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AGGRESSION IN BOYS IN A CLINIC POPULATION

by

LEONARD GOLDBERG

A dissertation submitted to the Graduate
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1973

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Abstract

AGGRESSION IN BOYS IN A CLINIC POPULATION

by

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The purpose of this study was to investigate the antecedents of physically aggressive behavior in preadolescent children referred to a psychiatric clinic in 1969-1970; this was done in order to gain further understanding of aggression with regard to the clinical situation. The most prevalent explanation for aggressive behavior is the frustration-aggression hypothesis. It was felt, however, that this hypothesis was not wholly capable of accounting for aggression. Parental, sibling, and peer modeling by the children, as well as the children's imaginal capacities, would also make a significant contribution to the behavior of the children.

The clinic case histories, including initial screenings, psychiatric interviews, and psychological evaluations, of seventy boys were rated as physically aggressive or non-aggressive. The aggressive boys were further categorized for exploratory purposes into three subtypes: unprovoked, provoked, and outburst. A group of fifteen case histories of girls was also rated as aggressive or non-aggressive for exploratory purposes. It was found that there were thirty-five aggressive boys and thirty-five non-aggressive boys. All the case histories were evaluated for the presence or absence of such modeling variables

as parental aggression, sibling aggression, and peer contact. Fantasy skills were determined by rating TAT stories and by using the Holtzman Movement scale for Rorschach protocols. Ratings were made of such frustration variables as geographic mobility, parental problems, and socio-economic-status.

The results supported a multi-theoretical approach to understanding aggression in children. The three theoretical points of view studied--modeling, fantasy, and frustration--all contributed to the described behavior in the case histories, however, modeling was most important, followed by fantasy, and then environmental frustration. Aggressive children tended to have aggressive parents, aggressive siblings, and high contact with peers. Non-aggressive children tended to have non-aggressive parents; aggressive children of different subtypes tended to have parents with similar aggressive behavior. Children poor in fantasy skills tended to be aggressive; children high in fantasy, even in aggressive fantasy, tended to be non-aggressive. Children high in social and familial frustration tended to feel frustrated and deprived and to behave aggressively.

A multi-pronged approach to the treatment of destructive physical aggression was suggested with particular emphasis on the importance of family intervention and modeling. The viability and utility of life-history research was affirmed.

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Introduction

Aggressive behavior in children is of major concern to the entire community, as well as to the social scientist in search of understanding human behavior. The child who is aggressive is often considered a major problem to teachers and school administrators, who use a variety of techniques to control him--from isolation, scolding, parental referral and special classes to school suspension and transfer; all with varying success. Outside of the school, it is often children who commit the bitterly complained of "violence in the streets", mostly minor acts in younger children and preadolescents, and more serious offenses in adolescents. In the mental health clinic, it is often the unmanageable, aggressive child who is referred for psychological evaluation, disposition, and treatment. The present study investigated antecedents of aggressive behavior to gain further understanding of this troublesome issue with regard to the clinical situation.

Numerous attempts have been made to understand the nature of aggressive behavior and, subsequently, to ascertain the best ways to handle it. Most of the work has been done in the laboratory with "normal" populations, using a vast array of designs and experimental tools. There has been sociological research done on juvenile delinquency; however, little attention is paid to individual differences in these studies; the primary focus is on the broad social milieu and gross family patterns of delinquents. There is a definite need for

non-laboratory studies, guided by the major theoretical models, to assist in confirming or disconfirming research done in the laboratory.

A small body of research is beginning to emerge which attempts to deal with aggression and other behaviors which take into account individual characteristics, as well as more subtle familial and social variables (for example, M. Roff, 1971). This body of research is primarily prospective research which looks at adults with some behavioral deviance, and searches earlier clinic data to discover observed childhood antecedents rather than relying wholly on adult records of their own childhood behavior, as in retrospective research, which comes mainly from psychoanalytically oriented investigators. The present study utilized some of the techniques and preliminary conclusions of prospective life-history research, or more specifically, what these researchers have called "follow back" research (Roff and Ricks, 1970; Roff, 1971).

Theories of Aggression

Excellent reviews on the theories of aggression have been published (Buss, 1961; Megargee, 1969; Staub, 1971; Bandura & Walters, 1963; Singer, 1971; Olweüs, 1969). The reader is referred to these reviews for more complete descriptions of the various theoretical positions.

Ethology

One theoretical approach is the phylogenetic or ethological one. In its most popular form (Lorenz, 1966; Ardrey, 1966),

it contends that, like the lower animal species, aggression in man, even though it is intra-species, is innately built-in, is expressed periodically, and functions to sustain the survival of the species. Environmental influences and the learning of aggression tend to be either denied or considered relatively unimportant, as are the unadaptive aspects of human aggression. Ethology recognizes the importance of environment as a set of "releasers" for innate patterns of behavior. It argues against what it considers the overwhelming role given the environment in learning theories. Some ethologists (Tinbergen, 1968; Scott, 1962) are more aware than others of the importance of the interaction of heredity and environment in the expression of overt behavior, particularly in human beings, and do not overly minimize environmental factors.

Psychoanalytic

Another major theory of aggression is the Freudian psychoanalytic one (S. Freud, 1929). In its last form, Freud's theory of aggression in man was that aggression is an innate physiological instinct and its basic goal is the destruction of the self. This death instinct or drive, Thanatos, is generally redirected outward, resulting in aggressive drives toward others. By this displacement outward, the Thanatos functions in the service of Eros, the life instinct.

Frustration-Aggression

In his earlier writings, Freud (1917) established the basic notion of the frustration-aggression hypothesis which he later rejected. He regarded the seeking of pleasure and

avoidance of pain as the basic mechanism of all mental functioning.

Frustration occurred whenever pleasure-seeking or pain-avoiding behavior was blocked; aggression was 'primordial reaction' to this state of affairs and was thought of as being originally and normally directed toward those persons or objects in the external world which were perceived as the source of the frustration. Freud dealt with such aberrant phenomenon as deliberate self-injury and suicide, not as abrogations of the pleasure principle, but as instances of aggression 'turned inward' under the influence of anxiety (threat of punishment). In this connection he was led to postulate the very important principle of displacement (Dollard et al., 1939, pp. 21-22).

Thus, it is Freud who fathered a third major theory of aggression--the frustration-aggression hypothesis. However, its greatest proponents and developers were not neo-Freudian psychoanalysts, but a group of learning theorists at Yale University (Dollard et al., 1939), who translated Freud's earlier concept into behavioristic language, and studied it in the laboratory. The Yale groups' original version of this theory stated that aggression is always a consequence of frustration, and contrariwise, that the existence of frustration always leads to some form of aggression. Frustration was defined as interference with an ongoing goal response. Later theorists attempted to extend the definition of frustration to include such behavior as being injured, criticized, or physically attacked (Berkowitz, 1969). It became obvious that every frustration does not terminate in overt aggression--aggression defined as responses that are directed toward the injury of people. This was the first major criticism of the original frustration-aggression theory. The Yale theorists, therefore, clarified their own original postulate by saying

that instigation to aggression by frustration leads to overt aggression depending upon other factors such as internal inhibition, and external stimulus events. Another major criticism of the frustration-aggression hypothesis is that there are antecedents of aggression other than frustration, such as attack (Buss, 1961). It should be further pointed out that Dollard, Miller, and their associates did not view frustration as always leading immediately to aggression. They took into account that frustrations can summate over time, and that instigation to aggression can, therefore, be established by chronically recurring or generalized frustrations.

Modeling or Imitation

Another major view of aggression is the social learning approach. The most persuasive and influential proponents of this view are Albert Bandura and his followers (Bandura and Walters, 1963). This point of view emphasizes the importance of social models, and imitation in the development and expression of an individual's aggressive behavior. Numerous laboratory experiments on the imitation of aggression have indicated the degree of influence which an aggressive model's behavior has on the observer's subsequent behavior. Some of the research on aggressive modeling indicates that aggressive behavior will often be modeled even in the absence of experimentally induced frustration. Social learning theorists study situational variables that influence the degree of modeling which takes place: reinforcement; model's characteristics, such as nurturance and punitiveness; and to a lesser degree,

observer characteristics, such as self-esteem (Flanders, 1968). Individual differences as they affect social learning have been largely ignored by these theoreticians, and very few of their studies have gone outside of highly controlled laboratory settings.

Peer conformity. There is evidence from the literature on conformity that indicates that children of middle-age and adolescence who are peer-oriented or peer-conforming are more likely to be aggressive than their more adult-oriented, socially-conforming counterparts (Hartup, 1970). Conditions--familial, personality, and situational--which are conducive to a peer-orientation rather than an adult one appear to increase the likelihood of antisocial aggressivity in a youngster. Peer conformity, then, when it is deviant from adult norms, as is often the case, is potentially a major source of aggressive modeling for children.

Imaginal

Still another position, which has received less prominence than the aforementioned ones, may be labeled the imaginal-capacity theory of aggression. A major proponent of this viewpoint is Singer (1971). This view contends, and experiments have borne evidence supporting it, that the individual with a greater capacity for cognitive redefinition of an aggressively provoking situation by use of imaginal skills will be less overtly aggressive than an individual with poorer imaginal skills. The ability to fantasize, even aggressive fantasies, would, therefore, according to this viewpoint, be

a major deterrent to the expression of aggressive behavior. Olweüs (1969) has made a series of refined predictions regarding the relationship of aggressive fantasy and aggressive inhibitory fantasy to overt aggression. Imaginal theory, more than the others cited, is concerned with internalized individual differences. It appears that the ability to fantasize is a necessary aspect of the two most frequently cited inhibitors of aggressive behavior--guilt or aggression anxiety, and empathy--both of which seem to necessitate a cognitive, imaginal component in order to effectively counteract instigations to aggression.

Evaluation of Theories

The present study derived hypotheses from the preceding theories. The position taken was that the frustration-aggression hypothesis is, in and of itself, a necessary but not sufficient factor in the prediction of aggressive behavior. Frustration and stress are inevitable aspects of life, particularly in a sample of clinic patients, and would be expected to be highly prevalent among all of the patients. Other factors derived from different theories of aggression, were expected to contribute to aggressiveness. Overt physical aggressiveness, it was expected, was likely to appear as a significant behavior primarily in those children who had in their family and/or immediate social environment, adult and peer models who were aggressive. Direct evidence in the life history for the presence of aggressive parents was investigated. Life history events were also explored in the present

study that would enhance the probability of a subject's experiencing successfully deviant aggressive models, such as a high degree of peer contact. The other general position of this experimenter was that children with poor fantasy skills, as exemplified in the projective psychological test data available from clinic case histories, were more likely to express overt aggression than subjects with good imaginal skills.

It was hypothesized, then, that frustration did not, in and of itself, differentiate relatively aggressive from relatively non-aggressive children. The prevalence of deviant aggressive models and of internally underdeveloped fantasy skills appeared to play significant roles in differentiating between the aggressive and non-aggressive children.

Aggressive subtypes. Aggression is not a unitary concept. It is complex and necessitates a finer categorization into types. A number of clinic case studies have attempted categorization of aggressive subjects. Using Lesser (1959) as a guideline, the present study has classified, in an exploratory fashion, overtly aggressive children into three categories: 1)unprovoked aggression; 2)provoked aggression; and 3)outburst aggression. Unprovoked aggression included children who often initiated fights and were assaultive; provoked aggression included children who were physically aggressive primarily in response to teasing from others; outburst aggression included children who were unpredictably, intermittently and often bizarrely aggressive toward others; this

aggression is often described similarly to a temper tantrum. All three types of aggressive children behaved destructively outside of the home in the classification used in this study.

Non-Aggressive Category

Children who were aggressive within the family but not outside of it were classified as non-aggressive in this study. Excluded were children who were primarily aggressive in the home because intra-familial aggression is reported in almost all clinic cases. Aggression directed toward the outside world is more clearly defined by the observation of various less intimately involved persons than parents, such as school personnel and social agency or clinical workers. The non-aggression group included children who used indirect aggression, passive aggression, and verbal aggression as well as those who had little or no aggression as part of their case history reported symptomatology or general behavior.

Hypotheses

The major hypotheses were that the clinical histories of boys with 1A)aggressive, fighting familial modes; 1B)a peer-oriented (peer modeling) rather than adult-oriented mode of life; 2)poor ability in imaginal skills; and 3)considerable frustration indicated by life history situations, were more likely to reveal aggressive behavior than the records of children without these characteristics.

A set of exploratory variables included a number that represented a more refined examination of modeling theory in relation to aggression. A review of the case material

indicated that aggression can be further sub-types into three categories: unprovoked, provoked, and outburst. Modeling theory predicts that significant adult and/or peer models whose aggression takes one of the above forms are more likely to have children who show similar behavior. For example, a father who is of the outburst aggressive type is likely to have a son whose aggressive behavior is of the outburst type. In the present study, these more refined modeling hypotheses were explored but not definitively tested because a sample of sufficient size could not be obtained. Trends in the data on these more refined predictions were reported, however. Additional characteristics associated with aggression but not directly connected to the theories of aggression were also explored.

Listed below are the major hypotheses and the more specific variables which they generate. They are described as having been confirmed in at least one past study or controversial in that there have been conflicting results reported from past studies or new in that they have not been previously studied with the specific focus on aggressive and non-aggressive subjects. A number of hypotheses designated as new have been studied by Roff (1971). However, he studied Bad Conduct versus Neurotic and Control subjects rather than aggressive versus non-aggressive subjects. His Bad Conduct category was far more inclusive than the aggressive category in the present study.

