
Fear Survey Schedule III Results	17
Observation and Recording Sheet Results	18
Low Group	18
High Group	26
Low Group	33
High Group	34

CHAPTER	PAGE
Questionnaire Results	35
Low Group.	35
High Group	36
Summary of Results of Questionnaire	38
IV. DISCUSSION OF THE RESULTS	39
Summary.	48
Conclusions	49
The Hypotheses	49
Recommendations for Further Study	53
BIBLIOGRAPHY	55
APPENDIX A: Observation and Recording Sheet	57
APPENDIX B: Key to Observation Sheet	58
APPENDIX C: Key to Subclassification	60
APPENDIX D: Questionnaire for Mothers of Newly Enrolled Toddlers.	62
APPENDIX E: Fear Inventory	64
APPENDIX F: Definition of Terms Used in This Study.	68

LIST OF TABLES

TABLE	PAGE
1. Summary of Mother Scores on Fear Survey Schedule III.	17
2. Behavior Activity Pattern Child Low-2.	21
3. Behavior Activity Pattern Child Low-3.	23
4. Behavior Activity Pattern Child Low-4.	24
5. Behavior Activity Pattern Child Low-5.	26
6. Behavior Activity Pattern Child High-1.	27
7. Behavior Activity Pattern Child High-2.	28
8. Behavior Activity Pattern Child High-3.	29
9. Behavior Activity Pattern Child High-4.	31
10. Behavior Activity Pattern Child High-5.	32
11. Mean Total Behavior Activity Pattern of Low Group.	33
12. Mean Total Behavior Activity Pattern of High Group.	34
13. A Comparison of the Mean Total Anxious Behavior Activity Pattern of the High and Low Groups.	44
14. A Comparison of the Mean Total Least Anxious Behavior Activity Pattern of the High and Low Groups.	45
15. A Comparison of the Mean Total Least Anxious Behavior Activity Pattern of High and Low Groups.	46

LIST OF FIGURES

FIGURE	PAGE
1. Behavior Activity Pattern Child Low-1	20
2. Behavior Activity Pattern Child Low-2	21
3. Behavior Activity Pattern Child Low-3	23
4. Behavior Activity Pattern Child Low-4	24
5. Behavior Activity Pattern Child Low-5	26
6. Behavior Activity Pattern Child High-1	27
7. Behavior Activity Pattern Child High-2	28
8. Behavior Activity Pattern Child High-3	29
9. Behavior Activity Pattern Child High-4	31
10. Behavior Activity Pattern Child High-5	32
11. Mean Total Behavior Activity Pattern of Low Group	33
12. Mean Total Behavior Activity Pattern of High Group	34
13. A Comparison of the Mean Total Anxious Behavior Activity Pattern of the High and Low Groups	44
14. A Comparison of the Mean Total Less Anxious Behavior Activity Pattern of the High and Low Groups	45
15. A Comparison of the Mean Total Least Anxious Behavior Activity Pattern of High and Low Groups	46

INTRODUCTION

This study is concerned with the behavior of a group of young children (toddlers) ranging in age from thirteen to nineteen months as they take their first steps toward autonomy.

Research in the area of parent-child relationships suggests a close association between the feelings of the mother and the behavior of her child during the socialization process. A review of related research provides information on parent behavior reflecting underlying emotional attitudes, philosophies, and personality traits. These in turn have been shown to influence the atmosphere of the home and ultimately the behavior of the child.

The theoretical framework of this study was derived from the concepts and findings of various investigators in the field of child behavior, as these relate to tensions, mother-feelings, and child rearing practices. As suggested above, this early period of self-realization is considered a crucial one in relation to further development of personality.

The main purpose of the study was to determine the relationship between the anxiety level of the mother of a toddler and the type of anxious behavior the toddler displayed as he entered a group situation for the first time.

CHAPTER I

REVIEW OF RELATED LITERATURE

The link between parental feelings and the behavior of the child is a concept which has been studied for some time and which continues to be investigated. According to Sullivan "The tension of anxiety when present in the mothering one induces anxiety in the infant" (1953, p. 41). According to the author this is a period which extends to the age of two years. He also stated that anxiety at any age is an important complicating factor in coping with the environment.

Freud (1926, 1959) emphasized the importance of the early years and their effect on the later personality and behavior of the child in his relationship with his parents. He regarded anxiety as a reaction of the ego to danger, no matter what the source or kind of danger. He distinguished between anxiety as a direct and automatic reaction to a trauma and anxiety aroused in the anticipation of trauma ("signal anxiety"). The young child learns to anticipate the advent of traumatic situations and to react with anxiety before they occur (i.e. "signal anxiety"). Anticipatory anxiety helps the child to master the actual experience when it comes. If he can anticipate an event, he can also anticipate when it will be over.

The anxieties of the first two or three years of life are those of loss of love objects (the object meaning the person to whom the child has become attached); and the loss of the love of that person.

Intense anxiety about separation occurs between the ages of one and one-half and two and one-half years (Freud, 1933). There are several concepts of anxiety, however. According to Kessler (1966) anxiety is a learned drive--but the potential for becoming anxious is innate. The author (1966, p. 44) pointed out that Cannon in 1932 defined anxiety as a ". . . feeling or affect, of a particularly unpleasant nature". Symonds (1949) suggested that anxiety can be passed on from parent to child. He further indicated that a parent who is anxious can unknowingly pass this anxiety on to his child.

Murphy (1962) wrote that anxiety is the manifest reaction to excess stimulation. She indicated that the development of locomotion overwhelms the child; i.e. the toddler learns to walk and move about and is stimulated by all he can do. Murphy also proposed that in order to avoid overstimulation in the face of strangers and strangeness, the child needs to warm up gradually to a situation. Orientation and familiarization are important procedures in protecting the child against overstimulation. Murphy hypothesized in reference to coping behavior, when she wrote that the potentiality for stranger anxiety is greatest at times when the infant experiences walking for the first time. Murphy (1962) stated that a child's tolerance for accepting separation from mother can be strengthened with the satisfying experiences with another love-object; i.e. multiple mothering. She further indicated that children are often fussier in the presence of their mothers, and after the mother leaves, the child displays more mature and controlled behaviors. She also commented that separation anxiety is most likely to occur right after naps, before ego control or cognitive organization

has become fully established.

Relative to coping with anxiety, McReynolds (1962) studied novelty-adjustive exploration in relation to anxiety and suggested the motivation for exploration behavior is to reduce anxiety caused by the ambiguity of the situation.

Heathers (1954) studied the behavior of two year olds as they were taken from their home to a clinic, in order to investigate the relationship between the upset during the trip and certain characteristics of home atmosphere and maternal behavior. Trip upset was measured on each of the first five days the children were taken to the nursery school. Individual upset was consistent from day to day. The upset decreased from day one to day five. In general, the older children showed greater decline in upset than the younger children. The results also showed that the older two year olds were more upset than the younger children. This fact was explained by associations derived from a former experience. These children had been taken on a similar trip for a physical examination. Once the older children experienced the situation and knew what was going to happen, they had a greater capacity to cope with the situation than the younger children. Further results of the study suggested that harmony of the home, sociability of the family, and maternal warmth seemed to go along with adequate coping behavior in the nursery school. Maternal indulgence at home did not appear to be related to affective coping behavior in the nursery school.

Stott explained individuality as well as coping behavior when he wrote the following:

Every individual, then, is born with a pattern of constitutional and morphological features all his own. Along with his organismic uniqueness, (and very largely based upon it) he is also born with certain temperamental predispositions to behave generally in characteristic ways in relation to his environment. As this unique organization of congenital qualities comes in contact with a constantly changing personal environment, "coping" reactions begin and behavioral development through learning is underway (Stott, 1967, p. 347).

Parten (1932) showed that the characteristic behavior of two year old children is largely concerned with parallel or solitary activities. An example of parallel play is: one child is playing with a truck and another child comes and plays with a similar truck and no communication between the two children takes place. An example of solitary play is: a child playing alone, paying no attention to any other person. Kessler (1966, p. 24) pointed out that characteristically, "The toddler is on the search for something new. ---he must be familiar with something before he takes pleasure in a variation".

Relative to unfamiliar situations Rosenthal (1967) reported that a young child, when exposed to an unfamiliar situation which is fear-provoking, could be expected to show a high frequency of dependency which gradually decreases as the child remains in the situation. However, long term familiarity with the situation cannot be expected. A child who is confronted with an unfamiliar situation once, and then confronted with it again several weeks later, cannot be expected to show less dependency behavior, i.e. less anxious behavior, the second time.

Dependency behavior was studied by Arsenian (1943) when he observed the behavior of babies in a new situation in which they were deprived of their mother's company. The response behavior was compared

to those responses made in familiar situations or in the mother's presence. The results showed that when mothers or substitute mothers were present, the children were usually secure. The children's security in the situation decreased with the removal of the adult. Insecurity of children alone in the strange situation diminished when a familiar adult was introduced, but only in cases where the child's insecurity in the "alone situation" was not extreme.

Sears in regard to dependency behavior stated:

In a normal young child the dependency motive appears to be a powerful one. It cannot be eliminated and it cannot be ignored. In fact, the more the child's efforts to satisfy it are frustrated, the more insistent and all absorbing are his supplications. (1957, p. 14).

Sears also noted there is general agreement whereby a child's behavior at any given time is a product of his native endowment, of immediate situation, and the qualities of personality he has developed up to that moment of his life.

Parental feelings as they influenced child behavior were analyzed by the Sears team of investigators and reported in the book, Patterns of Child Rearing (1957). They hypothesized that two variables of parent behavior (frustration and model) were related to aggression in children. They found that children tend to actively imitate patterns of behavior of their parents and also tend to assume the attitudes of the parents. These findings resulted from interviews with 379 mothers.

Parental feelings and their influence on child behavior was studied by Bayley and Schaefer (1960). They found that loving mothers have inactive babies until they are fifteen months of age, while hostile

mothers have active babies. Other findings of this study showed a tendency of the loving mothers to have calm, happy sons, while the controlling hostile mothers were more likely to have excitable, unhappy sons. Positive behavior of the sons tends to go with loving mothers while negative behavior tends to go with anxious, intrusive irritable mothers.

Child rearing practices as they relate to child behavior was investigated by Baumrind (1967) who identified self-reliant, self-controlled explorative, and content child behaviors and contrasted these with the child rearing practices of parents whose children were discontent, withdrawn, and distrustful. She concluded that parents of the most competent and mature children were notably firm, loving, demanding, and understanding. Parents of dysphoric and disaffiliative children had punitive and unaffectionate mothers.

Another theory of parent-child relationships was developed by Erikson (1950). He stressed individual mothering during the first year as being paramount to the development of trust. He described the second and the third years of childhood as the stage of autonomy versus shame and doubt. As the child explores and tries out new surroundings, the mother's feelings toward her child's growing independence affects his behavior. This period, according to Erikson, is a crucial one in relation to development of self-realization. Often the toddler group situation is one of the child's first experiences with autonomy. Therefore, if a child has learned to be dependent on others he can begin to modify his dependent behavior and assert his independence.

Successful attempts have been made to measure parent attitudes

toward child rearing and individual anxiety about being parents. The techniques used have included paper and pencil tests, survey questionnaires, judgement ratings of home interviews, self reports of parent behaviors, and recall on the part of older children about their parents earlier behaviors.