IA. Adult Modeling

Aggressive children:

1. Have more physically aggressive mothers and/or mothers who encourage aggressive behavior: confirmed; Staub (1971).
2. Have more physically aggressive fathers and/or fathers who encourage aggressive behavior: confirmed; Staub (1971).
3. Have more intense conflicts between parental figures (fighting, arguments, yelling): confirmed; Staub (1971).

B. Peer Modeling

Aggressive children:

1. Have more aggression among siblings: new; Hartup (1970).
2. Have more siblings: new; Hartup (1970).
3. Have more like-sexed siblings: new; Hartup (1970).
4. Tend not to be first born: confirmed; Sarason and Smith (1971), Singer (1966).
5. Have high peer contact outside of school: new; Hartup (1970).

II. Fantasy

Aggressive children:

- 1a. Have a low fantasy level and poor imaginative skills: controversial; Singer (1971), Staub (1971), Megargee (1969).
- 1b. Have lower fantasy scores and, therefore, fewer hostile fantasies: controversial; Bandura (1959), Singer (1971).
2. Are low in both empathic feelings and guilt: confirmed; Staub (1971).

III. Frustration-Stress

Aggressive children:

1. Have higher geographic mobility: confirmed; Eron et al. (1961).
2. Have lower socio-economic-status (SES): confirmed; Klein (1969).
3. Have more problem mothers (that is, abandonments and separations, promiscuity, alcoholism, addicts, psychotic household): new; Roff (1971), Robins (1970).
4. Have more working mothers: new.
5. Have more mothers or fathers who are widowed, divorced or separated (unstable marriages): new; Roff (1971).
6. Have more problem fathers (that is, abandonments and separations, promiscuity, alcoholism, addicts, psychotic household): confirmed; Crisis in Child Mental Health (1970), Megargee (1969).
7. Have more feelings of deprivation (that is, perceived injustice, jealousy of peers, sibs): confirmed; Staub (1971).

Agreement Between Aggressiveness in Boys and Their Parents

The following three variables are more refined modeling variables. These variables were explored but not definitively tested in the present study.

Aggressive children:

1. In the unprovoked aggression subtype, have fathers or mothers who show more unprovoked aggression toward the patient and/or others, than children in the other two

aggressive subtypes: new.

2. In the provoked aggression subtype, have fathers or mothers who show more provoked aggression toward the patient and/or others, than children in the other two aggressive subtypes: new.

3. In the outburst aggression subtype, have fathers or mothers who show more outburst aggression toward the patient and/or others, than children in the other two aggressive subtypes: new.

Additional Variables

Additional data were available making it possible to examine a number of variables not directly related to the major theoretical positions.

Aggressive children:

1. Are referred more often by an outside agency, especially the school, rather than the family: new; Roff (1971).
2. Are more likely to have perceptual-motor disturbances (irritability has been often found to occur in children with minimal brain dysfunction): new.
3. Are more hyperkinetic: new; Singer (1971).
4. Show no difference in I.Q. from non-aggressive children (Full Scale, Verbal, and Performance WISC I.Q.'s): controversial; Roff (1971), Klein (1969).
5. Show no difference in school achievement from non-aggressive children: controversial; Klein (1969).
6. Show more antisocial behaviors other than aggression (dishonesty, stealing, truancy): new; Roff (1971).

7. Have younger fathers: new; Roff (1971).

8. Have parents who are less pressing for achievement:
new; Roff (1971).

Method

Subjects

There were 70 boys in this subject population. This population included children of ages seven to eleven with relatively complete case records who were referred during 1969 and 1970 to the Brooklyn Community Counseling Center, a non-profit, private, out-patient, psychiatric clinic. The children came to this clinic from a variety of urban backgrounds. Fifteen girls could be studied in an exploratory fashion. There has been a general poverty of previous studies on females because of the smaller number of Ss available in the clinics, as was the case in the present sample. Boys outnumbered girls by a ratio of about four to one in the clinic.

Procedure

The subjects were classified as either aggressive or non-aggressive. Aggressive children included all those who demonstrated overt, physical aggression outside the home according to their clinic record. Non-aggressive children were not overtly aggressive outside the home.

Three subtypes in the aggressive category were also delineated for exploration: unprovoked aggression, provoked aggression, and outburst aggression.

Criteria for aggressive subtypes. The criteria were based on inspection of the clinic records. The unprovoked aggressive child was an initiator of aggression. He started fights with others in school and in the neighborhood. He may

have kicked, hit, pushed, fought, etc., without provocation, using his body or dangerous objects. He may have fought with males or females. This behavior was generally consistent in his interactions with others, especially peers and schoolmates, outside the home. He might have been labeled delinquent, antisocial-aggressive, "undercontrolled" (Megargee, 1969), sociopathic or psychopathic.

The provoked aggressive child was reactively aggressive. He did not start fights. He got into physical combat primarily when teased, provoked or incited by another, generally a peer. Once provoked he may strike back, hitting and fighting. He may have been moderately to highly controlled, somewhat like Megargee's (1969) "overcontrolled-type", until pushed over his threshold of control by provocation. This was a generally consistent pattern of behavior in his interactions outside the home. This child may have hurt others. However, he did not assault or attack them, but generally only responded to provocation with counter-physical-aggression.

The outburst aggressive child was unpredictably and intermittently explosive in his aggressive actions. He may have suddenly attacked another child without apparent reason or provocation; just as suddenly he may have become passive and docile. His behavior often seemed bizarre, wild or "crazy" to observers; it had the quality of a temper tantrum. His behavior may have occurred anywhere, anytime, and toward anyone; the aggression was indiscriminately directed, even toward adult targets, including the subject's teachers. This

child, unlike the unprovoked type, was often considered disturbed, bizarre, irrational, and "sick" rather than delinquent or antisocial.

Criteria for non-aggressive group. The non-aggressive child was not physically aggressive toward others outside the home according to the clinic record. He may have had any kind of behavior within the home, including aggressive behavior. He may have behaved in a passive, passive-aggressive, verbally aggressive, or indirectly aggressive manner toward others outside the home. His behavior was consistent. He did not assault or attack, did not tend to fight back when provoked, and did not have intermittent, explosive aggressive outbursts toward persons outside his home.

Characteristics of the subjects. Using the criteria previously discussed, 35 of the 70 boys in this study were classified as Aggressive (A) and 35 as Non-Aggressive (NA). There was no attempt to select equal samples of A and NA Ss; it just occurred that way. Of the A boys, 15 were classified as Aggressive-unprovoked (Aup), 4 as Aggressive-provoked (Ap), and 16 as Aggressive-outburst (Ao). The range of ages for all boys was seven to eleven years. The average age of the A boys was 9.03 years with little variation among the three subtypes. The average age of the NA boys was 9.46 years. The mean ages and variability measures are presented in Table 1. The racial breakdown in the two main groups was: 20 whites, and 15 non-whites in the A group; and 32 whites, and 3 non-whites in the NA group. The number breakdown of Ss' ethnic background

Table 1

Frequency Distribution for Ages of NA (N=35)
and A (N=35) Main Groups and A Subgroups in
Boys, and Mean Ages for Each Group and Subgroup

Age	Main Groups		A Subgroups		
	NA	A	Aup	Ap	Ao
7	5	6	3	0	3
8	7	5	1	1	3
9	5	12	9	0	3
10	3	6	0	2	4
11	15	6	2	1	3
Mean	9.46	9.03	8.80	9.75	9.06

in the A subgroups is found in Table 2.

There were 15 girls in the exploratory part of the study: 6 were classified A, and 9 were NA. The average age of the A's was 9.50 years, and of the NA's was 9.33 years. There were 8 whites and 1 non-white in the NA group, and 1 white and 5 non-whites in the A group.

Reliability. The classification of subjects according to the main types and subtypes was made by the experimenter, with an independent reliability check on a sample of 20 Ss by another psychologist. Determination of interjudge agreement on the presence or absence of behavioral characteristics was based on the first 20 records. The judgments were made of actual case history statements. There was almost perfect agreement for all categories. Out of the 20 cases, with 18 variables rated per case, there was a total of 6 disagreements. The interjudge agreement for every variable was greater than 90%. The criteria and examples of categories are presented in Appendix A, page 59 .

Measurement of variables and statistical analysis. The majority of variables were scored for the frequency of occurrence within the main groups, Aggressive versus Non-Aggressive Ss. The primary measurement unit was the presence or absence of a particular variable, such as a physically punitive father, in each case record. Some variables were rated along a continuum, such as movement responses in the Rorschach. Examples of the scoring of judgmental variables are provided in Appendix A, page 59 . The major statistical procedure used

Table 2

Frequency of Ethnic Characteristics for
 NA (N=35) and A (N=35) Main Groups and
 A Subgroups in Boys

Group	Ethnic Characteristics	
	White	Non-White
Main Groups		
NA	32	3
A	20	15
A Subgroups		
A unprovoked	6	9
A provoked	2	2
A outburst	12	4

to test the hypotheses was to tabulate a correlation matrix and compare the magnitudes of the Ss. The extent of the correlations of the individual variables to the two main groups, A and NA, determined their relative contribution to the aggressivity of the child.

Aggressive subgroups were not subjected to statistical analysis because of the limited size of the sample.

Results

The focus of this investigation was on the degree of relationship between 38 variables (identified as dependent variables) and the main subject groups, Aggressive and Non-Aggressive. Intercorrelations among the 39 variables were computed using the appropriate correlational techniques to obtain equivalents of Pearson r 's. The code for the matrix of intercorrelations is presented in Table 3 and the entire matrix for boys in Table 4. In accord with the focus, only the contribution of the variables to the aggressive behavior variable is discussed. These correlations are presented in order of magnitude in Table 5.

Frequencies, means, and standard deviations for all the variables studied in the main Aggressive and Non-Aggressive groups as well as in the Aggressive subgroups were tabulated. The p -values were determined by use of Fisher's Exact Test. These p values must be interpreted with considerable caution, however, due to the lack of independence among the variables. (See Appendix B, pages 66-80.)

Adult modeling. Fathers who were physically aggressive had a strong tendency to have sons who were physically aggressive ($r = .609$). Mothers who were physically aggressive had a strong tendency, but less so than fathers, to have sons who were like them ($r = .459$). When both parents were aggressive, they were very likely to have aggressive sons ($r = .500$). When both parents were non-aggressive, the child was least likely to be physically aggressive ($r = -.650$). Physical conflict

Table 3

Code for Correlation Matrices for Boys and Girls

<u>Variable #</u>	<u>Variable Name</u>	<u>Category</u>	<u>Code</u>
L 1	Group (Subj. categ.)	Aggressive	1
		Non-Agg.	0
L 2	Age		07-11
L 3	Ethnic	white	1
		non-white	0
L 4	Mother's Agg.	A	1
		NA	0
L 5	Father's Agg.	A	1
		NA	0
L 6	Conflict btn parents	present	1
		absent	0
L 7	# of siblings		1-9
L 8	# of like-sexed sib.		1-8
L 9	Sibling agg.	present	1
		absent	0
L10	Peer contact	high	1
		low	0
L11	Rorsch-# R		06-46
L12	Rorsch-Holtzman M		01-86
L13	TAT-transcendence		07-93
L14	TAT-# empathy		0-9
L15	TAT-# hostile		0-9
L16	Geographic mobil.	present	1
		absent	0

Table 3 (Continued)

<u>Variable #</u>	<u>Variable Name</u>	<u>Category</u>	<u>Code</u>
L17	SES occupation	Holling. Ind.	1-7
L18	SES education	Holling. Ind.	1-7
L19	SES combined	Holling. Ind.	03-21
L20	Problem mother	present	1
		absent	0
L21	Mother working	yes	1
		no	0
L22	Marital status	intact marriage	1
		non-intact mar.	0
L23	Problem father	present	1
		absent	0
L24	Feelings of depriv.	present	1
		absent	0
L25	Referral source	agency	1
		family	0
L26	Age of father		18-45
L27	Percept. motor disturb.	present	1
		absent	0
L28	Parnts press for achiev.	present	1
		absent	0
L29	Hyperkinetic	present	1
		absent	0
L30	Physical abnorm.	present	1
		absent	0
L31	WISC full scale		064-140
L32	WISC verbal scale		069-138

Table 3 (Continued)

<u>Variable #</u>	<u>Variable Name</u>	<u>Category</u>	<u>Code</u>
L33	WISC performance		062-135
L34	School achiev.	present	1
		absent	0
L35	Stanf. Ach. Test	word mean. %	00-99
L36	Stanf. Ach. Test	parag. mean. %	00-91
L37	Antisocial behavior	present	1
		absent	0
L38	Both parents A	present	1
		absent	0
L39	Both parents NA	present	1
		absent	0