One attempt to measure parent attitudes resulted in the development of the University of Southern California Parent Attitude Survey by Shoben (1949). This instrument employed the pencil and paper self inventory technique and analyzed the patterns of parent attitudes that were influential in shaping the development of the child. This questionnaire survey measured dominant, possessive, and ignoring attitudes on the part of parents. The results showed that the parents of problem children, when given the survey, were more apt to agree with the statements concerning strict discipline than those parents whose children were considered more stable.

Further studies of parent attitudes resulted in the development of the Parent Attitude Research Instrument (PARI) (Schaefer and Bell, 1958). This instrument consists of 23 five item scales and seeks to assess parent attitudes concerning marriage, child behavior, and child rearing. The results indicated that "acceptance-rejection" and "autonomy-control" are important aspects of parent behavior.

The environment of the home and its relationship to child behavior was studied by Champney (1941) and Baldwin, Kalhorn and Breeze (1945, 1949). The Fels Parent Behavior Scales were developed and analyzed as a result of this research. These scales include traits such as harmony of the home, sociability of the family and maternal

warmth, affection, cruelty, and emotional control. The results reported a syndrome analysis of parent behavior ratings in which the rated variables were grouped into three main clusters. These three syndromes each with its clusters of rated parental attitude variables are as follows: (1) democracy in the home, (2) acceptance of the child, (3) indulgence of the child. The Fels Scales are useful instruments but are time consuming, expensive, and require the use of trained personnel. The Fels Scales require that an interviewer visit the home and later rate the home atmosphere.

In contrast to the Fels Scales method, Sears, Maccoby and Levin, (1957) taped and transcribed the conversations that took place during interviews with mothers. Judges read all the data and made ratings. During the same study this group also used an inventory questionnaire. The Fels Scales had several advantages, namely: ease of administration, economy, and comprehensiveness of the obtained information.

Schaefer (1959) described parent types and conceptualized the two main dimensions of "love-hostility", and "autonomy-control". Becker (1964) studied the ways in which aspects of parent behavior related to each other, and suggested the division of Schaefer's "control versus autonomy" dimension into "restrictiveness versus permissiveness" and "anxious emotional involvement" versus "calm detachment." Although none of these studies related to anxious behavior on the part of the mother, it was generally found that strict discipline, rigid controlling parents have problem children. Attempts to measure anxiety are most often either clinical judgement or paper and pencil inventions. A number of inventory scales have been developed for the assessment of

characteristic anxiety. Self rating scales and objective adjective lists assess a person's current level of anxiety. An example of this type of scale is the Minnesota Multiphasic Personality Inventory (MMPI) (Hathaway and McKinley, 1951). These are anxiety scales which infer the level of an individual's anxiety from his reports of feelings and behaviors assumed to be symptomatic of anxiety. A little used but useful technique to measure fears of manifest anxiety was developed by Wolpe and Lang (1964). This schedule involved a self rating technique which included a list of 76 fear provoking stimuli.

Attempts have been made to observe and quantify children's behavior by techniques ranging from sociometric scores to teacher judgements. Direct observations have been used in experimental doll and dramatic play. Boys whose fathers are highly rewarding and affectionate have been found to adopt the father-role in doll play activities (Sears, 1953).

Research in the area of parent-child relationships suggests that restrictive, hostile, authoritarian type parents produce anxious children.

CHAPTER II

A DESCRIPTION OF THE PRESENT STUDY

Reasons and Objectives

Young children are participating in group activities at an earlier age than in the past. Little research has been conducted with toddler age children in a play group situation and still less is known about the behavior of toddlers as they are placed in new group situations. A knowledge of the relationship between mothers' anxieties and toddlers' coping behavior, with or without the mother present would be useful to those who teach and work with children.

The School of Home Economics at the University of North Carolina at Greensboro has two toddler play groups. The two groups which are a part of the Child Development program, meet twice a week for one hour each time. While the toddlers play, their mothers meet with a discussion leader. This program provided the opportunity for studying toddler behavior. Ten children were available in February 1969 for a study of the newly enrolled. A mother often becomes anxious when her young child cries and wants her to stay in the playroom. The mothers want to join the discussion group.

The objectives of the study were: (1) to identify the kinds of behavior activity patterns toddlers follow as they meet a new group situation; (2) to classify toddlers into certain groups of behaviors

with regard to those behavior patterns; (3) to study the mothers of the newly enrolled toddlers and assess the anxiety levels of each of these mothers; and (4) to investigate the relationship between the mothers' anxiety levels and their toddlers' behavior patterns.

Basic Assumptions and Hypotheses

The assumptions basic to this study were: (1) there are definite observable behavior patterns which toddlers follow as they are placed in a group situation; (2) each child behaves in an observable manner peculiar to his individuality; (3) length of time each day and number of consecutive days the child spends in an organized group is a factor to be considered when the toddler's coping behaviors in a group a situation is studied; (4) mothers' anxieties are measurable and should be considered when studying their toddlers' behavior.

This study was designed to test the following hypotheses:

(1) there is no relationship between the anxiety level of the mother and the behavior activity pattern the toddler follows as he meets a new group situation; (2) there is no relationship between the anxiety level of the mother and the length of time it takes the toddler to follow his own individual behavior activity pattern; (3) there is no relationship between the anxiety level of the mother and the time it takes for the toddler to be affectively stable when his mother leaves him; and (4) there is no relationship between the anxiety level of the mother and the number of times a week she leaves her child in the care of others.

Subjects

The subjects used in this study were ten toddlers and their mothers. Both were enrolled in the Toddler Group program of the Nursery School in the School of Home Economics at the University of North Carolina at Greensboro, North Carolina. The participants were from middle class families and resided in the community of Greensboro. The only criteria for selection for participation in this study was that the children were toddlers and were new to the group, i.e. they had never been enrolled or attended this program before. The age of the toddlers ranged from thirteen months to nineteen months. The mean age of the group was 15.2 months. The mothers, whose cooperation had previously been enlisted, were introduced to the study on the fourth and fifth days of February, 1969, at their initial discussion meetings. Each child was to be observed two days a week for a period of six weeks.

Methods

The Observation and Recording Instrument for the Data

The toddlers were divided into two groups. One group met from 3:00 to 4:00 p.m. on Tuesday and Thursday, the other group met at the same time on Wednesday and Friday. The dates of the first sessions were February 4, and 5, 1969. The study was completed on March 28, 1969. The observation of 12 days for each child required longer than the expected six weeks because of the absence of some children.

Direct observation was used to determine the data to be recorded. The data were recorded at five minute intervals during the

regular meeting of the Toddler Group. A clock on the wall was used to note the time intervals. Students majoring in Child Development in the School of Home Economics at the University of North Carolina at Greensboro, observed the children and recorded the data. One student was assigned to observe one child for the entire study. The investigator met the students before the arrival of the children and told them how to use the Observation and Recording Instrument. The investigator remained in the room during the recording sessions, answered the observers' questions, and participated in the observation and recording if an observer was absent.

Data for this exploratory study were obtained by the systematic observation for recording the toddler's behavior in the natural setting of the nursery school. A list of twenty-seven possible behaviors was used as a guide for measurement. The purpose of this list of behaviors was to appraise the adaptive mechanisms, controls and defenses with which the toddler handles his anxieties and fears in an unfamiliar situation.

The investigator reviewed techniques used by other researchers to measure behavior and anxiety. Among these methods were check lists, rating scales, and inventories.

The Toddler Group was observed by the experimenter during the first three weeks of the fall session. A diary record was kept for the purpose of determining the behaviors displayed by newly enrolled toddlers. From this observation the list of possible behaviors was constructed and evaluated by four specialists in the area of child development. The measuring device consisted of an Observation and

Recording Sheet, and an accompanying sheet entitled Key to Observation Sheet. (Appendix A and B)

Tabulation of the Recording Sheet

The data on the sheet were tabulated by dividing the 27 coping behaviors into types. These types of activities were named Anxious Behavior Activity (referred to in Figures 1 through 12 as (Anxious Behavior A.); Less Anxious Behavior Activity (Less Anxious B. A.); and Least Anxious Behavior Activity (Least Anxious B. A.). The items were tabulated and converted into percentage of total time the child engaged in each of the three types of behaviors. Although the recordings were made at five minute intervals there were thirteen samples for each child each day because the initial reaction of the child was also noted. (See Appendix C)

Questionnaire

A second instrument known as the questionnaire was used. The purpose of the questionnaire was to assess the behavior of the toddlers during the week when they were left in the care of others. The questionnaire was designed to determine where, with whom, and for how long each child was being left. The child's initial reaction to being left, the sitter's report of child's behavior while he was left, and his reaction upon his mother's return, were also deemed important. During the study, the mothers of the toddlers were asked to complete a questionnaire each time they left their child in the care of another. (See Appendix D). The mothers were identified as belonging to "low Anxiety Group" or "High Anxiety Group", (MH-ML, respectively). The

basis for this division was the score the mother received on the fear inventory.

Tabulation of the Questionnaire

There were five items on the questionnaire, with five possible choices as answers in four of them and six in the remaining one. These answers were given one point each and recorded on a tabulation sheet. The totals for the MH and ML were converted into percentages for every part of each question. The mean of the number of hours the child was left in the care of others and the mean of the number of times he was left in the care of others was determined by totaling the points of the highs and dividing by five, and by totaling the points of the lows and dividing by five.

Administration of the Fear Survey Schedule

On the first days of the study, February 4 and 5, 1969, the mothers were asked to complete the Fear Survey Schedule III (Wolpe and Lang, 1964). The inventory was selected for the study because of its ease of administering and scoring. (See Appendix E)

Scoring of the Fear Survey Schedule

The extent to which the mothers designated they were disturbed by the stimuli given in the fear inventory was scored as follows: "Not at all", one point; "A little", two points; "A fair amount", three points; "Much", four points; "Very much", five points. The number of items checked in each column were totaled and then multiplied by 76, which yielded a composite score for each mother.

The Coding of the Data

The mothers were placed into groups according to their responses on the fear survey. Those whose scores placed them in the "Low Anxiety Group" were identified as Mother Low-1 (ML-1), Mother Low-2 (ML-2), Mother Low-3 (ML-3), Mother Low-4 (ML-4), Mother Low-5 (ML-5). The mothers placed in the "High Anxiety Group" were identified as Mother High-1 (MH-1), Mother High-2 (MH-2), Mother High-3 (MH-3), Mother High-4 (MH-4), Mother High-5 (MH-5). Mother Low-1 was the mother who received the lowest anxiety score on the inventory, whereas Mother Low-5 was the mother who received the highest score of the low anxiety group. Mother High-1 was the mother receiving the highest score on the inventory while Mother High-5 received the lowest score in the high anxiety group.

The children were matched with their mothers and became members of the "Low Anxiety Group" or "High Anxiety Group" as a result of their mothers' scores on the fear inventory. They were coded as Child Low-1 (CL-1), Child Low-2 (CL-2), Child Low-3 (CL-3), Child 4 (CL-4), and Child Low-5 (CL-5).

CHAPTER III

RESULTS OF THE STUDY

The results of the analysis of the data is reported on the following pages. In general, the basic assumptions concerning the behavior of toddlers and the need to consider the level of anxiety of the mothers are borne out.

Fear Survey Schedule III Results

The scores of the high and low anxiety level mothers on the fear inventory are summarized and presented in Table 1.

TABLE I

SUMMARY OF MOTHER SCORES ON
FEAR SURVEY SCHEDULE III

MH	Score	ML	Score
MH-1	173	ML-5	155
MH-2	171	ML-4	144
MH-3	166	ML-3	141
MH-4	161	ML-2	134
MH-5	160	ML-1	134

The ten scores ranged from 134 (low) to 173 (high). The mean score was 151.9. This was 5.6 points below the median of 157.5. The mothers with scores above 157.5 were considered "High Anxiety" level mothers. Those mothers whose scores were below 157.5 were considered

to be "Low Anxiety" level mothers. The mothers are referred to in these two categories.

Observation and Recording Sheet Results

Tabulation of the information on the observation and recording sheet (one for each child) disclosed the total percentage of time each day for a twelve day period the individual children engaged in the following three types of behavior activities: Anxious Behavior Activity (Anxious B. A.), Less Anxious Behavior Activity (Less Anxious B. A.), and Least Anxious Behavior Activity (Least Anxious B. A.). These behavior activities are listed in the Key to the Subclassification of Behavior Activities in Appendix C.

The following figures present a summary of the total percentage of time each day a child engaged in the three behavior activities. The children were divided into two groups with the mother's scores on the Fear Survey Schedule III used as the basis for the division. According to the plan the children were coded as Child Low-1, 2, 3, 4, and 5 and Child High-1, 2, 3, 4, and 5, and are referred to in this way.

Low Group

Child Low-1 (CL-1)

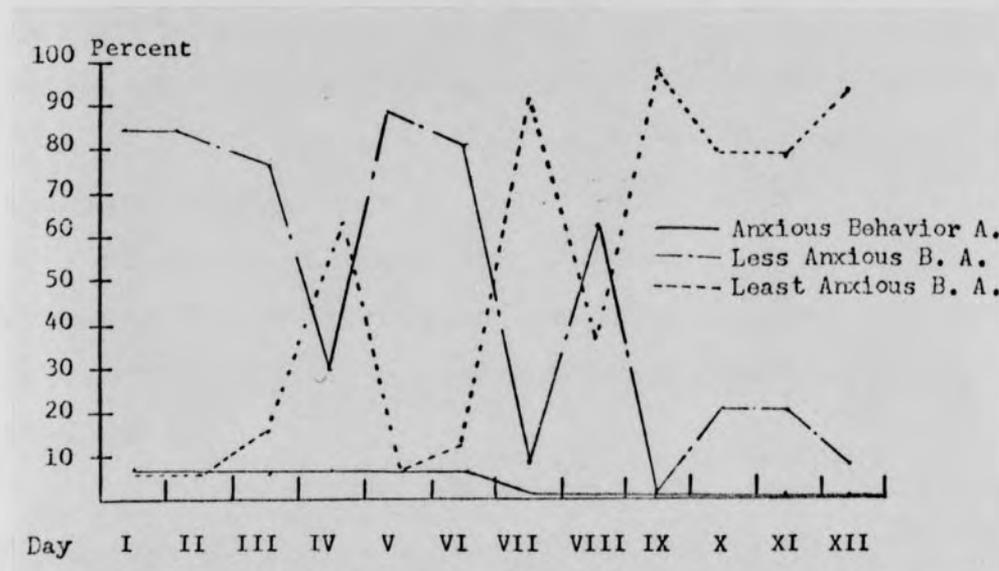
Child Low-1's anxious behavior (Figure 1) was only eight per cent during the first six days and then diminished to zero during the remaining six days. The anxious behavior could be described as low and consistent. Child Low-1's less anxious behavior, high on the first two days, was 84 per cent and on the third day diminished to 77 per cent. On the fourth day her less anxious behavior dropped sharply to 30 per

cent while on the fifth and sixth days it returned to its original high of 84 per cent and 77 per cent respectively. The remaining six days Child Low-1's less anxious behavior fluctuated from zero to a high of 92 per cent. Her less anxious behavior could be described as irregular and inconsistent. Child Low-1's anxious behavior activity varied from a low of eight per cent on the first day to a high of 100 per cent on the ninth day. During the entire twelve days she engaged in some least anxious behavior activities.

On several days when the Director of the Nursery School brought CL-1 to the playroom, she was unwilling to be left without the friendly hand that had led her in. CL-1 also showed less anxious behavior by not participating in juice time. During the study this child evidenced an allergic condition which could have affected her otherwise stable behavior.

Child Low-1 (See Figure 1) was one of the twins participating in the study. She, like her sister, Child Low-2, spent little time in anxious behavior activity during the study. Her less anxious and least anxious behavior activity, revealed CL-1's own individuality. She appeared to be less stable in her play than her twin sister, (Child Low-2) who spent an increasing percentage of time each day engaged in least anxious behavior.

FIGURE 1
BEHAVIOR ACTIVITY PATTERN
CHILD LOW-1



Child Low-2 (CL-2)

The behavior activity pattern of Child Low-2 is presented in Figure 2. Her anxious behavior activities were zero except for days II and III when she engaged in anxious behavior eight per cent of the total time. Less anxious behavior was high on Child Low-2's first and second days and lowered each day until on day VIII she engaged in zero less anxious behavior. Child Low-2's least anxious behavior was low on days I, II, and rose on day III and continued to rise until on day VIII she engaged in least anxious behavior activities the entire time she was in the playroom. Days IX, X, XI, and XII Child Low-2's least anxious behavior activities were 85 per cent, 92 per cent, 92 per cent and 92 per cent, respectively. Her anxious behavior activities could be described as consistently low. The less anxious behavior activities of

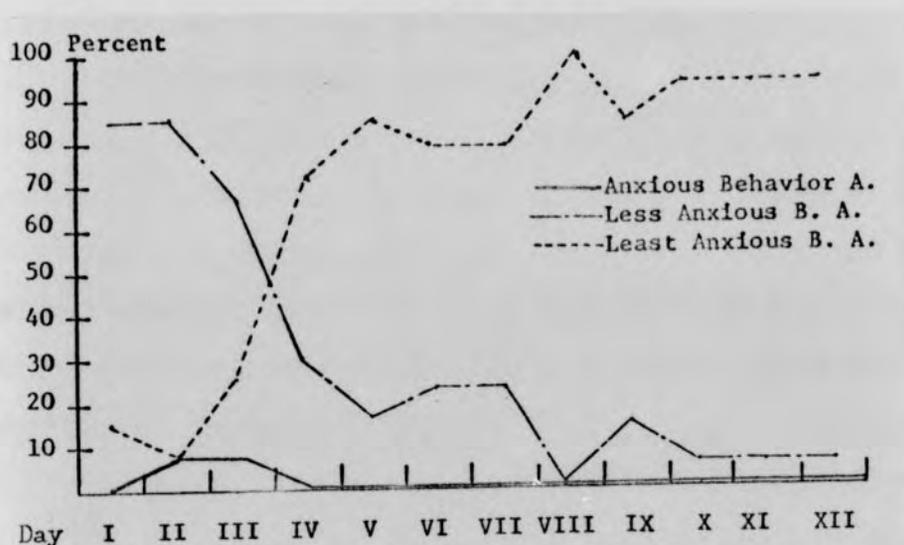
Child Low-2 were high, but continued to be consistently lower each day. Her least anxious behavior activities rose each day and leveled off with the highest amount of time being engaged in these activities on days IV through XII. Child Low-2 was the other twin and she, like her sister, Child Low-1, engaged in a very small amount of anxious behavior activity throughout the study.

It could conceivably be that since Child Low-1 and Child Low-2 were twins, that they were content with having each other in the room. This might have been the cause of their not engaging in anxious behavior activities.

Child Low-2 differed from her sister, Child Low-1, in the amount of less and least anxious behavior activity in which she engaged. Child Low-2 appeared to be more stable in her play than did her sister. However, for no apparent reason their behavior fluctuated during the

FIGURE 2

BEHAVIOR ACTIVITY PATTERN
CHILD LOW-2



entire study. The anxious behavior activity patterns of both girls resembled each other. The difference showed up in the less and least anxious behavior activities.

Child Low-3 (CL-3)

In Figure 3 the behavior activity pattern of Child Low-3 is presented. The anxious behavior activities of CL-3 varied from a high of 62 per cent on the first day to a low of zero on day IV. The remaining days V through XII were spent in variations from 77 per cent to 32 per cent of the total time. Child Low-3's anxious behavior activity could best be described as variable. His less anxious behavior was higher than 50 per cent only three times during the twelve day period. The remaining days were spent in less anxious behavior activities under 50 per cent of the time. Most of CL-3's time was spent in less anxious behaviors varying from 15 per cent to 46 per cent. His least anxious behavior varied from zero on the first day to a high of 85 per cent on the fourth day. On days V through XII he engaged in least anxious behavior from zero to 15 per cent of the time.

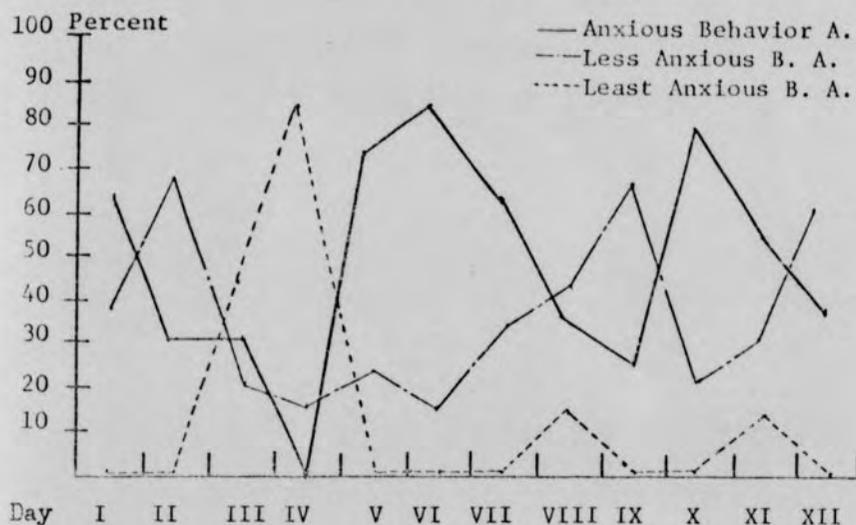
Child Low-3's behavior activity pattern was irregular in all three types of behavior activities. Child Low-3 was ill and hospitalized just prior to the study. He became ill during the study and was absent for a period of one week after day IV on which he had engaged in no anxious behavior. His return on day V was marked by highly anxious behavior activity. On the ninth day Child Low-3's anxious behavior activity had lowered to that of day III.

After this day Child Low-3 became ill again and his illness

necessitated another stay in the hospital. He was already a highly anxious child and the two hospitalizations did not help to allay his anxieties. After Child Low-3's recuperation he returned to the group. During the remainder of the study his anxious behavior became less each day. The study terminated before Child Low-3's anxious behavior completely diminished. It is interesting to note that Child Low-3's individual behavior pattern was more like Child High-3's individual pattern than any behavior pattern in his own low group.