AGGRESSION STUDY, BOYS

CORRELATIONS OF A

Table 4
Matrix of Intercorrelations for BoysPAGE 1
FILE 8

POSITION	1	2	3	4	5	6	7	8
LABEL	L1	L2	L3	L4	L5	L6	L7	L8
1	1.000	-0.149	-0.392	0.459	0.609	0.316	0.126	0.185
2	-0.149	1.000	-0.082	-0.175	0.019	0.069	0.127	0.127
3	-0.392	-0.082	1.000	-0.051	-0.301	-0.134	-0.112	0.009
4	0.459	-0.175	-0.051	1.000	0.218	0.054	0.062	0.096
5	0.609	0.019	-0.301	0.218	1.000	0.495	0.034	0.032
6	0.316	0.069	-0.134	0.054	0.495	1.000	0.102	0.094
7	0.126	0.160	-0.112	0.062	0.034	0.102	1.000	0.798
8	0.185	0.127	0.009	0.096	0.032	0.094	0.798	1.000
9	0.507	0.081	-0.175	0.274	0.342	0.387	0.365	0.252
10	0.675	-0.152	-0.332	0.197	0.369	0.306	0.127	0.063
11	-0.186	-0.028	0.063	-0.071	-0.326	-0.101	-0.043	-0.057
12	-0.407	0.053	0.096	-0.279	-0.402	-0.228	-0.167	-0.133
13	-0.295	0.045	-0.059	-0.223	-0.129	-0.129	0.070	0.070
14	-0.314	0.194	0.026	-0.382	-0.243	-0.080	0.234	0.135
15	-0.302	0.073	0.044	-0.285	-0.346	-0.113	0.224	0.105
16	0.261	0.039	-0.501	0.160	0.117	0.110	0.070	0.032
17	0.321	0.192	-0.265	0.128	0.141	0.231	0.221	0.221
18	0.241	0.236	-0.225	0.073	0.178	0.256	0.156	0.084
19	0.336	0.221	-0.265	0.129	0.153	0.353	0.235	0.209
20	0.257	-0.089	-0.261	0.172	0.087	0.190	0.252	0.259
21	0.032	-0.036	-0.155	-0.173	0.074	-0.102	-0.439	-0.317
22	-0.060	-0.066	0.126	-0.062	0.180	-0.143	0.027	-0.024
23	0.203	0.061	-0.362	0.073	0.119	0.275	0.039	0.118
24	0.371	-0.367	-0.131	0.229	0.203	0.063	0.036	0.111
25	0.327	-0.082	-0.271	0.277	0.163	0.083	0.176	0.009
26	-0.036	-0.176	0.057	-0.092	-0.023	-0.237	-0.168	-0.136
27	0.025	-0.142	-0.069	-0.226	-0.007	0.012	0.151	0.136
28	-0.259	0.029	0.130	-0.125	0.009	-0.118	-0.207	-0.149
29	0.482	-0.401	-0.081	0.240	0.241	0.124	0.008	0.028
30	-0.115	-0.075	0.146	-0.094	-0.190	0.181	0.008	0.022
31	-0.098	-0.115	0.157	-0.017	-0.151	-0.105	-0.296	-0.193
32	-0.149	-0.059	0.158	-0.091	-0.114	-0.099	-0.337	-0.192
33	-0.009	-0.154	0.101	0.142	-0.159	-0.103	-0.207	-0.167
34	-0.168	-0.227	0.190	-0.036	-0.297	0.040	-0.233	-0.145
35	-0.236	-0.077	0.038	-0.021	-0.305	-0.294	-0.305	-0.200
36	-0.302	0.043	0.297	-0.141	-0.320	-0.208	-0.181	-0.048
37	0.316	-0.195	-0.279	0.118	0.110	0.090	0.242	0.285
38	0.500	-0.188	-0.124	0.617	0.673	0.306	0.012	-0.034
39	-0.650	-0.006	0.249	-0.705	-0.646	-0.290	-0.088	-0.162

AGGRESSION STUDY, BOYS

Table 4 (Continued)

PAGE 2

CORRELATIONS OF A

FILE 8

POSITION		9	10	11	12	13	14	15	16
	LABEL	L9	L10	L11	L12	L13	L14	L15	L16
1	L1	0.507	0.675	-0.186	-0.407	-0.295	-0.374	-0.302	0.261
2	L2	0.081	-0.152	-0.028	0.053	0.045	0.194	0.073	0.039
3	L3	-0.175	-0.332	0.063	0.096	-0.059	0.026	0.044	-0.501
4	L4	0.274	0.197	-0.071	-0.279	-0.223	-0.382	-0.285	0.160
5	L5	0.342	0.369	-0.326	-0.402	-0.319	-0.243	-0.346	0.117
6	L6	0.387	0.306	-0.101	-0.228	-0.129	-0.080	-0.113	0.110
7	L7	0.365	0.127	-0.043	-0.167	0.070	0.234	0.224	0.070
8	L8	0.252	0.063	-0.057	-0.133	0.070	0.135	0.105	0.032
9	L9	1.000	0.407	-0.123	-0.346	0.071	-0.006	-0.019	0.160
10	L10	0.407	1.000	-0.079	-0.297	-0.333	-0.336	-0.217	0.190
11	L11	-0.123	-0.079	1.000	0.767	0.254	0.130	0.229	0.111
12	L12	-0.346	-0.297	0.767	1.000	0.334	0.145	0.200	0.044
13	L13	0.071	-0.333	0.254	0.334	1.000	0.684	0.677	-0.000
14	L14	-0.006	-0.336	0.130	0.145	0.684	1.000	0.762	-0.113
15	L15	-0.019	-0.217	0.229	0.200	0.677	0.762	1.000	-0.049
16	L16	0.160	0.190	0.111	0.044	-0.000	-0.113	-0.049	1.000
17	L17	0.237	0.219	-0.129	-0.195	-0.054	-0.017	-0.007	0.363
18	L18	0.231	0.152	-0.309	-0.349	-0.150	-0.099	-0.038	0.080
19	L19	0.261	0.220	-0.177	-0.248	-0.085	-0.042	-0.017	0.316
20	L20	0.209	0.147	-0.067	-0.202	0.221	0.122	0.232	0.435
21	L21	-0.120	0.088	-0.101	0.003	-0.106	-0.209	-0.096	0.074
22	L22	-0.027	-0.140	-0.012	-0.047	-0.155	-0.047	-0.181	-0.309
23	L23	0.203	0.108	-0.205	-0.168	0.174	0.181	0.103	0.472
24	L24	0.328	0.205	-0.201	-0.209	0.203	-0.086	-0.030	0.087
25	L25	-0.039	0.138	-0.146	-0.195	-0.284	-0.263	-0.248	0.296
26	L26	-0.312	-0.146	-0.034	0.092	0.038	-0.158	-0.144	-0.280
27	L27	0.044	0.105	-0.022	-0.001	-0.013	-0.017	0.062	-0.032
28	L28	-0.364	-0.180	0.076	0.137	-0.036	0.047	-0.010	-0.108
29	L29	0.162	0.417	-0.078	-0.268	-0.204	-0.286	-0.177	0.058
30	L30	-0.145	-0.157	0.018	0.159	-0.009	-0.084	-0.100	0.043
31	L31	-0.220	-0.101	0.368	0.396	0.303	0.210	0.228	0.046
32	L32	-0.252	-0.122	0.355	0.496	0.327	0.209	0.206	0.053
33	L33	-0.156	-0.054	0.302	0.204	0.218	0.169	0.213	0.026
34	L34	-0.019	-0.047	0.248	0.329	0.364	0.137	0.313	-0.060
35	L35	-0.237	-0.311	0.158	0.492	0.042	-0.087	-0.053	0.108
36	L36	-0.100	-0.277	0.061	0.308	0.142	0.006	0.076	0.038
37	L37	0.453	0.111	-0.072	-0.210	0.136	0.071	0.020	0.110
38	L38	0.343	0.312	-0.196	-0.375	-0.395	-0.393	-0.433	-0.003
39	L39	-0.326	-0.302	0.227	0.355	0.187	0.273	0.241	-0.286

AGGRESSION STUDY, BOYS

Table 4 (continued)

PAGE 3

CORRELATIONS OF A

FILE 8

POSITION	17	18	19	20	21	22	23	24
LABEL	L17	L18	L19	L20	L21	L22	L23	L24
1	0.321	0.241	0.326	0.257	0.032	-0.060	0.203	0.371
2	0.192	0.236	0.221	-0.089	-0.036	-0.066	0.061	-0.367
3	-0.265	-0.225	-0.265	-0.261	-0.155	-0.126	-0.362	-0.131
4	0.128	0.073	0.129	0.172	-0.173	-0.062	0.073	0.229
5	0.141	0.178	0.153	0.087	0.074	0.119	0.203	0.203
6	0.343	0.256	0.353	0.190	-0.102	-0.143	0.275	0.063
7	0.231	0.158	0.235	0.252	-0.439	0.027	0.039	0.036
8	0.221	0.084	0.209	0.259	-0.317	-0.024	0.118	0.111
9	0.237	0.231	0.261	0.209	-0.120	-0.027	0.203	0.328
10	0.219	0.152	0.220	0.147	0.088	-0.140	0.108	0.205
11	-0.129	-0.309	-0.177	-0.067	-0.101	-0.012	-0.205	-0.201
12	-0.195	-0.349	-0.248	-0.202	0.003	-0.047	-0.168	-0.209
13	-0.054	-0.150	-0.085	0.221	-0.106	-0.155	0.174	0.203
14	-0.017	-0.099	-0.042	0.122	-0.209	-0.047	0.181	-0.086
15	-0.007	-0.038	-0.017	0.232	-0.096	-0.181	0.103	-0.030
16	0.363	0.080	0.316	0.435	0.074	-0.309	0.472	0.087
17	1.000	0.665	0.798	0.389	-0.225	-0.450	0.552	-0.102
18	0.665	1.000	0.799	0.144	-0.106	-0.053	0.252	-0.048
19	0.978	0.799	1.000	0.353	-0.211	-0.059	0.509	-0.102
20	0.389	0.144	0.353	1.000	-0.161	-0.421	0.609	0.200
21	-0.225	-0.106	-0.211	-0.161	1.000	0.035	-0.008	0.032
22	-0.450	-0.053	-0.378	-0.421	0.035	1.000	-0.607	0.120
23	0.552	0.252	0.509	0.609	-0.008	-0.607	1.000	0.145
24	-0.102	-0.048	-0.102	0.200	0.032	0.120	0.145	1.000
25	0.344	0.304	0.359	0.196	-0.082	-0.081	0.102	-0.065
26	-0.228	-0.059	-0.203	-0.375	0.057	0.401	-0.361	0.094
27	0.149	0.110	0.157	0.095	0.012	0.030	0.032	-0.025
28	-0.495	-0.293	-0.477	-0.431	0.232	0.402	-0.359	-0.144
29	0.140	0.109	0.146	0.120	0.035	0.112	-0.058	0.181
30	0.087	0.062	0.060	-0.057	-0.238	-0.062	0.015	-0.172
31	-0.330	-0.516	-0.408	-0.070	0.026	-0.059	-0.020	0.224
32	-0.328	-0.537	-0.411	-0.101	0.095	-0.094	-0.027	0.145
33	-0.271	-0.377	-0.325	0.004	-0.051	-0.024	0.275	0.275
34	-0.043	-0.229	-0.101	-0.077	-0.116	-0.142	-0.005	0.091
35	-0.188	-0.355	-0.251	-0.119	0.192	-0.180	0.013	-0.151
36	-0.006	-0.413	-0.121	0.007	0.048	-0.268	0.166	-0.226
37	0.086	-0.043	0.051	0.253	-0.102	0.057	0.147	0.379
38	0.041	0.096	0.054	0.033	-0.046	0.128	-0.065	0.300
39	-0.240	-0.171	-0.242	-0.237	0.063	-0.005	-0.254	-0.177

AGGRESSION STUDY, BOYS

Table 4 (Continued)

PAGE 4

CORRELATIONS OF A

FILE 8

POSITION

LABEL

	25	26	27	28	29	30	31	32
	L25	L26	L27	L28	L29	L30	L31	L32
1	0.327	-0.036	0.025	-0.259	0.482	-0.115	-0.098	-0.149
2	-0.082	-0.176	-0.142	0.029	-0.401	-0.075	-0.115	-0.059
3	-0.271	0.057	-0.069	0.130	-0.081	-0.146	-0.157	-0.158
4	0.277	-0.092	-0.226	-0.125	0.240	-0.094	0.017	-0.091
5	0.163	-0.023	-0.007	0.009	0.241	-0.190	-0.151	-0.114
6	0.083	-0.237	0.012	-0.118	0.124	0.181	-0.105	-0.099
7	0.176	-0.168	0.151	-0.207	0.008	0.008	-0.296	-0.337
8	0.009	-0.136	0.136	-0.149	0.028	0.022	-0.193	-0.192
9	-0.039	-0.312	0.044	-0.364	0.162	-0.145	-0.220	-0.252
10	0.138	-0.146	0.105	-0.180	0.417	-0.157	-0.101	-0.122
11	-0.146	-0.034	-0.022	0.076	-0.078	0.018	0.368	0.355
12	-0.195	0.092	-0.001	0.137	-0.268	0.159	0.396	0.496
13	-0.284	0.038	-0.013	-0.036	-0.204	-0.009	0.303	0.327
14	-0.263	-0.158	-0.017	0.047	-0.286	-0.084	0.210	0.209
15	-0.248	-0.144	0.062	-0.010	-0.177	-0.100	0.228	0.206
16	0.296	-0.280	-0.032	-0.108	0.058	0.043	0.046	0.053
17	0.344	-0.228	0.149	-0.495	0.140	0.087	-0.330	-0.328
18	0.304	-0.059	0.110	-0.293	0.109	-0.062	-0.516	-0.537
19	0.359	-0.203	0.157	-0.477	0.146	0.060	-0.408	-0.411
20	0.196	-0.375	0.095	-0.431	0.120	-0.057	-0.070	-0.101
21	-0.082	0.057	0.012	0.232	0.035	-0.238	0.026	0.095
22	-0.081	0.401	0.030	0.402	0.112	-0.062	-0.059	-0.094
23	0.102	-0.361	0.032	-0.359	-0.058	0.015	-0.020	-0.027
24	-0.065	0.094	-0.025	-0.144	0.181	-0.172	0.224	0.145
25	1.000	0.089	0.096	-0.265	0.264	0.081	-0.257	-0.311
26	0.089	1.000	0.020	0.297	0.049	0.182	0.144	0.192
27	0.096	0.020	1.000	-0.238	0.118	-0.046	-0.368	-0.230
28	-0.265	0.297	-0.238	1.000	-0.144	-0.010	0.286	0.279
29	0.264	0.049	0.118	-0.144	1.000	0.059	-0.238	-0.296
30	0.081	0.182	-0.046	-0.010	0.059	1.000	0.050	0.008
31	-0.257	0.144	-0.368	0.286	-0.238	0.050	1.000	0.929
32	-0.311	0.192	-0.230	0.279	-0.296	0.008	0.929	1.000
33	-0.141	0.054	-0.463	0.235	-0.129	0.078	0.897	0.675
34	-0.289	0.065	-0.087	0.069	-0.077	0.273	0.544	0.544
35	-0.179	0.042	-0.249	0.196	-0.311	0.149	0.608	0.731
36	-0.219	0.124	-0.042	0.040	-0.157	0.230	0.611	0.671
37	-0.134	-0.173	-0.055	-0.118	0.190	-0.073	0.013	-0.100
38	0.181	-0.077	-0.112	-0.103	0.269	-0.252	-0.129	-0.160
39	-0.292	0.050	0.141	0.029	-0.254	0.066	0.019	0.065

AGGRESSION STUDY, BOYS

Table 4 (Continued)

PAGE 5

CORRELATIONS OF A

FILE B

POSITION	33	34	35	36	37	38	39
LABEL	L33	L34	L35	L36	L37	L38	L39
1	-0.009	-0.168	-0.236	-0.302	0.316	0.509	-0.650
2	-0.154	-0.227	-0.077	0.043	-0.195	-0.188	-0.006
3	0.101	0.190	0.038	0.297	-0.279	-0.124	0.249
4	0.142	-0.036	-0.021	-0.141	0.118	0.617	-0.705
5	-0.159	-0.297	-0.305	-0.320	0.110	0.673	-0.646
6	-0.103	0.040	-0.294	-0.208	0.090	0.306	-0.290
7	-0.207	-0.233	-0.305	-0.181	0.242	0.012	-0.088
8	-0.167	-0.145	-0.200	-0.048	0.285	-0.034	-0.162
9	-0.156	-0.019	-0.237	-0.100	0.453	0.343	-0.326
10	-0.054	-0.047	-0.311	-0.277	0.111	0.312	-0.302
11	0.302	0.248	0.158	0.061	-0.072	-0.196	0.227
12	0.204	0.329	0.492	0.308	-0.210	-0.375	0.355
13	0.218	0.364	0.042	0.142	0.136	-0.395	0.187
14	0.169	0.137	-0.087	0.006	0.071	-0.393	0.273
15	0.213	0.313	-0.053	0.076	0.020	-0.433	0.241
16	0.026	-0.060	0.108	0.038	0.110	-0.003	-0.286
17	-0.271	-0.043	-0.188	-0.006	0.086	0.041	-0.240
18	-0.377	-0.229	-0.355	-0.413	-0.043	0.096	-0.171
19	-0.325	-0.101	-0.251	-0.121	0.051	0.054	-0.242
20	0.004	-0.077	-0.119	0.007	0.253	0.033	-0.237
21	-0.051	-0.116	0.192	0.048	-0.102	-0.046	0.063
22	-0.024	-0.142	-0.180	-0.268	0.057	0.128	-0.005
23	0.019	-0.005	0.013	0.166	0.147	-0.065	-0.254
24	0.275	0.091	-0.151	-0.226	0.379	0.300	-0.177
25	-0.141	-0.289	-0.179	-0.219	-0.134	0.181	-0.292
26	0.054	0.065	0.042	0.124	-0.173	-0.077	0.050
27	-0.463	-0.087	-0.249	-0.042	-0.055	-0.112	0.141
28	0.235	0.069	0.196	0.040	-0.118	-0.103	0.029
29	-0.129	-0.077	-0.311	-0.157	0.190	0.269	-0.254
30	0.078	0.273	0.149	0.238	-0.073	-0.252	0.066
31	0.897	0.544	0.688	0.611	0.013	-0.129	0.019
32	0.675	0.544	0.731	0.671	-0.100	-0.160	0.065
33	1.000	0.438	0.444	0.349	0.142	-0.074	-0.052
34	0.438	1.000	0.415	0.562	-0.030	-0.257	0.112
35	0.444	0.415	1.000	0.679	0.084	-0.307	0.047
36	0.349	0.562	0.679	1.000	0.020	-0.384	0.115
37	0.142	-0.030	0.084	0.020	1.000	0.084	-0.159
38	-0.074	-0.257	-0.307	-0.384	0.084	1.000	-0.435
39	-0.052	0.112	0.047	0.115	-0.159	-0.435	1.000

Table 5

Correlations of Variables with Aggressive Behavior
(A and NA Main Groups) in Descending order for Boys

<u>Variable #</u>	<u>Variable Name</u>	<u>r</u>
L10	Peer contact	.675
L39	Both parents NA	-.650
L 5	Father's agg.	.609
L 9	Sibling agg.	.507
L38	Both parents A	.500
L29	Hyperkinetic	.482
L 4	Mother's agg.	.459
L12	Rorsch-Holtzman M	-.407
L 3	Ethnic	-.392
L14	TAT-# empathy	-.374
L24	Feelings of depriv.	.371
L25	Referral source	.327
L19	SES combined	.326
L17	SES occupation	.321
L 6	Conflict btn parents	.316
L37	Antisocial behavior	.316
L15	TAT-# hostile	-.302
L36	Stanf. Ach.-parag.	-.302
L13	TAT-transcendence	-.295
L16	Geographic mobil.	.261
L28	Parnts press for achiev.	-.259
L20	Problem mother	.257

Table 5 (Continued)

<u>Variable #</u>	<u>Variable Name</u>	<u>r</u>
L18	SES education	.241
L35	Stanf. Ach.-word	-.236
L23	Problem father	.203
L11	Rorsch-# R	-.186
L 8	# of like-sexed sib.	.185
L34	School achiev.	-.168
L 2	Age	-.149
L32	WISC verbal	-.149
L 7	# of siblings	.126
L30	Physical abnorm.	-.115
L31	WISC full scale	-.098
L22	Marital status	-.060
L26	Age of father	-.036
L21	Mother working	.032
L27	Percept. motor disturb.	.025
L33	WISC performance	-.009

between parents had a far smaller relationship to boy's aggression than the previous variables ($r = .316$).

Peer modeling. The most direct measure of peer modeling in the present study, amount of peer contact, showed the largest degree of relationship to aggressiveness ($r = .675$) in boys of all the variables studied. Sibling aggression, too, was highly related to the boys' aggression. When siblings were described as physically aggressive in the home, the boys in the sample were often also described as such ($r = .507$). Both number of siblings and number of like-sexed siblings had only small degrees of relationship with aggression in subjects: $r = .126$ and $r = .185$ respectively.

Fantasy. Fantasy measures revealed a moderately strong relationship to aggressiveness in boys with the aggressive group having less fantasy of all types including aggressive fantasy, than the non-aggressive group. Aggressive boys tended to have less Rorschach fantasy using a Holtzman Scaling procedure of responses for degree of movement (M), ($r = -.407$). The aggressive group was lower in a TAT measure of average number of stories with empathic or guilt content than the non-aggressive group ($r = -.374$). Aggressive children also tended to have a smaller average number of TAT stories with aggressive content (fantasy) than non-aggressive children ($r = -.302$). The TAT Transcendence Index also revealed the aggressive group as more likely to be low in fantasy than the non-aggressive group ($r = -.295$). Number of Rorschach responses had only a very slight relationship to aggression in the groups, although it was in the direction of the other measures.

There was a smaller number of Rorschach responses in the aggressive group than in the non-aggressive group ($r = -.186$).

Frustration-stress. This group of variables revealed predominantly only slight relationships to aggressiveness in the children. The one experiential, subjective measure of frustration--feelings of deprivation--indicated that the aggressive children expressed feelings of deprivation and envy more than non-aggressive children ($r = .371$). Socio-economic-status (SES), using a Hollingshead type index (with the highest class given an index of 1, the lowest an index of 7) with occupation weighted twice as heavily as education, indicated aggressive subjects as tending to have lower SES backgrounds ($r = .326$). Using the Hollingshead scale for occupation alone revealed a similar relationship to aggressiveness; heads of household tended to have better jobs for non-aggressive subjects than for aggressive subjects ($r = .321$). Other frustration variables had only minimal relationships to the main groups. Aggressive subjects tended to move or be moved about more often than non-aggressive subjects ($r = .261$). Aggressive children tended to have mothers with problems ($r = .257$), particularly absences from the child and emotional disturbances. (See Appendix B, page 81 for frequencies of various problems in parents of aggressive group.) The aggressive group also had more problem fathers than the non-aggressive group ($r = .203$), with absence or abandonment often accompanied by alcoholism, etc. as the primary problems. (See Appendix B, page 81.) Heads of household of aggressive subjects tended to have had less schooling and therefore, a low SES-education using Hollingshead Index

($\underline{r} = .241$). The intactness or non-intactness of the marriage (marital status) was not related to aggression in the subjects ($\underline{r} = -.060$). Also, whether mothers worked or did not was not related to the child's aggressiveness ($\underline{r} = .032$).

Additional Findings

Some of the additional variables were found to be related to the main groups to a considerable extent, while most had only moderate or negligible relationships.

Aggressive boys tended to be described as hyperkinetic or restless ($\underline{r} = .482$). The referral source for aggressive children tended to be more like an outside agency, particularly the school, rather than the family ($\underline{r} = .327$). Aggressive boys were more likely to demonstrate antisocial behaviors other than aggression, such as lying and stealing, than non-aggressive boys ($\underline{r} = .316$). Ethnic identification also had a modest degree of relationship to aggressiveness. Whites tended to be less aggressive than non-whites in the present clinic sample ($\underline{r} = -.392$).

One measure of achievement, out of several, indicated a moderate degree of relationship between aggression and lack of achievement--that is, the Stanford Achievement Test, paragraph meaning ($\underline{r} = -.302$). Other variables had only meager degrees of relationship to the main groups: parental pressure on the child to do well in school; achievement in school (Stanford Achievement-word meaning, school achievement as reported in case history statements); I.Q. (WISC-Full Scale, Verbal Scale, and Performance Scale); physical abnormalities among boys; age of fathers; and perceptual-motor disturbances. The age of the child was negligibly related to aggressivity ($\underline{r} = -.149$).

Agreement Between Aggressiveness in Boys and Their Parents

The relationships regarding main and subgroups revealed marked trends. The overall finding was that a boy's aggressiveness or non-aggressiveness was often the same as the aggression or non-aggression of his parents. (See Table 6.) Among the 35 Non-Aggressive (NA) boys, 31 had NA fathers, 27 had NA mothers, 24 had both parents NA, and 34 had at least one parent NA. All but one NA boy had either a NA father or a NA mother. In the 35 A boys, 25 had A fathers, 24 had A mothers, 16 had both parents A, and 33 had at least one parent who was A. Therefore, most A boys had either A fathers or A mothers. Among the A subgroups, the 4 Aggressive-provoked (Ap) had no discernible pattern of similarity to their parents. The 15 Aggressive-unprovoked (Aup) boys had 11 Aup fathers and 3 Aup mothers, while the 16 Aggressive-outburst (Ao) boys had 6 Ao fathers and 10 Ao mothers. Thus, the fathers appeared to serve as the primary models for the Aup boys, while the mothers, to a lesser degree, tended to serve as the major modeling figures for the Ao boys. (See Table 6 for frequency counts of similarity between boys' and parents' aggressive behavior.)

Trends in Girls' Data

A correlation matrix was calculated for the 9 NA and 6 A girls. (See Table 7.) Due to the small number of cases, however, these results must be viewed with considerable caution and restraint. A list of correlations of the dependent variables to the two main groups of girls, NA and A, is presented. (See Table 8.)