FIGURE 3

BEHAVIOR ACTIVITY PATTERN
CHILD LOW-3



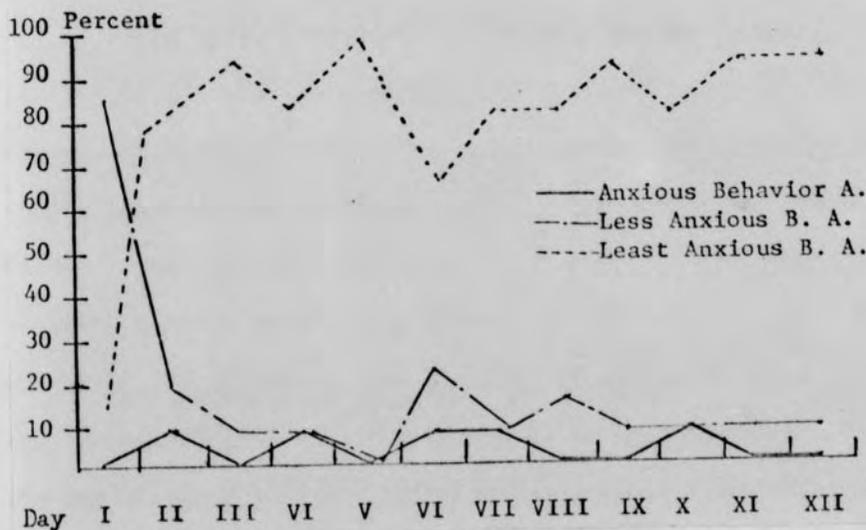
Child Low-4 (CL-4)

The behavior activity pattern of CL-4 is presented in Figure 4. The anxious behavior activities of Child Low-4 were consistently low throughout the twelve day period. Days II, IV, VI, and VII were the only days on which CL-4 engaged in no anxious behavior activities. The

less anxious behavior activities of CL-4 were constant. After the first day when 85 per cent of time was spent in less anxious behavior activity, the remaining days were spent in less anxious behavior under 23 per cent of the time. On the first day of the study Child Low-4 spent 15 per cent of his time in least anxious behavior activities. The remaining days he spent 77 per cent or more of his time in least anxious behavior activities. He spent 77 per cent or more of his time in least anxious behavior seven days during this study. Child Low-4's behavior could be described as stable, constant, and exploring. His behavior pattern was similar to Child High-1 who was also labeled an explorer. Child Low-4's behavior could be described as stable, constant, and exploring.

FIGURE 4

BEHAVIOR ACTIVITY PATTERN
CHILD LOW-4

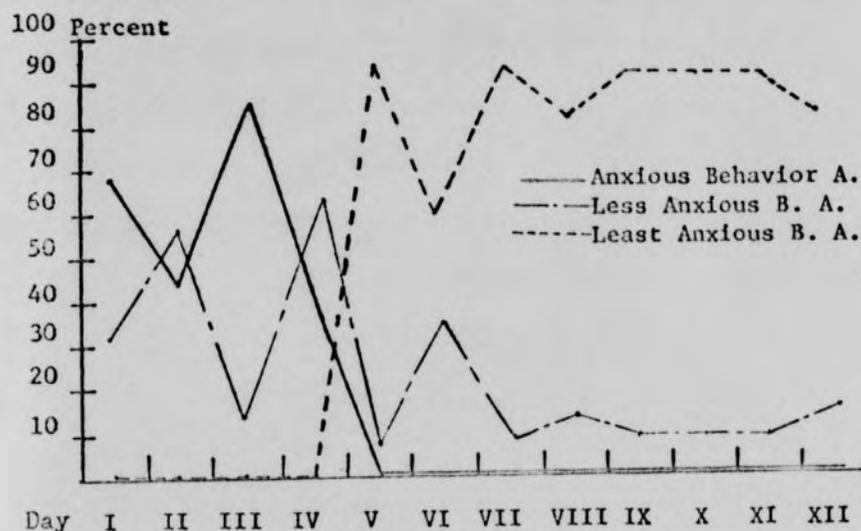


Child Low-5 (CL-5)

In Figure 5 the behavior activity pattern of CL-5 is presented. On days I through IV CL-5 engaged in anxious behavior activity 85 per cent to 39 per cent of the time. On the fifth day CL-5 commenced with no anxious behavior activity and continued this pattern through the last day of the study. Child Low-5's anxious behavior was consistent and regular as it diminished. Her less anxious behavior was irregular during days I through IV attaining a high of 62 per cent of the time on day IV. On Days V through XII he engaged in less anxious behaviors from 39 per cent of the time to eight per cent of the time. Child Low-5's least anxious behavior was zero on days I through IV then on day V her least anxious behavior activity attained a height of 92 per cent dropping to 62 per cent on day VI. On the final six days of the study Child Low-5's least anxious behavior activities varied between 92 and 84 per cent.

Child Low-5 (Figure 5) followed a behavior activity pattern similar to the one followed by Child High-4 (Figure 9). Although anxious at the beginning of the study, once she engaged in affectively stable behavior she continued to do so throughout the remaining days. On day I when her anxiety behavior activity was high, she carried a security blanket with her as she sat on her mother's lap. She did not bring the blanket to the playroom on any other day and she did not require her mother to stay with her after the third day. Child Low-5 was one of the most interesting to study because her adjustment was obvious and observable.

FIGURE 5
BEHAVIOR ACTIVITY PATTERN
CHILD LOW-5



High Group

Child High-1 (CH-1)

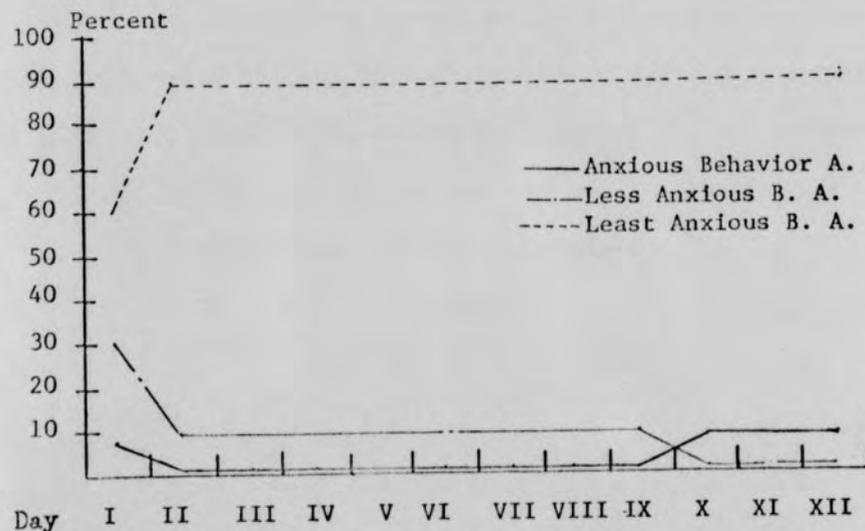
CH-1's anxious behavior activities (Figure 6) were consistently low during the twelve day period. On days I, X, XI, XII the anxious activities totaled eight per cent while on the other days they remained at zero. Child High-1's anxious behavior activities were 31 per cent of the time on day I. On days II through XII, Child High-1's less anxious behavior activities totaled eight per cent or less. His least anxious behavior activities were consistently high during the twelve day period. On day I, Child High-1 engaged in least anxious behavior activities 61 per cent of the time while the remainder of the twelve day period he engaged in these activities 92 per cent of the time.

Child High-1's individual behavior pattern (Figure 6) was unique

in that he was the only child who engaged in such consistent least anxious behavior. After the first day he continually engaged in least anxious behavior 92 per cent of the time. It was noted that Child High-1's least anxious behavior was exploratory. He wandered about the room touching things, playing on the horse, and even piling one block on top of another. All his exploring activities seemed purposeful, which is most unusual for a child of the toddler age.

FIGURE 6

BEHAVIOR ACTIVITY PATTERN
CHILD HIGH-1



Child High-2 (CH-2)

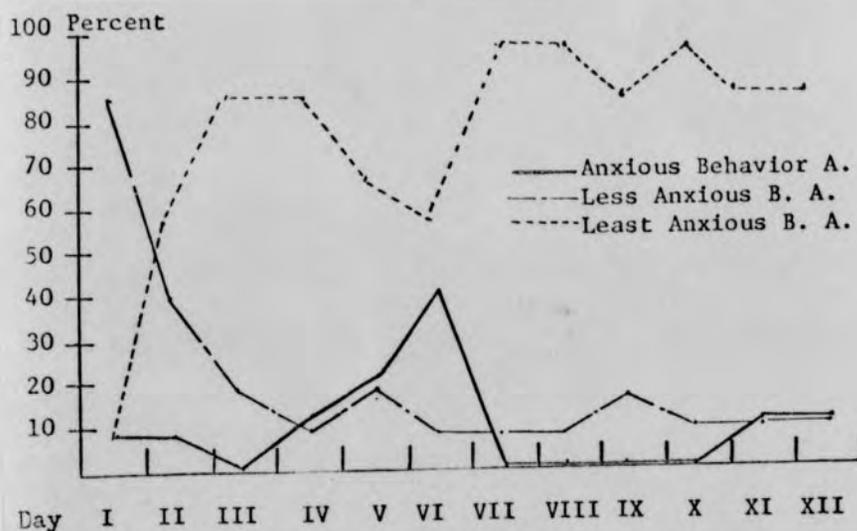
The behavior activity pattern of CH-2 is shown in Figure 7. His anxious behavior was low, zero to eight per cent, during the first four days of the observation period. On days V and VI the anxious behavior of Child High-2 rose to 23 and 39 per cent, respectively. On days VII through XII his anxious behavior totaled eight per cent or under. The

less anxious behavior activities engaged in by CH-2 were 84 per cent of the time on day I. During the remaining days of the study, CH-2 engaged in 38 to eight per cent less anxious behavior activities. The least anxious behavior of CH-2 was higher than 50 per cent on eleven out of the twelve days of the observation period.

Child High-2's anxious behavior followed an inconsistent pattern. After day III he cried as he entered the lobby of the Nursery School and continued to remain upset until he arrived in the playroom. When he saw the toys and other children, he left his mother and continued his usual pattern of exploring. This pattern continued throughout the period of the study. Although his mother was able to leave him almost immediately after he came into the playroom, Child High-2 cried each day as he came into the Nursery School lobby. His mother reported he had to be awakened from his nap each day to come to the toddler play group. This could account for his anxiousness.

Figure 7

BEHAVIOR ACTIVITY PATTERN
CHILD HIGH-2

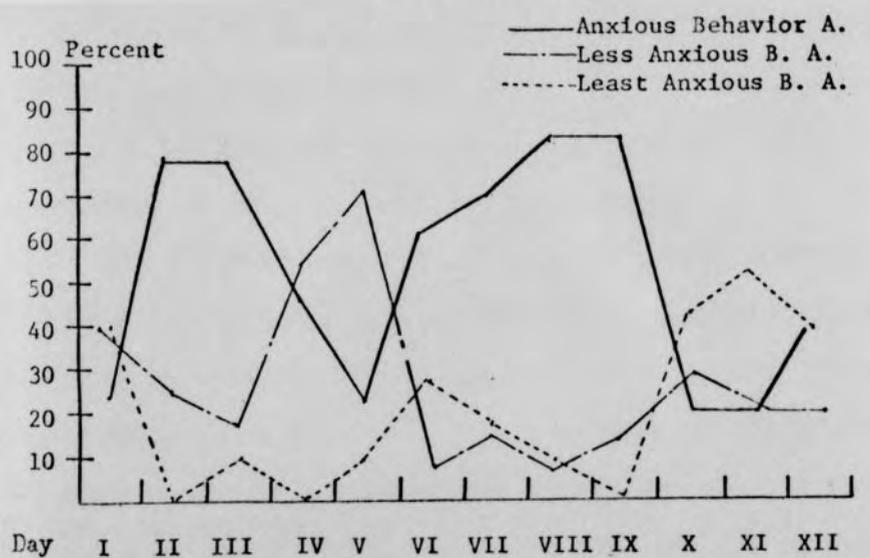


Child High-3 (CH-3)

In Figure 8, Child High-3's behavior activity pattern is presented. Child High-3's anxious behavior was irregular and inconsistent throughout the twelve day observation period. On five out of the twelve days her anxious behavior activities were lower than 50 per cent. Her less anxious behavior was irregular and inconsistent. Nine of the twelve days Child High-3 engaged in less anxious behavior activities under half the time. On three days she did not engage in any least anxious behavior activities and on eleven of the twelve days her least anxious behavior was less than 50 per cent of the time.

Figure 8

BEHAVIOR ACTIVITY PATTERN CHILD HIGH-3



Child High-3, whose behavior activity pattern resembled the one followed by Child Low-3, had a notably irregular, anxious behavior pattern. The first day her behavior activities were lower than at any

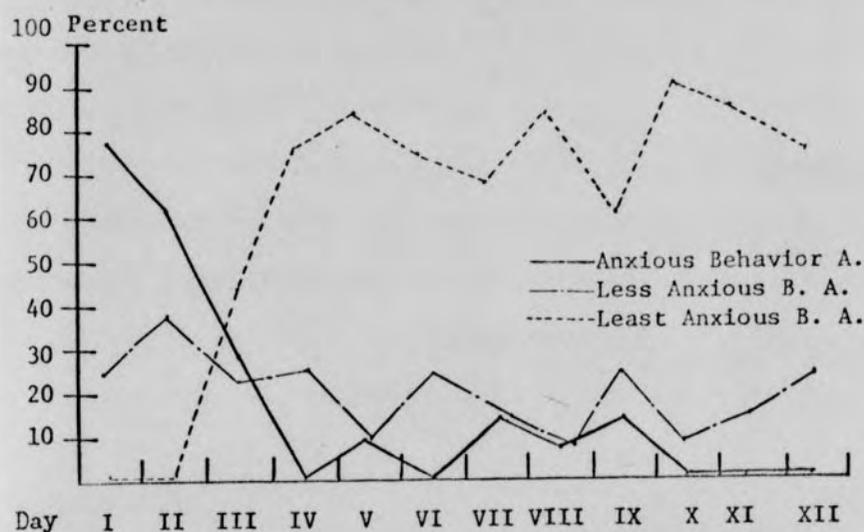
other time during the study. The mother noted on the questionnaire that during the time of the study she had left her child more than usual. On most days the child was brought to the Toddler Group after the mother had been away from her during the morning. Child High-3 did not want to be left again, so she fussed and cried. She could not be diverted very easily so her mother stayed in the playroom the entire time until the tenth day of the study.

Child High-4 (CH-4)

Child High-4's anxious behavior activity dropped from 77 per cent on day I to one per cent on day IV, as shown in Figure 9. On days IV through XII Child High-4 engaged in anxious behavior activity 23 or less per cent of the time. Her less anxious behavior of CH-4 was below 38 per cent during the entire time of the study. The least anxious of CH-4 was zero on days I and II. On day III her least anxious behavior rose to 46 per cent and continued to rise. It remained 62 per cent or more during the remainder of the observation period.

Child High-4's behavior activity pattern resembled the one of Child Low-5 in that once she exhibited no anxious behavior, she continued to behave in this manner. During the study, Child High-5 was absent for a two week period. This occurred after day VI when she had shown no anxious behavior. The days following her absence, her anxious behavior was higher than before she left, and it was day X before the absence of anxious behavior activity was noted. The last three days of the study Child High-4 did not engage in any anxious behavior activities.

FIGURE 9
BEHAVIOR ACTIVITY PATTERN
CHILD HIGH-4



Child High-5 (CH-5)

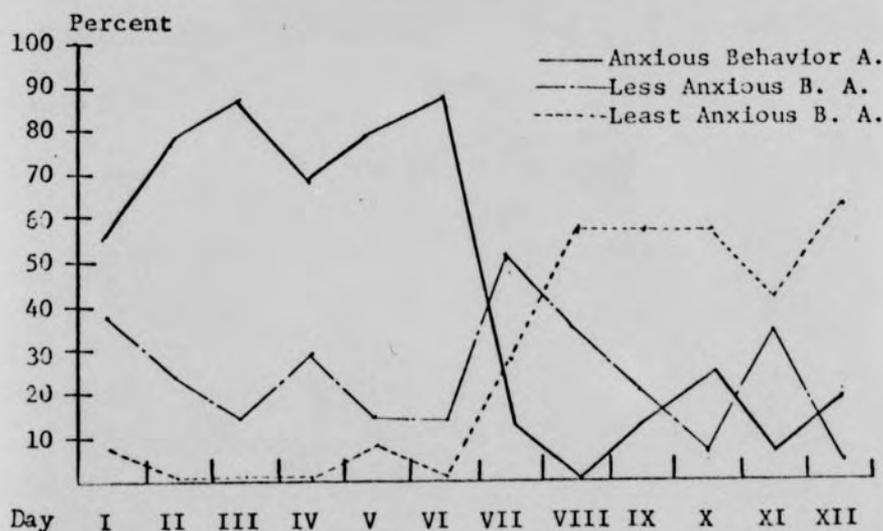
The behavior activity pattern of CH-5 is presented in Figure 10. CH-5's anxious behavior activity was 54 per cent or more during the first seven days of the observation period. On days VIII through XII he engaged in anxious behavior activity from 38 per cent down to zero per cent of the time. The less anxious behavior activity of CH-5 was 50 per cent or less on eleven out of the twelve days of the observation period. The least anxious behavior activity of CH-5 was consistently low on days I through VII. The remainder of the days he engaged in least anxious behavior activity 54 per cent to 69 per cent of the time.

Child High-5 had a highly irregular anxious behavior activity pattern during the first seven days of the study. His mother remained in the room during these days. On day VIII his mother left the room

shortly after his arrival and although he called for her several times, he engaged in less and least anxious behavior activity the greater part of the hour. A note on the questionnaire partially explained this anxiety on the part of Child High-5. His mother was employed full time outside the home and returned home just in time to bring him to the Toddler Group. Child High-5 did not like it when his mother tried to leave him again so soon. Her eagerness to leave and join the mothers' discussion group was evident to the teachers as well as to Child High-5.

FIGURE 10

BEHAVIOR ACTIVITY PATTERN
CHILD HIGH-5



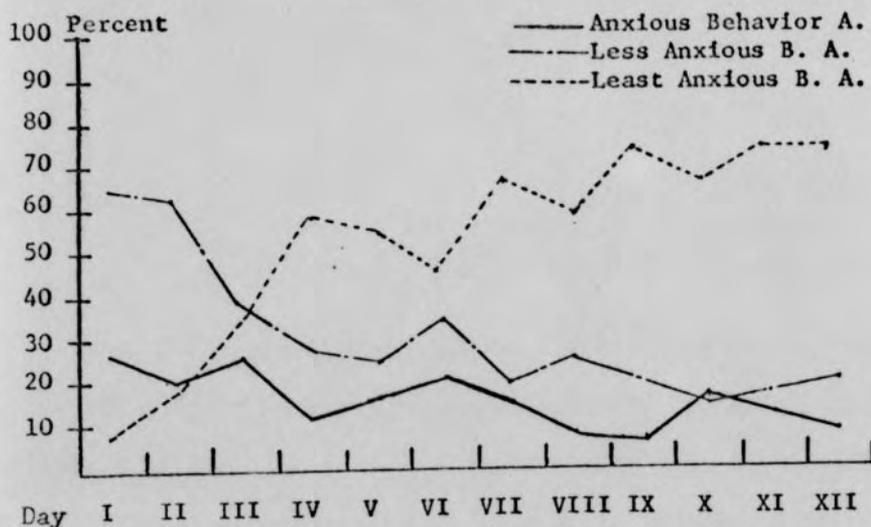
The following figures illustrate the results of the mean totals of the three types of behavior activity patterns in which the ten toddlers engaged during each day of the study.

Low Group

The mean total behavior activity pattern of the low group is presented in Figure 11. The per cent of time the low group engaged in anxious activity was highest on the first day i.e. 28 per cent. The remaining days of the study the percentage of time descended slowly and somewhat irregularly until on day XII the anxious behavior activity was only eight per cent. The less anxious behavior activity of the low group descended from a high of 64 per cent on day I to a low of 20 per cent on day XII. The lowest percentage of time spent in less anxious behavior was on day X when 14 per cent was recorded. The least anxious behavior of the low group rose steadily from a low of eight per cent on the first day to a high of 72 per cent on day XII.

FIGURE 11

MEAN TOTAL BEHAVIOR ACTIVITY PATTERN OF LOW GROUP

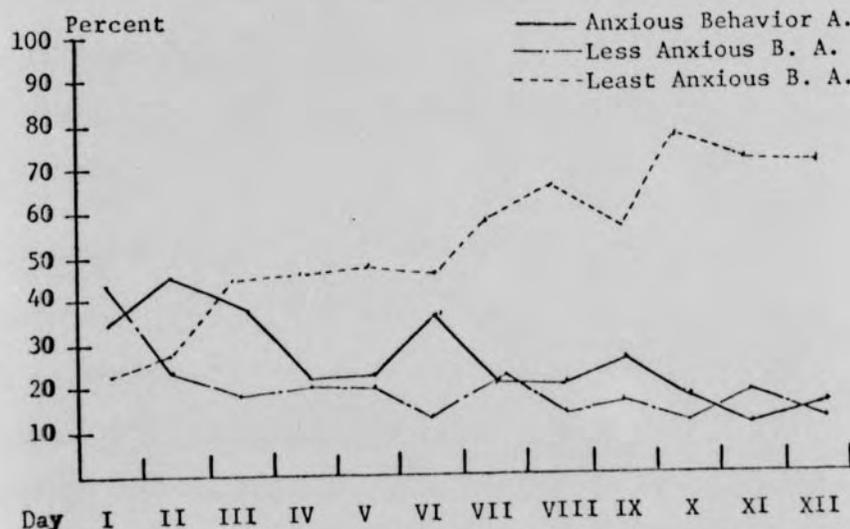


High Group

The percentage of time the high group engaged in anxious behavior activity was 34 per cent on day I, (Figure 12). The amount of time the high group engaged in anxious behavior was 15 per cent on day XII. The less anxious behavior activity of the high group varied from a high of 43 per cent on day I to 12 per cent on day XII. The per cent of time the high group engaged in least anxious behavior activity rose from a low of 23 per cent on day I to a high of 72 per cent on day XII.

FIGURE 12

MEAN TOTAL BEHAVIOR ACTIVITY PATTERN OF HIGH GROUP



When the three types of behavior activities of the individuals in the low group were averaged and compared to the mean total behavior activities of the high group, (Figures 11 and 12), the behavior patterns of both groups appeared similar. Each group engaged in anxious behavior less time on day XII than on day I and more least anxious

behavior activity on day XII than on day I, showing that both groups coped with their anxiety successfully during the course of the study.

Questionnaire Results

The following discussion is a report of the tabulations of the choices on the questionnaire which were checked by each mother, giving her child's reaction to being left with someone either in his own home or in the home of a sitter. Five questions were posed. They were: Where did you leave your child? With whom did you leave your child? What was the child's immediate reaction to your leaving? What was the sitter's report of the child's behavior while you were absent? What was your child's reaction to you upon your return? A sixth choice of "other information" was given. None of the mothers answered this question, confining their answers to the choices given under each of the five questions.