Table 6

Similarity Between Parents and Sons in Relation
to Type of Aggressive Behavior for NA (N=35) and
A (N=35) Main Groups and A Subgroups

Group	Parental NA & A Grps Relative to Ss' NA & A Grps			
	Father and son similar	Mother and son similar	Both Parnts & son simil.	At least 1 prnt & son sim.
S Main Grps				
NA	31	27	24	34
A	25	24	16	33
S A Subgrps				
A unprov.	11	3	2	12
A prov.	1	1	1	1
A outbur.	6	10	1	15

Table 7
Matrix of Intercorrelations for Girls

POSITION	1	2	3	4	5	6	7	8
LABEL	L1	L2	L3	L4	L5	L6	L7	L8
1	1.000	0.060	-0.722	0.431	0.577	0.272	0.355	0.249
2	0.060	1.000	-0.161	-0.178	-0.417	-0.393	0.014	0.143
3	-0.722	-0.161	1.000	-0.123	-0.289	0.068	-0.609	-0.470
4	0.431	-0.178	-0.123	1.000	0.213	0.075	0.286	0.374
5	0.577	-0.417	-0.289	0.213	1.000	0.354	0.154	-0.076
6	0.272	-0.393	0.068	0.075	0.354	1.000	-0.327	-0.341
7	0.355	0.014	-0.609	0.286	0.154	-0.327	1.000	0.879
8	0.249	0.143	-0.470	0.374	-0.076	-0.341	0.879	1.000
9	0.667	0.040	-0.389	0.185	0.577	0.068	0.279	0.117
10	0.577	-0.209	-0.577	0.107	0.500	0.0	0.506	0.381
11	0.427	-0.565	-0.025	0.546	0.590	0.507	-0.115	-0.267
12	0.120	-0.204	-0.145	-0.288	0.292	0.559	-0.301	-0.607
13	0.203	-0.820	-0.287	0.572	0.372	0.254	0.372	0.251
14	-0.319	-0.646	0.219	0.102	0.057	0.326	-0.008	-0.200
15	0.096	-0.476	0.055	0.558	0.170	0.474	0.328	0.281
16	0.167	-0.241	-0.167	-0.185	0.209	0.272	0.102	-0.117
17	0.401	0.266	-0.485	0.173	0.290	-0.471	0.690	0.645
18	0.627	0.191	-0.823	0.318	0.068	-0.096	0.561	0.585
19	0.559	0.290	-0.699	0.258	0.266	-0.428	0.778	0.748
20	-0.289	-0.104	0.289	-0.533	-0.100	0.354	-0.418	-0.381
21	0.055	0.020	-0.055	-0.262	-0.094	0.200	-0.382	-0.231
22	0.068	0.025	0.272	0.302	0.354	-0.167	-0.062	0.072
23	-0.272	-0.221	0.272	-0.075	0.0	0.250	-0.451	-0.467
24	0.320	-0.029	-0.320	-0.207	0.277	-0.294	0.317	0.338
25	0.408	0.025	-0.408	0.302	0.0	-0.167	0.093	0.252
26	0.234	0.248	-0.450	0.427	-0.121	-0.438	0.611	0.564
27	0.169	-0.176	-0.169	0.293	0.314	-0.098	0.405	0.299
28	-1.000	-0.060	0.722	-0.431	-0.577	-0.272	-0.355	-0.249
29	0.327	0.020	-0.055	0.040	0.472	0.200	0.116	0.130
30	0.444	-0.441	-0.167	0.123	0.577	0.612	-0.025	-0.338
31	-0.195	-0.387	0.343	0.134	0.041	0.053	-0.356	-0.306
32	-0.240	-0.244	0.445	0.091	-0.089	0.344	-0.414	-0.403
33	-0.138	-0.550	0.238	0.202	0.207	0.245	-0.217	-0.209
34	0.0	0.0	-0.289	-0.107	0.100	0.0	0.088	0.152
35	-0.294	-0.032	0.441	0.046	-0.047	0.008	-0.424	-0.195
36	-0.012	0.112	0.454	0.064	0.024	0.157	-0.614	-0.370
37	0.272	0.344	-0.272	-0.302	0.0	0.167	-0.249	-0.252
38	0.480	-0.549	-0.080	0.650	0.555	0.294	0.140	0.085
39	-0.491	0.217	0.218	-0.564	-0.661	-0.134	-0.195	-0.086

AGGRESSION STUDY, GIRLS

CORRELATIONS OF A

Table 7 (continued)

PAGE 2

FILE B

POSITION

LABEL

16

15

14

13

12

11

10

9

	L9	L10	L11	L12	L13	L14	L15	L16
1	0.667	0.577	0.427	0.120	0.203	-0.319	0.096	0.167
2	0.040	-0.209	-0.565	-0.204	-0.820	-0.646	-0.476	-0.241
3	-0.389	-0.577	-0.025	-0.145	-0.287	0.219	0.055	-0.167
4	0.185	0.107	0.546	-0.288	0.572	0.102	0.558	-0.185
5	0.577	0.500	0.590	0.292	0.372	0.057	0.170	0.289
6	0.068	0.0	0.507	0.559	0.254	0.326	0.474	0.272
7	0.279	0.506	-0.115	-0.301	0.372	-0.008	0.328	0.102
8	0.117	0.381	-0.267	-0.607	0.251	-0.200	0.281	-0.117
9	1.000	0.577	0.302	0.134	0.129	-0.368	0.142	0.111
10	0.577	1.000	0.130	0.055	0.428	-0.214	0.199	0.289
11	0.302	0.130	1.000	0.464	0.620	0.535	0.432	-0.126
12	0.134	0.055	0.464	1.000	0.203	0.463	0.239	0.221
13	0.129	0.428	0.620	0.203	1.000	0.641	0.662	0.102
14	-0.368	-0.214	0.535	0.463	0.641	1.000	0.559	0.319
15	0.142	0.199	0.432	0.239	0.662	0.559	1.000	0.130
16	0.111	0.289	-0.126	0.221	0.102	0.319	0.130	1.000
17	0.268	0.319	-0.112	-0.462	-0.147	-0.436	-0.323	-0.184
18	0.353	0.543	-0.043	-0.041	0.336	-0.249	0.268	0.039
19	0.350	0.460	-0.109	-0.397	-0.007	-0.448	-0.178	-0.140
20	0.0	-0.200	-0.179	0.142	-0.160	0.122	-0.222	0.289
21	0.218	0.094	-0.025	0.032	0.087	-0.118	-0.130	0.055
22	0.272	0.0	0.208	-0.354	-0.137	-0.438	-0.054	-0.612
23	-0.068	-0.354	0.326	0.297	0.257	0.482	-0.106	0.068
24	0.480	0.555	-0.144	-0.566	-0.028	-0.631	-0.462	-0.080
25	0.272	0.354	0.092	-0.193	0.175	-0.423	-0.203	-0.272
26	-0.123	-0.012	0.099	-0.155	0.139	0.138	0.007	-0.205
27	0.239	0.098	0.165	-0.093	0.133	-0.254	-0.064	-0.507
28	-0.667	-0.577	-0.427	-0.120	-0.203	0.319	-0.096	-0.157
29	0.764	0.378	-0.025	-0.044	-0.066	-0.483	0.281	0.055
30	0.389	0.289	0.661	0.651	0.418	0.419	0.281	0.444
31	0.218	-0.015	0.590	0.176	0.523	0.470	0.285	-0.263
32	-0.068	-0.170	0.571	0.411	0.357	0.637	0.411	-0.130
33	0.071	0.202	0.622	0.288	0.648	0.663	0.420	0.013
34	0.0	0.200	0.233	0.164	0.407	0.219	0.055	-0.289
35	-0.139	-0.183	0.321	-0.100	0.161	0.210	0.091	-0.462
36	0.220	0.034	0.285	-0.053	-0.075	-0.064	0.006	-0.253
37	0.408	0.354	-0.014	0.413	-0.216	-0.346	-0.283	-0.068
38	0.320	0.277	0.842	-0.008	0.667	0.423	0.397	0.080
39	-0.600	-0.189	-0.427	-0.044	-0.355	0.182	-0.356	0.055

AGGRESSION STUDY, GIRLS

CORRELATIONS OF A

Table 7 (Continued)

POSITION	17	18	19	20	21	22	23	24
LABEL	L17	L18	L19	L20	L21	L22	L23	L24
1	0.401	0.627	0.559	-0.289	0.055	0.068	-0.212	0.320
2	0.266	0.191	0.290	-0.104	0.020	0.025	-0.221	-0.029
3	-0.485	-0.289	-0.699	0.289	-0.055	0.272	-0.320	-0.320
4	0.173	0.318	0.258	-0.533	-0.262	0.302	-0.075	-0.207
5	0.290	0.068	0.266	-0.100	-0.094	0.354	0.0	0.277
6	-0.471	-0.096	-0.428	0.354	0.200	-0.167	0.250	-0.294
7	0.690	0.561	0.778	-0.418	-0.382	-0.062	-0.451	0.317
8	0.645	0.585	0.748	-0.381	-0.231	0.072	-0.467	0.338
9	0.268	0.353	0.350	0.0	0.218	0.272	-0.068	0.480
10	0.319	0.543	0.460	-0.200	0.094	0.0	-0.354	0.555
11	-0.112	-0.043	-0.109	-0.179	-0.025	0.208	0.326	-0.144
12	-0.462	-0.041	-0.397	-0.142	0.032	-0.354	0.297	-0.566
13	-0.147	0.336	-0.007	-0.160	0.087	-0.137	0.257	-0.028
14	-0.436	-0.249	-0.448	0.122	-0.118	-0.438	0.482	-0.631
15	-0.323	0.268	-0.178	-0.222	-0.130	-0.054	-0.106	-0.462
16	-0.184	0.039	-0.140	0.289	0.055	-0.612	0.068	-0.080
17	1.000	0.291	0.940	-0.463	-0.471	0.369	-0.451	0.490
18	0.291	1.000	0.600	-0.475	0.109	-0.144	-0.504	0.217
19	0.940	0.600	1.000	-0.557	-0.355	-0.257	-0.557	0.487
20	-0.463	-0.475	-0.557	1.000	0.661	-0.354	0.707	0.139
21	-0.471	0.109	-0.355	0.661	1.000	-0.200	0.468	0.367
22	0.369	-0.144	0.257	-0.354	-0.200	1.000	-0.250	0.294
23	-0.451	-0.504	-0.557	0.707	0.468	-0.250	1.000	0.294
24	0.490	0.217	0.487	0.139	0.367	0.294	-0.196	1.000
25	0.266	0.576	0.428	-0.354	0.134	0.167	-0.250	0.294
26	0.632	0.400	0.658	-0.745	-0.721	-0.053	-0.383	-0.168
27	0.589	-0.073	0.458	-0.293	-0.507	0.488	-0.076	-0.255
28	-0.401	-0.627	-0.559	0.289	-0.055	-0.068	0.272	-0.320
29	0.104	0.205	0.160	0.094	0.196	0.468	-0.200	0.367
30	-0.184	-0.157	-0.210	0.289	0.055	-0.272	0.408	-0.080
31	-0.446	-0.178	-0.436	0.297	0.548	-0.163	0.619	-0.142
32	-0.617	-0.343	-0.639	0.368	0.363	-0.123	0.665	-0.370
33	-0.415	-0.135	-0.394	0.231	0.375	-0.029	0.598	-0.277
34	0.029	0.170	0.085	0.200	0.472	0.0	0.354	0.277
35	-0.305	-0.276	-0.354	0.281	0.568	0.336	0.475	0.192
36	-0.393	-0.216	-0.402	0.331	0.680	0.331	0.356	0.239
37	-0.164	0.144	-0.086	0.354	0.535	-0.167	0.250	0.196
38	0.112	0.066	0.118	-0.139	0.026	0.196	0.154	0.154
39	-0.224	-0.276	-0.286	0.378	0.196	-0.535	0.134	-0.026

AGGRESSION STUDY, GIRLS

CORRELATIONS OF A

POSITION

LABEL

25	26	27	28	29	30	31	32
L25	L26	L27	L28	L29	L30	L31	L32
L1	0.408	0.234	-1.000	0.327	0.444	-0.195	-0.240
L2	0.025	0.248	-0.060	0.020	-0.441	-0.387	-0.244
L3	-0.408	-0.450	-0.169	-0.055	-0.167	0.343	0.445
L4	0.302	0.427	0.293	0.040	0.123	0.134	0.091
L5	0.0	-0.121	0.314	0.472	0.577	0.041	-0.089
L6	-0.167	-0.438	-0.098	0.200	0.612	0.053	0.344
L7	0.093	0.611	0.405	0.116	-0.025	-0.356	-0.414
L8	0.252	0.564	0.299	0.130	-0.338	-0.306	-0.403
L9	0.272	-0.123	0.239	0.764	0.389	0.218	-0.068
L10	0.354	-0.012	0.098	0.378	0.289	-0.015	-0.170
L11	0.092	0.099	0.165	-0.025	0.661	0.590	0.571
L12	-0.193	-0.155	-0.093	-0.044	0.651	0.176	0.411
L13	0.175	0.139	0.133	-0.066	0.418	0.523	0.357
L14	-0.423	0.138	-0.254	-0.483	0.419	0.470	0.637
L15	-0.203	0.007	-0.064	0.281	0.281	0.285	0.411
L16	-0.272	-0.205	-0.507	0.055	0.444	-0.263	-0.130
L17	0.266	0.632	0.589	0.104	-0.184	-0.446	-0.617
L18	-0.576	0.400	-0.073	0.205	-0.157	-0.178	-0.343
L19	0.428	0.658	0.458	0.160	-0.210	-0.436	-0.639
L20	-0.354	-0.745	-0.293	0.094	0.289	0.297	0.368
L21	0.134	-0.721	-0.507	0.196	0.055	0.548	0.363
L22	0.167	-0.053	0.488	0.468	-0.272	0.163	-0.123
L23	-0.250	-0.383	-0.076	-0.200	0.408	0.619	0.665
L24	0.294	-0.168	0.255	0.367	-0.080	0.142	-0.370
L25	1.000	0.310	0.098	0.134	-0.072	0.136	-0.265
L26	0.310	1.000	0.267	-0.430	-0.232	-0.285	-0.237
L27	0.098	0.267	1.000	0.169	0.169	-0.229	-0.325
L28	-0.408	-0.234	-0.169	1.000	-0.444	0.195	0.240
L29	0.134	-0.430	0.169	-0.327	0.055	0.070	-0.226
L30	-0.272	-0.232	0.169	-0.444	1.000	0.112	0.377
L31	0.136	-0.285	-0.229	0.195	0.112	1.000	0.842
L32	-0.265	-0.237	-0.325	0.240	0.377	0.842	1.000
L33	0.087	-0.173	-0.275	-0.063	0.288	0.943	0.803
L34	0.0	-0.112	-0.029	-0.094	0.0	0.449	0.439
L35	-0.183	-0.401	-0.291	-0.091	-0.140	0.777	0.695
L36	0.034	-0.560	-0.464	0.012	0.003	0.729	0.648
L37	0.250	-0.401	-0.098	0.200	0.272	0.174	0.249
L38	0.196	0.168	0.076	-0.480	0.480	0.481	0.401
L39	-0.200	-0.055	-0.507	-0.607	-0.218	-0.025	0.308

Table 7 (continued)

PAGE 4

FILE B

AGGRESSION STUDY, GIRLS

CORRELATIONS OF A

Table 7 (continued)

PAGE 5

FILE 8

POSITION	33	34	35	36	37	38	39
LABEL	L33	L34	L35	L36	L37	L38	L39
1	-0.138	0.0	-0.294	-0.012	0.272	0.480	-0.491
2	-0.550	0.0	-0.032	0.112	0.344	-0.549	0.217
3	0.238	-0.289	0.441	0.454	-0.272	-0.080	0.218
4	0.202	-0.107	0.046	0.064	-0.302	0.650	-0.564
5	0.207	0.100	-0.047	0.024	0.0	0.555	-0.661
6	0.265	0.0	0.008	0.157	0.167	0.294	-0.134
7	-0.217	0.088	-0.424	-0.614	-0.249	0.140	-0.195
8	-0.209	0.152	-0.195	-0.370	-0.252	0.085	-0.086
9	0.071	0.0	-0.139	0.220	0.408	0.320	-0.600
10	0.202	0.200	-0.183	0.034	0.354	0.277	-0.189
11	0.622	0.233	0.321	0.285	0.014	0.842	-0.427
12	0.288	0.164	-0.100	-0.053	0.413	-0.008	-0.044
13	0.648	0.407	0.161	-0.075	-0.216	0.667	-0.355
14	0.663	0.219	0.210	-0.064	-0.346	0.423	0.182
15	0.420	0.055	0.091	0.006	-0.283	0.397	-0.356
16	0.013	-0.289	-0.462	-0.253	-0.068	0.080	0.055
17	-0.415	0.029	-0.305	-0.393	-0.164	0.112	-0.224
18	-0.135	0.170	-0.276	-0.216	0.144	0.066	-0.276
19	-0.394	0.085	-0.354	-0.402	-0.086	0.118	-0.286
20	0.231	0.200	0.281	0.331	0.354	-0.139	0.378
21	0.375	0.472	0.568	0.680	0.535	0.026	0.196
22	-0.029	0.0	0.336	0.331	-0.167	0.196	-0.535
23	0.598	0.354	0.475	0.356	0.250	0.196	0.134
24	-0.060	0.277	0.192	0.239	0.196	0.154	-0.026
25	0.087	0.0	-0.183	0.034	0.250	0.196	-0.200
26	-0.173	-0.112	-0.401	-0.560	-0.401	0.168	-0.055
27	-0.275	-0.029	-0.291	-0.464	-0.098	0.076	-0.507
28	0.138	0.0	0.294	0.012	-0.272	-0.480	-0.491
29	-0.063	-0.094	-0.091	0.209	0.200	0.026	-0.607
30	0.288	0.0	-0.140	0.003	0.272	0.480	-0.218
31	0.943	0.449	0.777	0.729	0.174	0.481	-0.025
32	0.803	0.439	0.695	0.648	0.249	0.401	0.308
33	1.000	0.537	0.621	0.549	0.130	0.609	0.075
34	0.537	1.000	0.753	0.389	0.354	0.139	0.189
35	0.621	0.753	1.000	0.818	0.134	0.302	0.237
36	0.549	0.389	0.818	1.000	0.480	0.309	0.159
37	0.130	0.354	0.134	0.480	1.000	-0.196	0.200
38	0.609	0.139	0.302	0.309	-0.196	1.000	-0.367
39	0.075	0.189	0.237	0.159	0.200	-0.367	1.000

Table 8

Correlations of Variables with Aggressive Behavior
(A and NA Main Groups) in Descending Order for Girls

<u>Variable #</u>	<u>Variable Name</u>	<u>r</u>
L28	Parnts press for achiev.	-1.000
L 3	Ethnic	-.722
L 9	Sibling agg.	.677
L18	SES education	.627
L 5	Father's agg.	.577
L10	Peer contact	.577
L19	SES combined	.559
L39	Both parents NA	-.491
L38	Both parents A	.480
L30	Physical abnorm.	.444
L 4	Mother's agg.	.431
L11	Rorsch-# R	.427
L25	Referral source	.408
L17	SES occupation	.401
L 7	# of siblings	.355
L29	Hyperkinetic	.327
L24	Feelings of depriv.	.320
L14	TAT-# empathy	-.319
L35	Stanf. Ach.-word	-.294
L20	Problem mother	-.289
L 6	Conflict btn parents	.272
L23	Problem father	-.272
L37	Antisocial behavior	.272

Table 8 (Continued)

<u>Variable #</u>	<u>Variable Name</u>	<u>r</u>
L 8	# of like-sexed sib.	.249
L32	WISC verbal	-.240
L26	Age of father	.234
L13	TAT-transcendence	.203
L31	WISC full scale	-.195
L27	Percept. motor disturb.	.169
L16	Geographic mobil.	.167
L33	WISC performance	-.138
L12	Rorsch-Holtzman M	.120
L15	TAT-# hostile	.096
L22	Marital status	.068
L 2	Age	.060
L21	Mother working	.055
L36	Stanf. Ach.-parag.	-.012
L34	School achiev.	.000

Adult modeling. There were some strong relationships between aggressiveness in subjects and aggressiveness in their parents. Fathers' aggression was most strongly related to daughters' aggression ($r = .577$). When both parents were NA, the child tended to be NA ($r = -.491$); when both parents were A, the girl tended to be A ($r = .480$). When mother alone was aggressive, the girl tended to be aggressive ($r = .431$); the relationship was less strong than with father aggressiveness. Conflict between parents was much less potently related to aggressiveness in the girls ($r = .272$).

Peer modeling. Aggression among siblings in the home was most strongly related to aggressiveness in girls ($r = .677$). Peer contact was as importantly related to girls aggressiveness as father aggressiveness ($r = .577$). Number of siblings was moderately related to aggressiveness in girls ($r = .355$). Number of like-sexed siblings was minimally related to girls aggression ($r = .249$).

Fantasy. Fantasy variables were less strongly related to aggression in girls than modeling variables. With only a moderate degree of relationship, the number of Rorschach responses was related to aggressiveness in girls ($r = .427$); more fantasy meant a tendency toward aggressiveness. TAT empathy scores were slightly related to aggressiveness; there tended to be less empathic fantasy in aggressive girls. Other fantasy scores were negligibly related to aggression.

Frustration-stress. Frustration-stress variables were only moderately related to aggressiveness in girls with the exception of SES which had a strong degree of relationship. SES (combined

Hollingshead Index) indicated that heads of households were lower in education and had poorer jobs for A rather than NA girls ($r = .559$). Education contributed more to this correlation ($r = .627$); occupation was less related to aggression ($r = .401$). Feelings of deprivation did have a small relationship to aggression in girls ($r = .320$). Other frustration variables were hardly related to aggressiveness. (See Table 8.)

Additional findings. Children whose parents had little or no concern about school achievement were unanimously aggressive ($r = -1.000$). Most of the aggressive girls were non-white ($r = -.722$). Physical abnormalities variable was moderately related to aggressiveness in girls ($r = .444$). Aggressive girls tended somewhat to be referred by the school or other outside agency ($r = .408$). There was a slight relationship between aggression and feelings of deprivation and envy ($r = .320$). The remainder of the "additional" variables correlated meagerly with aggression in the girls. (See Table 8.)

Discussion

Theoretical Implications

The major function of this study was to explore three theoretical positions, frustration-aggression, modeling, and imaginal capacities, and their relationship to aggressive behavior in children treated at a psychiatric clinic. The results pointed strongly to a multiple-theoretical approach to understanding the development of physically aggressive modes of behavior in children. These three theoretical views represented both external factors and internal factors which contributed to aggressive patterns of functioning in the clinic population studied.

Modeling Theory

Imitation or modeling was found to be the primary source of aggressive learning in the child, consistent with the theoretical position of Bandura and Walters (1963). Mothers and fathers who were physically aggressive tended to have children who behaved in kind. Fathers were especially important where aggressive behavior in sons was concerned. The delinquency literature consistently points to the punitive parental behaviors which predominate in the families of delinquents (Rosenquist and Megargee, 1969; Klein, 1969). Parents who were not physically aggressive had an excellent chance of not producing violent offspring. Even the type of aggression used by the parents was imitated by the children. Fighting among family members, especially among siblings, had enormous influence on its members often despite verbal communications which discouraged such behaviors. The size and composition

of the family made little contribution to modeling effects which took place. Parents, the most potent external factor in a child's human environment, according to the present study, seemed quite unaware of the profound and massive effects of their actions in relation to the actions of their children at home and outside the home--in the streets, and schools.

Peer contact outside the home was another highly influential element in the development of aggressive patterns. Underlying the peer contact, it was expected that peer-orientations were often anti-adult, and therefore, often aggressive. Hartup (1970) has a fine review of studies on peer orientation and its relationship to adult values and attitudes. One would suspect that older children, teenagers, would be even more destructively influenced by aggressive peer group behaviors than the younger children explored in the present study. Despite their ages, however, the boys and girls in the present study were heavily influenced by group processes occurring with friends as well as with families.

Fantasy Theory

Another significant contributing factor to child aggressiveness, but less important than modeling, was not an external one. It was the degree to which the child could demonstrate the internalized capacity to imagine or fantasize. The child who was better able to fantasize, even aggressive fantasies, was less likely to behave in an aggressively destructive manner; this is consistent with previous findings (Biblow, 1970). It appeared that the child who was not overwhelmed with stresses in the home, and who did not have parents and siblings who

clashed with him or with each other, was better able to develop a capacity to imagine effectively. With this imaginal ability seemed to come an ability to control aggressive behaviors at inappropriate times and places, and toward inappropriate targets. It should be pointed out in this regard that among the subgroups of aggression, the Aggressive-provoked group was more like the Non-Aggressive group for all variables, including fantasy. It seemed valid to surmise that provoked aggression was not considered by most people in this society as inappropriate, and would, therefore, certainly not be considered problematical enough in itself to warrant clinic referral by parents or social agencies, such as the school. The reasons for referral of Aggressive-provoked children could be a source of further research and exploration. The child who was able to fantasize better was not likely, in the clinic population, to present physical aggression in an unprovoked or explosive manner toward others as a part of his behavioral profile or symptomology.

Frustration Theory

The social and intra-familial environments also contributed to the development of aggressive modes of behavior by the stresses and frustrations it engendered in the children, but to a far less extent than either modeling or fantasy. The child coming from poverty-stricken, unstable, problem-ridden households, was more likely to be physically aggressive than the child from less stressful environments, consistent with Klein's findings (1969). Frustrating life circumstances appeared to interact with aggressive familial and peer models

to foster the destructively aggressive stance observed in the clinic children studied in this paper.

The Modal Aggressive Boy

One can develop a portrait of the typical, clinic-referred, aggressive child. The aggressive child is likely to have fathers and mothers who frequently hit other people including their children and sometimes each other, and brothers and sisters who fight amongst themselves. He is also likely to spend a good deal of time outside his home during middle childhood and preadolescence, and is presumably likely to have viewed fighting or participated in fighting with peers during this time. He is also likely to be deficient in imaginal capacities, thereby limiting his ability to delay his impulses, and blunting his ability to produce cognitive alternatives to his immediate aggressive feeling and typical aggressive response pattern, as also found by Singer (1971) and Biblow (1970). He is likely to feel frustrated and deprived of the things he perceives his siblings and peers to have. At least some of this frustration and stress is founded in reality as he is likely to have parents who are poor and low in social status, and fathers with physically-oriented jobs. He may sometimes have parents who are unstable and problem-laden (for example, fathers in and out of the home, or both parents sexually disloyal to their spouse), and have shifts in the place called home due to either family moves or the child's being shunted about.

Aggressive children also tend to be brought to the psychiatric clinic by referrals from agencies rather than the family. They tend, at least in a multi-ethnic clinic, to be

non-white. Their problems are more often expressed in socially disruptive ways, and from an exploration of the case histories it appeared that their parents were often indifferent, and sometimes even hostile, to having their child receive help. The aggressive child is often more restless, jumpy, and motorically demonstrative than the non-aggressive child. It seems plausible to hypothesize that this hyperactivity increases the probability of physical confrontations with other children. Like his non-aggressive counterpart, he is of average intelligence. He tends to do worse on some achievement tests, but does not do worse according to statements from the case histories (often statements from the school). Finally, the aggressive child also is somewhat more likely to be involved in antisocial behavior other than aggressive ones, such as stealing and lying, consistent with the findings of Roff (1971).