Low Group

Mother Low-1 and 2 (ML-1-2)

Mother Low-1-2 left her children in care of others 38 times for a total of 84 hours. According to the information the girls were usually left in their home in the care of a maid. The mother usually left while the children were asleep or playing in another room, therefore neither child showed a reaction when the mother left. The maid reported the children played and were content or that they slept. Upon the return of ML-1-2, the girls either ran to their mother, smiled at her or were asleep.

child was in her home in the care of a relative. The child showed no reaction to her mother's leaving and the sitter reported that the child played and was content. When the mother returned her little boy smiled at her and was glad to see her.

Mother High-2 (MH-2)

Mother High-2 left CH-2 five times for a total of 53 hours. Her choice for leaving the child was in her home in the care of a relative. The mother reported the child showed no reaction to her leaving and the relative most frequently reported that the child played and was content. Upon the return of the mother, the child smiled at her but continued playing.

Mother High-3 (MH-3)

Mother High-3 left her child (CH-3) 22 times for a total of 103 hours. She left her child in their home in the care of a familiar sitter. Child High-3 was usually asleep when her mother left; therefore, showed no reaction to the mother's departure. The sitter reported that CH-3 played and was content in the absence of her mother or that the child slept. Upon the return of the mother, the child was reported to have run to her mother and seemed glad to welcome her home.

Mother High-4 (MH-4)

Mother High-4 most frequently left CH-4 in their home in the care of a familiar sitter. The child showed no unusual reaction to her mother's leaving. The familiar sitter reported that CH-4 usually slept while her mother was away.

Mother High-5 (MH-5)

The mother left her child 30 times for a total of 245 hours. Mother High-5 left her child in a neighbor's home and in the neighbor's care. The child showed no reaction to the mother's leaving and the neighbor reported that the child played and was content while the mother was away. When the mother returned the child smiled at her and seemed glad to go to his own home.

Summary of Results of Questionnaire

From the tabulations of the answers to the items on the questionnaire the following results emerged. More than 50 per cent of the time, both high and low mother groups circled the items listed below.

1. The child was left in his own home.
2. The child was left in the care of a familiar baby sitter or maid.
3. The child showed no reaction to the mother's leaving.
4. The sitter reported the child played and was content or the child slept.
5. The reaction of the child on the mother's return was that he smiled or he was asleep.

CHAPTER IV

DISCUSSION OF THE RESULTS

This exploratory study relative to the possible relationships between mother's anxiety levels and toddler behavior patterns, yielded a wealth of information. Investigation beyond the mathematical compilations revealed many interesting facts which were helpful in interpreting and understanding the results. The results obtained through the use of the Observation and Recording Sheet, the Questionnaire and the Fear Survey Schedule are discussed.

A casual inspection of Figures 1 through 10 reveals the individuality of the behavior pattern of each child irrespective of the anxiety grouping. Some members of the high anxiety group resemble the behavior patterns of the low anxiety group. Each individual behavior pattern was unique, but similarities between some of them can be seen. The similarities between the behavior patterns of children according to Stott (1967) are the result of personality differences and temperament. Sears (1957) wrote that a child's behavior at any given time is a product of his native endowment, of his immediate situation, and the qualities of personality he has developed up to that moment of his life.

The findings of this study bear out those of Sears, for example, the twin girls, Child Low-1 and Child Low-2, who live in the same home and according to the questionnaire were treated in the same manner,

behaved differently (Figures 1 and 2). Although an allergic condition partially accounted for some of the anxious behavior activity of Child Low-1, individuality and position in the family could explain the remaining differences in her less and least anxious behavior activities. These two children have a sister eighteen months older who sets the pace for them to follow.

The anxieties displayed by Child Low-3, who should have been a less anxious child (according to the theoretical framework of the study) can be explained by his physical condition at the time of the study, as previously reported. His bronchial condition lasted through most of the winter months, so his physical condition was not stabilized until the study was ended. Child Low-3's mother showed no outward anxiety and her inventory score reflected low anxiety. She seemed most willing to stay in the playroom as long as she was needed. Child Low-3's individual behavior pattern resembled that of Child High-3 whose mother reported the reasons for the child's anxieties were due to conditions in the home and activities of the mother during the study.

Child High-1's behavior did not support the researcher's belief that anxious mothers would have anxious children. This child exhibited little anxious or less anxious behavior. Most of his activities could be described as purposeful and least anxious. The mother's highly anxious tendency did not influence her child's behavior to a measurable degree. McReynolds (1962) suggested the motivation for exploratory behavior is to reduce anxiety caused by the ambiguity of the situation. This could serve to explain Child High-1's continual exploration.

The individual behavior patterns of Child Low-4 and Child High-1 are similar. This can be explained by the exploring behavior activities in which both children engaged. Child High-2 also engaged in some exploring activity. This child's anxiety was high on days V and VI as was evidenced by his crying on these days as he entered the Nursery School lobby. For the remainder of the study he appeared anxious as he approached the playroom, but soon after arriving he left his mother and explored the room. This behavior concurred with Freud's theory of signal anxiety.

Child Low-5 and Child High-4 had individual behavior patterns which were similar. These children behaved similarly to those in Rosenthal's study (1967) when she explained that dependency caused by anxiety gradually decreased as the child remained in the situation. Child Low-5's anxious behavior activity was high on days I through IV. On day V she engaged in no anxious behavior and remained at that level for the twelve days of the study. She attended regularly and was affectively stable.

Rosenthal further explained that long term familiarity with the situation could not be expected. A child who is confronted with an unfamiliar situation once and then confronted with it again several weeks later cannot be expected to show less dependency behavior the second time. Child High-4 and Child Low-3 exhibited greater anxious behavior upon their return to the group after an absence. Another child who was absent, Child Low-4, did not appear to be anxious upon his return. He habitually engaged in exploratory

behavior. In this study exploratory behavior was categorized as least anxious behavior. On day V Child Low-4's least anxious behavior rose which indicated that he engaged in much more exploratory behavior on that day.

Because the questionnaire used did not seek to measure the variable warmth versus hostility, there was no way to predict this quality in the mothers participating in this study. The researcher did not measure the amount of activity per unit time but rather the kinds of activity. There was no evidence to support the findings of Bayley and Schaefer when they explained loving mothers and the behaviors of their sons. Three of the five boys in the study were active explorers, while the other two were more cautious in their behavior activity. The division of the high and low groups according to their sex was an interesting observation. In the low anxiety group, there were two boys and three girls, and in the high anxiety group, three boys and two girls.

The division of the group according to age was as follows: three of the children in the high anxiety group were thirteen months old as the study began; while the remaining two children were 16 and 19 months old; the low anxiety group contained one child who was 13 months of age and the other four children in the group were 16 months old.

Heathers (1954) found the older children in her study to be initially more anxious than the younger children. The present study did not support this evidence. Of the group of five children who were

initially more anxious, three of these were the younger ones. Of the group of five children who were initially less anxious only one was younger.

The present study did not record specifically with whom the children played. However, it was noted that as a group their play was parallel i.e. two children rode the horses side by side or two children rode the cars side by side. Otherwise, there was little or no interaction. This supports the findings of Parten (1932).

Child High-2 often appeared anxious when he arrived. His mother reported she had just awakened him. This behavior supports the hypothesis of Murphy (1962) who hypothesized that separation anxiety is most likely to occur right after a child's nap.

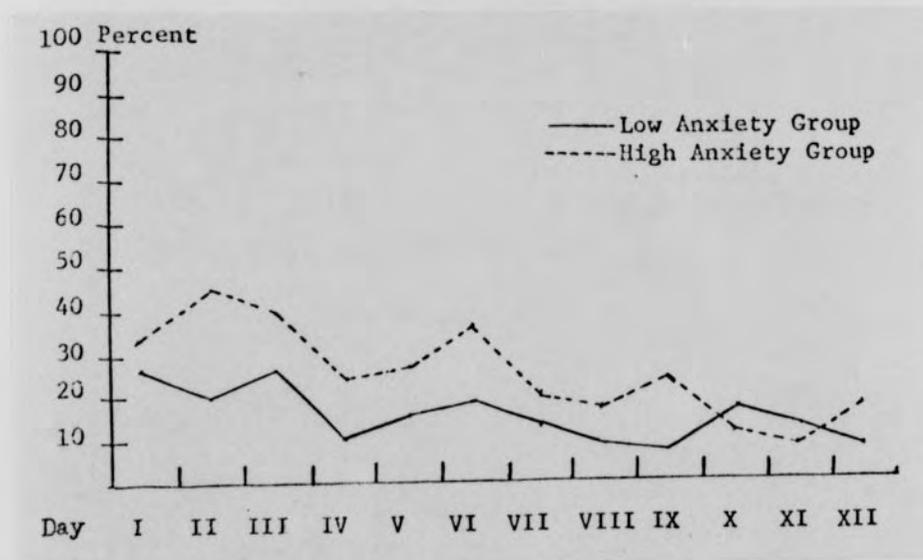
Child High-3 and Child Low-3 cried when they noticed their mother had left them on day V. The teacher in the toddler group sent for their mothers. These children stopped crying immediately and returned to their less anxious behavior activities. This is in accord with Arsenian's data on secure and insecure children. He found that insecurity of children alone in a strange situation diminished when a familiar adult was introduced.

The mothers of Child High-5 and Child High-3 stated they were eager to attend the discussion group which was conducted across the hall from the playroom. Their children seemed to sense this and displayed more dependent behavior each time their mothers tried to leave. This was in agreement with Sears (1957) findings that the more the child's efforts to satisfy dependency are frustrated the more insistent and all-absorbing the depending becomes.

The anxious behavior activities of the low group were lower than the anxious behavior activities of the high group on ten of the twelve days. The 34 per cent of the high group's anxious behavior on day I was a higher percentage than any day of the low group's anxious behavior activity. The lowest percentage of time the low group engaged in anxious behavior which was eight per cent on day XII. The low anxiety group engaged in anxious behavior activity a lower amount of time on ten out of the twelve days than the high anxiety group (Figure 13).

FIGURE 13

A COMPARISON OF THE MEAN TOTAL ANXIOUS
BEHAVIOR ACTIVITY PATTERNS OF THE
HIGH AND LOW GROUPS

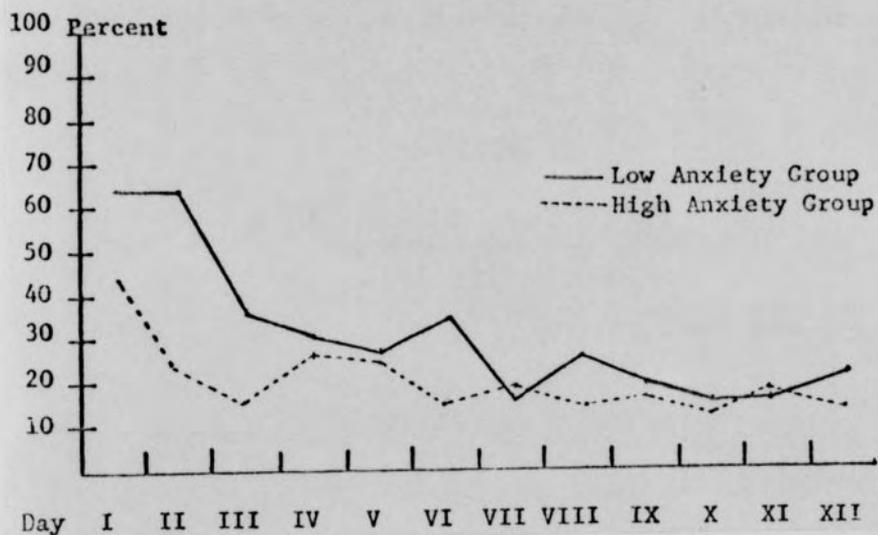


Twelve per cent of total time of less anxious behavior activity on the last day was eight per cent lower than the 20 per cent of total less anxious behavior activity of the low group on day XII.