Aggressive Girls in Relation to Aggressive Boys

The typical aggressive girl in the present study must be viewed as only a very unrefined portrait because of the tiny size of the sample and its ethnic imbalance. The aggressive girl in this very limited sample was predominantly black. All the results and conclusions regarding girls need far more extensive research than the exploratory work done in this study.

The familial and peer modeling variables coincided in importance for girls and boys. The powerful effects of these variables point to similar treatment implications for girls as for boys. Frustration variables for girls also paralleled the boys; they were far less influential, except for SES, than

modeling variables.

Fantasy variables appeared to be less important for girls than boys. There was some indication of important differences in the relationship of fantasy to aggression; it may be that more fantasy is associated with more aggression in girls. Fantasy variables in girls need further investigation as they have important theoretical implications.

Parental lack of concern for girls' school achievement appeared far more important for girls than in boys of middle-age and preadolescence. This result for girls only reinforces some of the treatment implications discussed in the next section. There was also a greater relationship between physical abnormalities and aggression in girls than in boys. Further research might elucidate what the meaning of visible physical differences mean to boys and girls, and indeed, the meaning and extent of differences in self and other reactions to such physical abnormalities.

Treatment Implications

The pervasive conditions which help produce socially and personally destructive aggressive modes of behavior in the child necessitate equally pervasive and massive interventions in order to deal with them. Individual psychotherapy for a child struggling with problems in aggressivity may not be sufficient to alter the behavior. Much of the aggressivity is founded on familial patterns of aggressivity and stress. To disregard the home and treat only the child is to set up a constant competition of new patterns of behavior learned in individual psychotherapy with the old patterns which the child

continues to find fostered in the home. The influences of the family and peer environments are long-standing, and are continually reinforced as long as intervention is made only at the individual level. It should be noted that Robins' study, Deviant Children Grown Up (1966), pointed to the failure of individual psychotherapy with aggressive children who were later observed in adulthood.

McCord and McCord in Psychopathy and Delinquency (1964) reviewed a number of treatment approaches attempted with delinquent children. Some of these approaches, such as individual psychotherapy and milieu therapy, may be applicable with the aggressive clinic referrals presented in this study. These two approaches include aspects of treatment which deal with modeling, fantasy, and frustration primarily derived from psychoanalytic theory. The emphasis of all the approaches reviewed, however, was to focus on the child, and to pay little regard to the family. The milieu approach does attempt to create a "healthier" environment, and therefore, does deal with peer modeling indirectly, but disregards the actual family in the treatment process.

The desirability of a family therapy to deal with modeling influences of parents and siblings on the destructive aggressive behavior of the aggressive child, feelings of deprivation in the aggressive child, and frustrations and stresses, becomes evident. Certainly, the importance of the family in creating and maintaining destructive aggressive patterns of functioning point to the family as the focal point for therapeutic intervention. Although social conditions creating poverty may not

be effectively changed, the more potent variables of parental and sibling aggression can be dealt with. Sensitivity to the powerful effects of familial aggressive behavior, alternatives to such behaviors, and practice of the new behaviors are all possible in a family therapy setting.

The necessity for a family intervention does not negate the utility of individual psychotherapy with children. In the area of destructive, disruptive aggression, fantasy skills are often lacking. In working with the individual child, a therapist can have significant impact in fostering, encouraging, and reinforcing the use of imagination and fantasy. Increasing the amount of fantasy in a child decreases the tendency to behave in a physically aggressive manner. One researcher has successfully developed and used a series of imaginative play techniques, including role-playing, voice simulation, and the imaginative use of play equipment to improve the fantasy skills of a group of five year olds (Freyberg, 1970). These techniques have been adapted for use with older children, though perhaps far less consciously and systematically than in the previously mentioned study. Individual therapy can also be helpful in exploring and dealing with the aggressive child's acute sense of deprivation and envy. To the extent that deprivations are actually occurring in the family or peer group, however, the individual therapy will be hampered in its effectiveness, and peer-group and family interventions might be more useful.

There are other possibilities for psychologists and mental health workers to have impact on the aggressive youngster. Parents, teachers, and other significant adults can be sensitized

to the importance of imitation in the development of aggressive patterns of behavior through the use of group sessions. Parents of aggressive children, and especially fathers, many of whom will be aggressive, might be engaged, if rewarded sufficiently, in a direct group learning program in which they are sensitized to the effects of modeling, taught alternative modes of behaving, and reinforced for their newly acquired non-aggressive behaviors. Groups of the parents of aggressive youngsters could also be formed which are primarily directed toward the sharing of their experiences with the therapist informing the group of the importance of modeling, fantasy, and frustration-stress on the development and maintenance of aggressive behavior in their children. School personnel, especially those working with difficult, disruptively aggressive youngsters, could also be involved in training groups on the causes of aggression in children. Aggressive school children might also be encouraged and induced into getting involved in sensitization and/or training groups on the influence of aggressive peer models (as well as familial models) in contributing to the acquisition of destructive aggressive patterns.

No specific types of therapeutic techniques (for example, role-playing) are recommended in working with individuals, families, or groups, as there may be many different means for accomplishing effective group interventions to alter destructive aggressive behaviors. One can look to publications, such as the Handbook of Psychotherapy and Behavior Change (1971), to find numerous possible avenues to making meaningful and

competent interventions in the multi-determined problem of the aggressive youngster.

Research Implications

Life-History Research

Life-history research is a tool for adding information and understanding to human psychology (Roff and Ricks, 1970). It is effective in exploring unknown areas, and as primarily utilized in the present study, in confirming or disconfirming previously done research--particularly research done in the experimental laboratory. It has the great advantage of offering researchers complex, rich, and genuine material to work with. It complements and mutually nurtures the more refined, specific and less real-life research coming from experimental designs which carefully manipulate and control variables.

It is often the laboratory experiment or series of experiments which confirms data stemming from less refined sources. However, in the present study, life-history research was used to assess the relative importance of previous results which stemmed from a variety of studies examining aggression from a number of theoretical orientations. Using the vibrant material of case histories, enough information was available to study simultaneously previous results and theoretical assumptions from multiple sources, and then integrate these past results in a manner not often possible in other research designs and techniques.

Life-history research lends itself especially well to the study of basic human processes and behaviors, such as

aggression, where a massive body of data has been collected, and a large number of theoretical positions stated.

Of course, life-history research, as other methods, generates many questions which can then be studied by more refined life-history research, or by other experimental designs. And so, one method of research adds understanding and generates further research, perhaps, using other methods in the ever moving spiral of scientific exploration.

Suggestions for Further Research

There are aspects of the present research which could be expanded upon, or further investigated.

Of major importance would be the accumulation of more data on girls to do a more refined statistical analysis on the variables for them. Ethnic differences in aggressive behavior need further exploration. Larger samples might also allow further understanding of age differences. Given a large enough sample, children could, in fact, be clustered in a large variety of ways (by intelligence, nationality, etc.) to see if the patterns for Aggressive children, Non-Aggressive children, and Aggressive subgroups, are the same or different from those found in the present study.

A larger sample would also enable an experimenter to investigate thoroughly differences within aggressive subtypes. Perhaps, the subtypes should be limited to unprovoked and outburst, as provoked physical aggression appears to be consonant with non-aggression in the present study. Provoked aggression is not generally considered by observers in our society as inappropriate or destructive. Of particular

interest would be a more refined understanding of the relative prominence of fathers and mothers in their modeling influence on the unprovoked and outburst subcategories of aggression.

Some of the variables could be better understood if more directly assessed, such as peer modeling. It is suggested that further research be done to examine actual peer interactions, and the influence of aggressive peer behavior on the aggressive behavior of the child observer or participant observer.

Many of the variables measured as dichotomous (present-absent) in the present study, could perhaps, be measured as continuous variables if the appropriate measuring instruments were developed, and if the available data was more thorough and detailed than the data which was available in the present study. Degree of subject, familial, and peer aggressiveness, frequency of modeling, frequency of parental separations, are a few of the variables which were treated as dichotomous but which are actually continuous, and could be valuably treated as such.

Some of the variables might be further refined, or categorized. For example, parental separations associated with problems in the child could be distinguished from non-problematic absences. Also, the category of problem father and problem mother could be distinguished as to the effects upon the child. These refinements also depend on the intensity and detail of the case history material collected.

Appendix A

Scoring Criteria and Examples for Subject Categorization and Dependent Variables Requiring Rater Judgment, Including Inter-Rater Disagreements

Categorization of Subjects

Subjects were categorized into two main types--aggressive and non-aggressive. The aggressive type was further categorized, in exploratory fashion, into unprovoked, provoked, and outburst. A brief example from the case material of each type is given:

I. Aggressive

a. Unprovoked--"Child is restless, won't keep still, bothers other children, hits them, is constantly in fights."

b. Provoked--"He doesn't get along well with peers; often they tease him for his weight, he gets mad, and on many occasions hurts other kids."

c. Outburst--"He breaks up the house and strikes out at other children, and says I got mad and I can't help it. . . . He is described as uncontrollable by others and unable to control himself even when he tries."

II. Non-Aggressive--"Child never displayed a temper, but rather is moody, sulks, and holds things in."

Scoring of Variables

In almost all cases, descriptions were reported which permitted, in present-absent variables, classification into one of the categories within the variable. When no mention was made of a particular characteristic or situation, the

variable was considered absent.

IA. Adult Modeling

#1, 2 - The presence or absence of punitiveness in mother and father toward subject and/or siblings was scored for each case. The aggressiveness was further subtyped into Aggressive-unprovoked, Aggressive-provoked, or Aggressive-outburst.

Examples: a) Mother-Aup--"Mother admits that when she gets very upset over little things during the day, she beats the child with a stick."

b) Mother, father-Ap--"Parents seem to be extremely strict and rigid by today's standards. Both parents whip their children with the end of a strap when they get out of line."

c) Father-Ao--"Father is described as one who could be charming and personable, then suddenly change and blow up. . . .His father used his hands a lot, did a lot of hitting."

d) Father-NA--"Father is seen as calm, rarely expressing anger or feeling anger."

#3 - The presence or absence of physically aggressive conflict between the parents was scored for each case.

Examples: a) Physical conflict--"She gave as the reason for the divorce, his beating her. As a matter of fact, because of his beating her, she was hospitalized for a week."

b) Lack of physical conflict-- "There seems to be a good relationship between the parents, and according to them, good family relations."

B. Peer Modeling

#1 - The presence or absence of aggression among siblings was scored for each case.

Examples: a) Sibling aggression-- "He seems to be very jealous of his brothers and cannot stay in the same room with them without hitting or annoying them in some way."

b) Inter-rater disagreement: In the phrase from a case history, "Children squabbled about their toys," one rater interpreted the word "squabbled" to mean non-physical interaction between the siblings, while the other rater understood "squabbled" to indicate physical aggression.

#5 - Rate the children as high or low in peer contact from the case report.

Examples: a) Low-- "Generally he keeps to himself wherever he is." "Introverted--prefers adult company and conversation to other children."

b) High-- "What he likes most is playing with his friends."

c) Inter-rater disagreement: From the statement, "Mother reports that her child often gets into fights and that according to his teacher he is not well-liked," one rater understood this as indicating high peer contact, even though the contacts were aggressive confrontations;

"often gets into fights" was the focus of attention for this rater. The other rater, focusing on "he is not well-liked", interpreted the entire statement to mean the child was isolated from the other children because of his behavior and was, therefore, low in peer contact.

II. Fantasy

- #1 - a) The Rorschach was scored using the Holtzman scaling technique for movement. The scale goes from 0 to 4; the higher number indicating more movement.
 b) The number of responses (R) in the Rorschach for the two main groups was counted and assessed.
 c) There was count made of additional segments which go beyond the immediate stimuli presented on the card for the ten TAT cards for each case (Transcendence Index).
- #2 - TAT stories which contained empathy, guilt or consequence were counted for each subject.
 Examples: a) TAT (card 17): "Then he was in trouble with the gym teacher."
 b) TAT (card 6): "A man is sad about something. Maybe his brother got hurt."
- #3 - The number of TAT stories in which there was aggressive content were counted.
 Example: TAT (card 13): "This looks like a man killed his wife and he's crying. He's gonna run away and the cops can't catch him."

III. Frustration-Stress

#1 - The presence or absence of moves or changes of address was scored for each case.

Example: "At eleven months old, he was sent down to South Carolina and was taken care of by a maternal grandmother. At about three and one-half years, he came back to New York. When he returned, he was fearful of his mother."

#3 & 6 - For both mothers and fathers, determine the presence or absence in each case of any such problems as abandonments and separations, promiscuity, alcoholism, addicts, psychotic household.

Examples: a) Problem father: "He was an admitted drug addict."

b) Problem mother: "Her paranoia interfered with her ability to give a reliable history. She has a rather blatant thought disorder and is ambulatory schizophrenic."

#7 - The presence of feelings of deprivation is scored for each case in which the child is said to experience perceived injustice and jealousy, or envy of others.

Examples: a) "Child is never happy, never satisfied. . . . He insists on her (mother) buying him things."

b) "He seems to think that more is done for his older brothers, and shows jealousy quite openly."

c) Inter-rater disagreement: One rater saw no single statement which indicated feelings of deprivation in the child. The other rater, although finding no clear-cut statement, saw a number of references to sibling

interactions which seemed to justify a rating of feelings of deprivation.

Agreement between aggressiveness in boys and their parents

#1, 2, & 3 - The type of punitiveness of both mother and father, that is, unprovoked, provoked, outburst, is rated for each case. See IA. Adult Modeling, #1,2 for examples.

Additional variables

#2 - Score for the presence of signs of perceptual-motor dysfunction by using a score of 4 or more on the Koppitz scale of the Bender Gestalt Test.

#3 - Rate children as hyperactive or hyperkinetic or not.

Examples: a) "He never sits still in his seat. He's always moving about."

b) Inter-rater disagreement: One rater felt that a description of "restless and fidgety" in test behavior on the psychological evaluation was enough evidence for rating the child hyperactive. The other rater disagreed, since in all other cases a rating of hyperactivity was given when restlessness was described by others as prevalent in the child's non-clinic behavior.

#6 - Children are scored for the presence or absence of antisocial behaviors other than aggression (that is, dishonesty, stealing, truancy, fire-setting, etc.).
Example: "The child has trouble in school, and according to him (S) was picked up by police for brandishing an illegal knife and received a youth offense."

#8 - Rate cases for the presence or absence of the parental expression of the importance of and/or pressure for school achievement in their child.

Examples: a) "Their overconcern about S's academic performance, as well as his classroom behavior, appears to be at least partially because of how this reflects on themselves as parents-teachers. Homework and achievement are stressed by both parents. The children are given a lot of attention in this area by the parents."

b) Inter-rater disagreement: On an intake report, the father stated that his prime concern is the child's "fearfulness at home". He also mentioned to the intake worker that "the child's guidance counselor indicated that although the boy's grades were good, he showed some recent lack of motivation in class". One rater interpreted the parent's statement about school as an indirect expression of a press for achievement. The other rater felt the statement was not substantial enough to rate the parent as pressing for achievement.

Appendix B

Additional Data on Boys

Frequency of Presence or Absence of Reported
Aggression in Parents for NA (N=35) and A (N=35)
Main Groups, and A Subgroups in Boys

Group	Mother's		Father's		Interaction	
	Aggression*		Aggression*		Between Parents**	
	Pres.	Abs.	Pres.	Abs.	Confl.	No Confl.
Main Groups						
NA	8	27	4	31	5	30
A	24	11	25	10	15	20
A Subgroups						
A unprov.	10	5	12	3	6	9
A prov.	2	2	3	1	3	1
A outbur.	12	4	10	6	6	10

* $p < .01$ for differences between NA and A

** $p < .05$ for differences between NA and A

Frequency of High or Low Peer Contact and
 Presence or Absence of Aggression in Siblings
 for NA and A Main Groups, and A Subgroups
 in Boys

Group	Peer Contact*		Aggression in Siblings*	
	High	Low	Pres.	Abs.
Main Groups				
NA	10	25	4	25
A	33	2	21	10
A Subgroups				
A unprov.	14	1	8	5
A prov.	4	0	3	1
A outbur.	15	1	10	4

* $p < .01$ for differences between NA and A

Note: For Peer Contact, N=35 for NA; N=35 for A.

For Agg. in Siblings, N=29 for NA; N=31 for A.

Means and Ranges of NA (N=35) and A (N=35) Main Groups and A Subgroups for Number of Siblings and Number of Like-Sexed Siblings, and Standard Deviations and t Value of NA and A Main Groups in Boys

Variables	Main Grps		A Subgrps		
	NA	A	Aup	Ap	Ao
Number of Siblings					
Mean	1.94	2.34	2.00	3.25	2.44
Range	0-5	0-6	0-5	1-5	0-6
S.D.	1.48	1.68			
t	1.08				
	n.s.				
No. of Like-Sexed Sib.					
Mean	.91	1.34	1.00	2.25	1.44
Range	0-4	0-5	0-2	1-3	0-5
S.D.	1.03	1.24			
t	1.65*				

* $p = .10$ for differences between NA and A

Means and Ranges of NA (N=29) and A (N=31) Main Groups and A Subgroups for Rorschach Holtzman M Score and Number of Responses (R), and Standard Deviations and t Value of NA and A Main Groups in Boys

Variables	Main Grps		A Subgroups		
	NA	A	Aup	Ap	Ao
Holtzman M Score					
Mean	25.69	14.45	14.14	22.50	12.31
Range	5-86	2-30	3-30	19-26	2-27
S.D.	15.89	8.41			
t	3.34*				
# of Responses (R)					
Mean	15.34	12.94	12.71	15.25	12.46
Range	7-46	6-22	7-20	11-22	6-20
S.D.	8.09	4.06			
t	1.40				
	n.s.				

* $p < .01$ for differences between NA and A

Means and Ranges of NA (N=29) and A (N=28) Main Groups and A Subgroups for TAT Transcendence Index, Number of Empathy-Guilt Stories, and Number of Hostile Aggressive Stories, and Standard Deviations and t Value of NA and A Main Groups in Boys

Variables	Main Grps		A Subgroups		
	NA	A	Aup	Ap	Ao
Transcendence Index					
Mean	51.13	38.75	38.08	52.67	36.00
Range	16-93	7-87	7-66	39-62	10-87
S.D.	3.87	3.58			
t	2.35**				
# of Emp.-Guilt Stories					
Mean	5.48	3.57	3.69	5.00	3.08
Range	0-9	0-9	0-9	4-6	0-8
S.D.	2.42	2.32			
t	2.98*				
# of Host.-Agg. Stories					
Mean	4.79	3.39	3.23	3.33	3.58
Range	0-9	0-8	0-7	3-4	0-8
S.D.	2.32	2.10			
t	2.37**				

* $p < .01$ for differences between NA and A

** $p < .02$ for differences between NA and A

Frequency of Presence or Absence of Geographic
Mobility for NA (N=35) and A (N=35) Main
Groups, and A Subgroups in Boys

Group	Geographic Mobility	
	Pres.	Abs.
Main Groups		
NA	10	25
A	19	16
A Subgroups		
A unprov.	8	7
A prov.	2	2
A outbur.	9	7

* $p < .05$ for differences between NA and A

Means and Ranges of NA (N=35) and A (N=35) Main Groups and A Subgroups for Socio-Economic-Status: Occupation, Education, and Weighted Combined Index for Head of Household, and Standard Deviations and t Value of NA and A Main Groups in Boys

Variables	Main Grps		A Subgroups		
	NA	A	Aup	Ap	Ao
Occupation					
Mean	3.94	5.29	5.27	4.50	5.63
Range	1-8	1-8	3-8	1-8	2-8
S.D.	2.12	1.83			
t	2.81*				
Education					
Mean	3.74	4.46	4.60	3.00	4.69
Range	1-6	1-7	2-7	1-5	3-7
S.D.	1.41	1.47			
t	1.31				
	n.s.				
Wght. Comb. Index					
Mean	11.63	15.09	15.00	12.00	15.94
Range	3-20	3-21	8-21	3-19	7-21
S.D.	5.17	4.64			
t	2.88*				

* $p < .01$ for differences between NA and A

Frequency of Presence or Absence of Frustration-
Stress Variables for NA (N=35) and A (N=35) Main
Groups and A Subgroups in Boys

Variables	Main Grps		A Subgroups		
	NA	A	Aup	Ap	Ao
Problems in Mother*					
Present	13	22	8	2	12
Absent	22	13	7	2	4
Problems in Father**					
Present	17	24	10	3	11
Absent	18	11	5	1	5
Working Mothers***					
Present	9	10	5	1	4
Absent	26	25	10	3	12
Marital Status***					
Non-Intact	11	13	6	1	6
Intact	24	22	9	3	10
Feelings of Depriv.****					
Present	11	24	10	2	12
Absent	24	11	5	2	4

* p at .05 for differences between NA and A

** $.05 < p < .10$ for differences between NA and A

*** $p = \text{n.s.}$ for differences between NA and A

**** p at .01 for differences between NA and A

Frequency of Presence or Absence of Physical Abnormalities in S, Antisocial Behavior Other than Aggression in S, and Parents' Press for Achievement for NA (N=35) and A (N=35) Main Groups and A Subgroups in Boys

Variables	Main Grps		A Subgroups		
	NA	A	Aup	Ap	Ao
Physical Abnorm.***					
Present	18	14	3	2	9
Absent	17	21	12	2	7
Antisocial Behav.*					
Present	4	15	8	1	6
Absent	31	20	7	3	10
Parents' Press for Achiev.**					
Present	20	11	4	2	5
Absent	15	24	11	2	11

* $p < .01$ for differences between NA and A

** p at .05 for differences between NA and A

*** $p = n.s.$ for differences between NA and A

Frequency of Agency or Family as Referral Source
of Subject for NA (N=34) and A (N=35) Main Groups,
and A Subgroups in Boys

Group	Referral Source*	
	Agency	Family
Main Groups		
NA	20	14
A	31	4
A Subgroups		
A unprov.	13	2
A prov.	3	1
A outbur.	15	1

* p at .01 for differences between NA and A

Frequency of Presence or Absence of Perceptual
Motor Disturbance and Hyperkinetic Behavior of
Subject for NA (N=35) and A Main Groups and A
Subgroups in Boys

Group	Percept. Motor Disturb.*		Hyperkin. Behav.**	
	Pres.	Abs.	Pres.	Abs.
Main Groups				
NA	14	21	15	20
A	14	19	31	4
A Subgroups				
A unprov.	6	7	15	0
A prov.	3	1	3	1
A outbur.	5	11	13	3

* $p = \text{n.s.}$ for differences between NA and A

** $p < .01$ for differences between NA and A

Note: For Perceptual Motor Disturb., N=33 for A.

For Hyperkinetic Behavior, N=35 for A.

Means and Ranges of NA (N=34) and A (N=33) Main Groups and A Subgroups for WISC Intelligence Quotients: Full Scale, Verbal, and Performance, and Standard Deviations and t Value of NA and A Main Groups in Boys

Variables	Main Groups		A Subgroups		
	NA	A	Aup	Ap	Ao
Full Scale					
Mean	100.82	97.88	94.71	103.50	99.33
Range	64-140	80-130	81-114	88-112	80-130
S.D.	17.43	11.76			
t	.80				
	n.s.				
Verbal Scale					
Mean	102.56	97.91	93.43	109.75	98.93
Range	69-138	79-133	76-120	92-120	79-133
S.D.	17.28	13.23			
t	1.22				
	n.s.				
Perform. Scale					
Mean	98.74	98.48	97.57	95.75	100.07
Range	62-135	79-120	79-118	86-101	79-120
S.D.	16.36	11.31			
t	.07				
	n.s.				

Frequency of Low or High School Achievement
of Subject for NA (N=33) and A (N=35) Main
Groups and A Subgroups in Boys

Group	School Achievement*	
	Low	High
Main Groups		
NA	25	8
A	31	4
A Subgroups		
A unprov.	14	1
A prov.	3	1
A outbur.	14	2

* $p = \text{n.s.}$ for differences between NA and A

Means and Ranges of NA and A (N=22) Main Groups
and A Subgroups for Stanford-Binet Achievement
Test: Word Meaning and Paragraph Meaning, and
Standard Deviations and t Value of NA and A Main
Groups in Boys

Variables	Main Grps		A Subgroups		
	NA	A	Aup	Ap	Ao
Word Meaning					
Mean	35.65	22.68	18.60	43.00	22.70
Range	0-100	0-70	0-66	20-66	1-70
S.D.	29.26	23.56			
t	1.61				
	n.s.				
Paragraph Meaning					
Mean	30.21	15.32	9.70	36.00	16.80
Range	0-91	0-76	0-36	20-52	4-76
S.D.	5.64	4.11			
t	2.13*				

* $p < .05$ for differences between NA and A

Note: For Word Meaning, N=23 for NA.

For Parag. Meaning, N=24 for NA.

Means and Ranges of NA (N=32) and A (N=31)

Main Groups and A Subgroups for Age of Father

at Subject's Birth, and Standard Deviations

and t Value of NA and A Main Groups in Boys

Group	Age of Father at S's Birth				
	Mean	Range	S.D.	t	
Main Groups					
NA	29.69	20-42	5.45	.28	n.s.
A	29.26	18-45	6.51		
A Subgroups					
A unprov.	28.31	18-45			
A prov.	28.25	23-36			
A outbur.	30.43	20-42			

Frequency of Various Problems of S's Parents
for NA and A Main Groups and A Subgroups in Boys

Problems	Main Groups		A Subgroups		
	NA	A	Aup	Ap	Ao
Mother					
Absence	7	11	4	1	6
Psychological	8	13	3	1	9
Extra-Marital Sexuality	1	4	3	0	1
Alcohol, Drugs	1	1	1	0	0
Father					
Absence	5	20	9	3	8
Psychological	3	4	0	0	4
Extra-Marital Sexuality	3	7	3	0	4
Alcohol, Drugs	4	7	4	1	2
Gambling	1	2	1	0	1
Criminality	0	2	1	0	1

Note: a) For Problem Mother, N=13 for NA; N=22 for A.

For Problem Father, N=17 for NA; N=24 for A.

b) Some parents had multiple problems.

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