A comparison of the less anxious behavior activity of the high and low (Figure 14) anxiety groups shows the low group engaging in less anxious behavior activity a greater percentage of the time on ten out of the twelve days of the study.

FIGURE 14

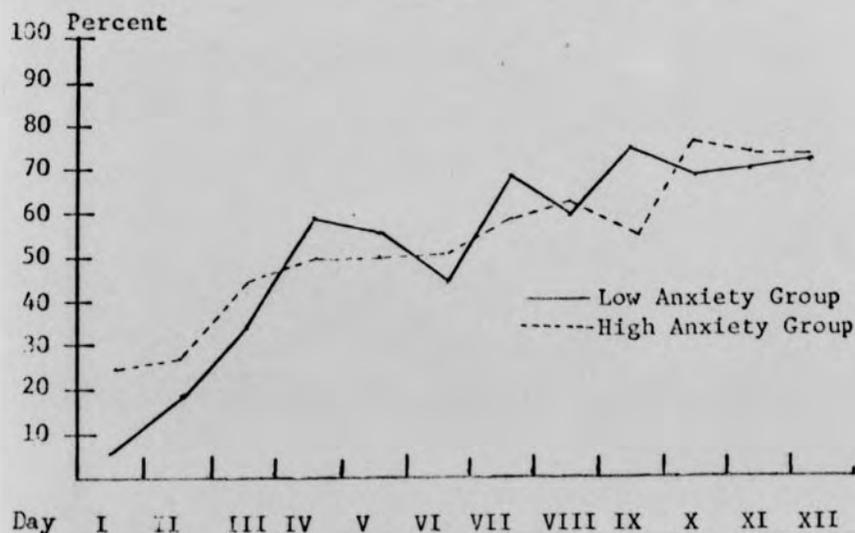
A COMPARISON OF THE MEAN TOTAL LESS ANXIOUS BEHAVIOR ACTIVITY PATTERN OF THE HIGH AND LOW GROUPS



A comparison of the least anxious behavior activities of the high and low group is presented in Figure 15. It can be noted that the high anxiety group spent more time each day in least anxious behavior activities. On the last day the high group spent 72 per cent of the time in least anxious behavior. On day I they spent only 23 per cent of the time in least anxious behavior. As the days progressed during the study the high anxiety group became more adjusted and less anxious. The low anxiety group's least anxious behavior activity rose steadily but more irregularly to attain the same 72 per cent of the time spent by the high group in least anxious behavior on day III. On the last day of the study, both high and low anxiety groups arrived at the same level of stability even though their daily patterns were different.

FIGURE 15

A COMPARISON OF THE MEAN TOTAL LEAST ANXIOUS BEHAVIOR ACTIVITY OF HIGH AND LOW GROUPS



The results of the tabulation of the information included in the questionnaire, designed to explore the behavior of the child left in the care of others in his home setting showed there was a relationship between the high and low anxiety level mothers. The leaving habits of the mothers of the children were much the same. These similarities suggest that the families came from similar socio-economic strata.

The scores of the Fear Survey Schedule III suggest that even in a group of ten mothers, enough variation was found to divide them into high and low anxiety groups.

The study began on February 4, 1968, and was completed on March 25, 1968. Each child was observed 12 times by a student observer who recorded the findings on a data sheet. The observers were students who were majoring in Child Development at the University of North Carolina at Greensboro.

There appeared to be a void in the literature concerning the relationship between anxious behavior of a young child who was placed in a group situation and the feelings of the mother upon leaving her child. Younger age children are more amenable to preschool studies in greater

SUMMARY

The relationship of toddler behavior patterns to anxiety levels of the mothers' were investigated in this study. An instrument was developed to assess the anxious versus least anxious behavior activity of a group of children as they began in the Toddler Program at the Nursery School in the School of Home Economics at the University of North Carolina at Greensboro, North Carolina. The Wolpe and Lang (1964) Fear Survey Schedule III was used to determine the anxiety levels of the mothers of those ten new toddlers. In order to include the anxious versus least anxious behavior of the toddler in his home setting, a questionnaire was developed to determine where, with whom and for how long each child was being left. The child's initial reactions to his mother's leaving and his reaction to her return were included in the questionnaire. The mother completed the questionnaire each time she left her child in the care of someone else.

The study began on February 4, 1969, and was completed on March 28, 1969: Each child was observed 12 times by a student observer who recorded the findings on a data sheet. The observers were students who were majoring in Child Development at the University of North Carolina at Greensboro.

There appeared to be a void in the literature concerning the relationship between anxious behavior of a young child when placed in a group situation and the feelings of the mother upon leaving her child. Toddler age children are being enrolled in preschool groups in greater

numbers than ever before, and a report of their anxious versus least anxious behavior activity could be most informative.

CONCLUSIONS

The following conclusions were made as a result of studying the data recorded by observing behavior activities patterns of a group of toddlers and assessing the expressed anxiety of their mothers.

The Hypothesis

Hypothesis I is: there is no relationship between the anxiety level of the mother and the behavior activity pattern the toddler follows as he meets a new group situation.

The results showed that the mean percentage of total time the low group engaged in anxious activity was 28 per cent on the first day, as compared to a mean percentage of 34 per cent of the high group's time on day I. During the remaining days of the study, the amount of time the low group engaged in anxious behavior descended slowly and irregularly until on day XII the anxious behavior activity of the low group was eight per cent. The 34 per cent total time the high group spent in anxious behavior on day I exceeded any per cent attained by the low group on any day. The least per cent of total time engaged in anxious behavior by the high group was on day XI when the total was nine per cent. This compared favorably with the anxious behavior of the low group i.e. eight per cent on the day XII (Figure 13). The less anxious behavior activity of the low group descended from a high of 64 per cent of day I to a low of 20 per cent of day XII. On day I the

less anxious behavior of the high group was 43 per cent while on day XII the mean total of less anxious behavior was 12 per cent (Figure 14). The least anxious behavior of the low group rose from a low of eight per cent on day I to a high of 72 per cent on day XII. The per cent of time the high group engaged in least anxious behavior activity rose from a low of 23 per cent on day I to a high of 72 per cent on day XII. On the final day of the study both the high and low groups engaged in least anxious behavior activity 72 per cent of the time (Figure 15).

These results and comparisons of the mean total behavior activity patterns indicated that in spite of the individual difference, when the means of the members of the high and low group were tabulated and compared, the anxious behavior activities of the low group were lower than the anxious behavior activities of the high group on ten of the twelve days (Figure 13). The less anxious behavior activities of the low group were higher than the less anxious activities of the high group on ten out of the twelve days (Figure 14). The least anxious behavior activities of the low group were more irregular in comparison to those of the high group and although they both resulted in similar percentages on the last day, the low group engaged in least anxious behavior a higher percentage of time as shown on four days out of the twelve days (Figure 15). These facts led the experimenter to conclude that the children of mothers belonging to the low anxiety level group initially adapted to the group situation with less anxiety, than did those children of mothers belonging to the high anxiety level group. However, the children's least anxious behavior activity in the high group rose

steadily until the final day when both groups attained the same amount of time engaged in least anxious behavior activity.

Hypothesis II reads: there is no relationship between the anxiety level of the mother and the length of time it takes the toddler to follow his own individual behavior activity pattern.

The results, shown in Figures 1 through 10, indicate a child followed his own individual behavior pattern irrespective of the group to which he belonged. No two patterns were alike but several children from both the high and low groups exhibited similar patterns of behavior. The individual behavior patterns of children of the high anxiety level mothers exhibited irregular and choppy levels of anxious behavior patterns. The children of the low group of mothers were more stable. Their anxious behavior was less and their individual pattern more predictable. It can therefore be stated that there is a relationship between anxiety level of mothers and the length of time it takes a toddler to follow his own individual behavior patterns.

Hypothesis III stated: there is no relationship between the anxiety level of the mothers and the time it takes for the toddler to be affectively stable when his mother leaves him.

On the reverse side of each observation and recording sheet the experimenter recorded every day the number of minutes the mother remained in the room. Three out of five of the low anxiety mother's group stayed less than one hour out of twelve. However, two of the mothers stayed considerably longer. One mother of the low group stayed in the room 11 of the 12 hours which was longer than any mother from either group. Of the high anxiety mothers four out of five stayed

at least four days with the exception of one who stayed only part of one day.

It can be stated that there is no relationship between a mother's anxiety level and the number of days she remained in the room with her child before he engaged in affectively stable or least anxious behavior activity.

Hypothesis IV reads: there is no relationship between the anxiety level of the mother and the number of times a week she leaves her child in the care of others.

The results recorded on the questionnaire showed that the mothers of the low anxiety group left their child a mean total of 21 times while the mothers of the high anxiety group left their children a mean total of 20 times. The mean total place where the child was left showed the mothers of both groups left their child more than 70 per cent of the total time in their own home. More than 50 per cent of the total time the child was left with a familiar baby sitter or maid, and more than 50 per cent of the total time the children showed no reaction because they were asleep or playing in another room when the mother left. The sitters reported that more than 50 per cent of the time the children played and were content or they slept, and upon the mother's return more than half of the times the child either smiled at the mother or was asleep.

When the high and low anxiety groups were compared they appeared similar. It could therefore be said that there is no relationship between a mother's anxiety level and the number of times she leaves her child in the care of others.

The results of the study regarding the child and his individual behavior activity pattern are inconclusive as they relate to their mother anxiety levels.

The behavior of the child when left in the care of others in the home setting was not shown to be related to the anxiety level of the mother.

A further possibility might be that this questionnaire was measuring leaving behavior of socio-economic class rather than toddler behavior activity patterns in the home setting.

It appeared to the investigator that once a child has become secure enough for the mother to leave, his anxious behavior activity diminished rapidly and the least anxious behavior became stable. The investigator suggests that early departure of the mother helps to develop the child's independence.

Recommendations for Further Study

A study of coping mechanisms which children employ in a new situation would be helpful to those who teach young children. This would include a detailed description of what they actually do i.e. what equipment do these toddlers use.

The length of time the child requires before he becomes affectively stable when the mother leaves the room needs further study. A larger number of mothers and children could be divided into high and low level anxiety groups. The groups could then be divided into a control group and an experimental group. The children in the experimental group would be subjected to separation from their mothers

upon arrival. Comparison of the groups might result in more clear-cut evidence.

Perhaps a study using a parent attitude scale to measure mother feelings, or a rating scale to probe deeper into the home atmosphere might prove to be more informative.

Because parent-child relationships are an important link in understanding child behavior, an exploratory study of the relationship between the anxiety level of the mother and the techniques she uses in handling the child's fears should provide useful information.

Little is known about toddler behavior and especially about those who come from the financially and culturally deprived homes. A study comparing the behavior activity patterns of toddlers from different socio-economic families would be most informative.

BIBLIOGRAPHY

- Arsenian, J. M. Young Children in an insecure situation. Journal of Abnormal Social Psychology, 1943, 38, 225-249.
- Baldwin, A. L., Kalhorn, J., & Breese, F. H. Patterns of parent behavior. Psychological Monographs, 1945, 58, No. 3 (Whole No. 268).
- Baldwin, A. L., Kalhorn, J., & Breese, F. H. The appraisal of parent behavior. Psychological Monographs, 1949, 63, No. 4. (Whole No. 229).
- Baumrind, D. Child care practices anteceding three patterns of preschool behavior. Genetic Psychology Monographs, 1967, 75, 43-88.
- Bayley, N., & Schaefer, E. S. Maternal behavior and personality development: Data from the Berkeley Growth Study. Psychiatric Research Reports, 1960, 13, 155-173.
- Becker, W. C. Consequences of different kinds of parental discipline. In Hoffman, M. L., & Hoffman L. W., (Eds.), Review of child development research. Vol. 1. New York: Russell Sage Foundation, 1964. Pp. 109-208.
- Champney, H. C. The variables of parent behavior. Journal of Abnormal Social Psychology, 1941, 36, 525-542.
- Erikson, E. H. Childhood and society. New York: Norton, 1950.
- Freud, S. Inhibitions, Symptoms, and Anxiety. (1926) Standard Edition, Vol. 20. Strachey, J. (Ed. and Trans.) London: The Hogarth Press, Ltd., 1959. Cited by J. W. Kessler, Psychopathology of Childhood. New Jersey: Prentis-Hall, 1966, P. 45.
- Freud, S. New introductory lectures on psycho-analysis. New York: Norton, 1933.
- Hathaway, S. R. and McKinley, J. C. The Minnesota Multiphasic personality inventory Manual. (Rev. ed.) New York: Psychological Corp., 1951.
- Heathers, G. The adjustment of two year olds in a novel social situation. Child Development, 1954, 25, 147-157.

- Hoffman, M. L., & Hoffman, L. W., (Eds.), Review of Child development research. Vol. 1. New York: Russell Sage Foundation, 1964.
- Kessler, J. W. Psychopathology of childhood. New Jersey: Prentis-Hall, 1966.
- McReynolds, P. Exploratory Behavior: A theoretical interpretation. Psychological Reviews, 1962, 11, 311-318.
- Murphy, L. The Widening World of Childhood. New York: Basic Books, 1962.
- Parten, M. B. Social participation among preschool children by a time sample technique. Journal of Abnormal Social Psychology, 1932, 27, 243-269.
- Rosenthal, M. K. Effects of a novel situation and of anxiety on two groups of dependency behavior. British Journal of Psychiatry, 1967, 58, 357-364.
- Schaefer, E. S. A circumplex model for maternal behavior and for child behavior. Journal of Abnormal Social Psychology, 1959, 59, 226-235.
- Schaefer, E. S. and Bell, R. Q. Development of a parental attitude research instrument. Child Development, 1958, 29, 339-361.
- Sears, P. S. Child-rearing factors related to playing sex-type roles. American Psychologist, 1953, 8, 431 (abstract).
- Sears, R. R., Maccoby, E., & Levin, H. Patterns of childrearing. Evanston, Illinois: Peterson and Co., 1957.
- Shoben, E. J., Jr. The assessment of parental attitudes in relation to child adjustment. Genetic Psychological Monographs, 1949, 39, 101-148.
- Stott, L. H. Child development an individual longitudinal approach. New York: Holt, Rinehart & Winston, Inc., 1967.
- Sullivan, H. S. The interpersonal theory of psychiatry. New York: Norton (London: Tavistock), 1953.
- Symonds, P. M. The dynamics of parent-child relationships. New York: Appleton Century Crofts, Inc., 1949.
- Wolpe, J., & Lang, P. J. A fear survey schedule for use in behavior therapy. Behavior Research Therapy, 1964, 2, 27-30.

APPENDIX A

Observation and Recording Sheet

DIRECTIONS TO OBSERVERS: Please observe the behavior of _____ for one hour. Record the behavior after every five minute interval. Use the clock on the wall to measure the time intervals. A description of possible behavior is listed and numbered 1-21 on a separate sheet titled KEY TO OBSERVATION SHEET. Find the number of the described behavior most like the behavior of the child you are observing. Record this number in the appropriate day and time square on the observation sheet. One number only should be recorded in each square.

Date	Recorder's Initials	Day	Initial Reaction	After 5 Min.	10	15	20	25	30	35	40	45	50	55	60
		I													
		II													
		III													
		IV													
		V													
		VI													
		VII													
		VIII													
		IX													
		X													
		XI													
		XII													

APPENDIX B

Key to Observation Sheet

1. Cries.
2. Clings to mother.
3. Picks up toy within six feet of mother.
4. Picks up toy in another part of the room.
5. Verbalizes with teacher within six feet of mother.
6. Verbalizes with teacher in another part of the room.
7. Verbalizes with another child within six feet of mother.
8. Verbalizes with another child in another part of the room.
9. Drinks juice quickly.
10. Dawdles and spills juice while trying to drink.
11. Refuses to drink juice--not interested.
12. Explores and touches as he moves around the entire room.
13. Stands and looks within two feet of mother. (Surveys the group)
14. Stands and looks in another part of the room, away from mother.
15. Plays--conscious of mother's presence.
16. Plays--ignoring mother's presence.
17. Observes mother leave the room and cries.
18. Observes mother leave the room and clings to teacher.
19. Observes mother leave the room and tries to follow.
20. Observes mother leave the room and shows no reaction.
21. None of the above--please explain on the reverse side of the observation sheet. (Note date, time, and initial.)

22. After mother leaves: child--

- a. plays with water
- b. plays with trucks
- c. plays with blocks
- d. plays with pull toy
- e. plays with horse
- f. plays with puzzle
- g. other; name it, note date, time and initial on reverse side.

1. Clings to mother.
2. Picks up toy within six feet of mother.
3. Observes mother leave the room and cries.
4. Verbalizes with teacher within six feet of mother.
5. Observes mother leave the room and clings to teacher.
6. Refuses to drink juice--not interested.
7. Stands and looks within two feet of mother. (studies the ground)
8. Plays--conscious of mother's presence.

Less Serious Behavior Activities

1. Picks up toy in another part of the room.
2. Verbalizes with teacher in another part of the room.
3. Verbalizes with another child within six feet of mother.
4. Verbalizes with another child in another part of the room.
5. Drinks juice quickly.
6. Doodles and spills juice while trying to drink.
7. Stands and looks in another part of the room, only faintly notices.
8. Plays--ignoring mother's presence.

APPENDIX C

Key to Subclassification

The following is a list of the subclasses of behavior activities used in the tabulation of this study. There are nine activities in each subclass.

Anxious Behavior Activities

1. Cries.
2. Clings to mother.
3. Picks up toy within six feet of mother.
17. Observes mother leave the room and cries.
5. Verbalizes with teacher within six feet of mother.
18. Observes mother leave the room and clings to teacher.
11. Refuses to drink juice--not interested.
13. Stands and looks within two feet of mother. (Surveys the group)
15. Plays--conscious of mother's presence.

Less Anxious Behavior Activities

4. Picks up toy in another part of the room.
6. Verbalizes with teacher in another part of the room.
7. Verbalizes with another child within six feet of mother.
8. Verbalizes with another child in another part of the room.
9. Drinks juice quickly.
10. Dawdles and spills juice while trying to drink.
14. Stands and looks in another part of the room, away from mother.
16. Plays--ignoring mother's presence.

19. Observes mother leave the room and tries to follow.

Least Anxious Behavior Activities

12. Explores and touches as he moves around the entire room.
20. Observes mother leave the room and shows no reaction.
22. After mother leaves: child--
- a. plays with water
 - b. plays with trucks
 - c. plays with blocks
 - d. plays with pull toy
 - e. plays on horse
 - f. plays with puzzle
 - g. none of the above

APPENDIX D

Questionnaire for Mothers of Newly Enrolled Toddlers

Please complete one of these forms each time you leave your child for an hour or more during the next six weeks.

Child's Name: _____

Date of leaving your child: _____

Hour of day you left your child: _____ Time returned: _____

Length of your absence
(No. hours, minutes) Hours: _____ Minutes: _____

Where did you leave your child: in a neighbor's, sitter's, or
(circle one) friend's home

in a relative's home

in a day care center

in a church nursery

in his own home

other

With whom did you leave your child
(circle one)

his father

a neighbor

a relative

familiar sitter

unfamiliar sitter

friend with whom child is
acquainted

other

Child's immediate reaction to
your leaving (circle one)

cried
reluctant, had to be carried
reluctant, but went
waved and smiled
showed no reaction

Sitter's report of child's
behavior (circle one)

cried all the time
cried part of the time
played and was content
played, but was not content
slept

Child's reaction when you
returned (circle one)

ignored you
ran to you
smiled at you
cried
was asleep
other

Other information--Explain

APPENDIX E
Fear Inventory

The items in this questionnaire refer to things and experiences that may cause fear or other unpleasant feelings. Write the number of each item in the column that describes how much you are disturbed by it nowadays.

	Not at all	A little	A fair amount	Much	Very much
1. Noise of vacuum cleaners					
2. Open wounds					
3. Being alone					
4. Being in a strange place					
5. Loud voices					
6. Dead people					
7. Speaking in public . . .					
8. Crossing streets					
9. People who seem insane. .					
10. Falling					
11. Automobiles					
12. Being teased					
13. Dentists					
14. Thunder					
15. Sirens					
16. Failure					
17. Entering a room where other people are already seated					

	Not at all	A little	A fair amount	Much	Very much
18. High places on land . . .					
19. Looking down from high buildings					
20. Worms					
21. Imaginary creatures . . .					
22. Receiving injections . .					
23. Strangers					
24. Bats					
25. Journeys by train					
26. Journeys by bus					
27. Journeys by car					
28. Feeling angry					
29. People in authority . . .					
30. Flying insects					
31. Seeing other people injected					
32. Sudden noises					
33. Dull weather					
34. Crowds					
35. Large open spaces					
36. Cats					
37. One person bullying another					
38. Tough-looking people . .					
39. Birds					

	Not at all	A little	A fair amount	Much	Very much
40. Sight of deep water . . .					
41. Being watched working . .					
42. Dead animals.					
43. Weapons					
44. Dirt.					
45. Crawling insects					
46. Sight of fighting					
47. Ugly people					
48. Fire					
49. Sick people					
50. Dogs					
51. Being criticized					
52. Strange shapes					
53. Being in an elevator. . .					
54. Witnessing surgical operations.					
55. Angry people.					
56. Mice.					
57. Blood a--Human. b--Animal					
58. Parting from friends. . .					
59. Enclosed places					
60. Prospect of a surgical operation					

	Not at all	A little	A fair amount	Much	Very much
61. Feeling rejected by others					
62. Airplanes					
63. Medical odors					
64. Feeling disapproved of.					
65. Harmless snakes					
66. Cemeteries.					
67. Being ignored					
68. Darkness.					
69. Premature heart beats (missing a beat).					
70. Nude men (a).					
Nude women (b).					
71. Lightning					
72. Doctors					
73. People with deformities					
74. Making mistakes					
75. Looking foolish					
76. Losing control.					

APPENDIX F

Definition of Terms Used in This Study

Toddler--a child between the ages of thirteen and nineteen months enrolled for the first time in the Toddler Group of the Nursery School in the School of Home Economics at the University of North Carolina at Greensboro.

Toddler Group--a group of toddler children who meet on a regular basis for an hour of supervised playtime.

Anxious Behavior--the uneasiness a toddler exhibits as he enters a new and unfamiliar group situation.

Coping Behavior--the various behaviors the toddler displays as his mother leaves and he becomes affectively stable in the play group.