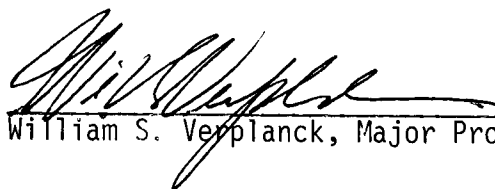
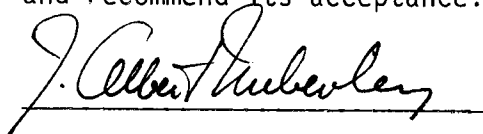
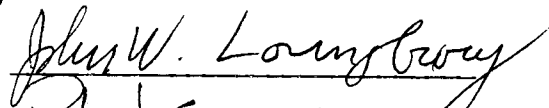
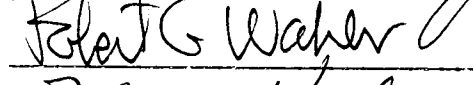
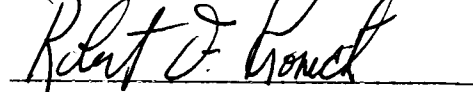


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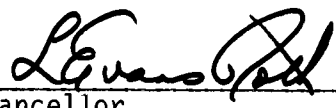
I am submitting herewith a dissertation written by Joseph Allen Cook entitled "Referrals to Psychological Services of Knox County Schools: Description and Outcomes." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.


William S. Verplanck, Major Professor

We have read this dissertation
and recommend its acceptance:

Accepted for the Council:


Vice Chancellor
Graduate Studies and Research

Thesis

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REFERRALS TO PSYCHOLOGICAL SERVICES OF KNOX COUNTY SCHOOLS:
DESCRIPTION AND OUTCOMES

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Joseph Allen Cook

March 1979

1378430

Dedicated to
Patricia Marie Mussey

ACKNOWLEDGMENTS

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ABSTRACT

Four hundred referrals to school psychologists were described in terms of (a) demographic characteristics (age, grade, sex, repeat-in-grade status, month of birth, and school SES), (b) reasons for referral (written-in reasons and a problem checklist), (c) referrer characteristics (identity and teaching experience), and (d) outcomes (special education placements, test scores, and referrals to outside agencies). An item-by-item analysis uncovered consistent relationships among various referral characteristics as well as between referral characteristics and outcomes. Some of the more important findings were as follows: (a) although boys are referred at a higher rate, the difference became smaller over the 5 years of the study; (b) the proportion of referred children who were placed in special programs increased over the 5 years covered by the study; (c) educational problems were the most frequently given reason for referral; (d) the referral rate for children later designated as learning disabled (as an outcome of referral) was highest in the second grade, whereas the rate for children later designated as educably mentally retarded (EMR) was highest in the seventh and eighth grades; (e) referred children tend to be the youngest in their respective grades; (f) children designated EMR tended to come from lower SES schools; and (g) various discriminant analyses failed to show that any one group of referral variables (written-in reason for referral versus problem checklist versus demographics) consistently predicted all outcomes better than any other group.

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INTRODUCTION

Background and Review of the Literature

When a teacher initiates the referral of a student to a school psychologist, a complex series of events is set in motion which may ultimately have significant consequences for the child and for the adult he or she may become. First, it identifies him/her as one of the approximately 5% of the children in the U.S. who require more attention than the classroom alone can provide (Robbins, Mercer, and Meyers, 1967). Next, it normally involves the teacher consulting with the principal, followed by the submission of a formal referral to a school psychologist. At that point, the school psychologist assumes a responsibility for the case until a decision is reached as to a final disposition for the child. (A more detailed description of this process is given in a later section.)

The process involves at minimum a triadic interaction of the child, the teacher, and the school psychologist. At times, however, the process may extend to involve numerous parties in a complex chain of events which includes diagnosis and further diagnosis, labeling and relabeling, multiple referrals to other agencies, the necessary interchanges of paper, and hopefully the delivery of services to the child, with subsequent demonstrable benefits.

The present study is exploratory and descriptive in nature. It proposes to examine in detail the referral system that functions in Knox County schools. It seeks to describe the degree to which the process is systematic in detail as well as in concept and to clarify

the referral traffic within, and sometimes beyond, the school system. Although there is no attempt to accept or reject hypotheses or prove or disprove a theory, the results should be of some heuristic value in enabling administrators and practitioners to plan more accurately and to more effectively carry out the delivery of services to children in Knox County schools.

A search through the literature has turned up surprisingly few studies which describe referral population in schools. Most of these have confined themselves to a restricted number of variables which primarily describe characteristics of the child referred. For example, Rice (1963) divided 283 referral problems into six categories and compared their frequencies of occurrence at various grade levels. He found that: (1) pupils tend to be referred for different reasons at different grade levels; the number of children referred for intellectual, moral, and social reasons varied significantly at various levels; (2) intellectual disabilities and social maladjustment seem to be the most common problems at any grade level; (3) problems of "moral defect" [sic] and physical ailments tend to be less common at all grade levels, except that junior high school pupils manifest more moral problems than do pupils at other grade levels; and (4) problems arising from emotional reactions tend to be constant at all grade levels.

Gilbert (1957) made a survey of 2,500 cases referred to principal child guidance centers in four large U.S. cities and classified problems into 10 categories. Analysis of his data revealed that academic difficulties are the most common problem (45%) at all grade levels, and boys are more frequently referred than girls by a ratio of 2-1/2 to 1.

The first investigator to look at variables other than those particularly related to the child (e.g., grade, sex) was Nicholson (1967) who studied 590 referrals in 59 Ohio school districts. He found, not surprisingly, that most referrals to school psychologists were from teachers. Like other studies before and after, he also found that boys were about twice as likely to be referred as were girls and that the most frequently given reasons at all grade levels were academic difficulties with possible need for special class placement.

The most comprehensive study of school referrals to date was conducted by Robbins, Mercer, and Meyers (1967). They studied all 1,231 referrals to the central office of a California school district made in one year. The data revealed a striking and consistent decline in referral rate of individual students as they proceeded from elementary through secondary school. More importantly, they found significant differences in rates of referral per 1,000 students across schools. Further analyses indicated that these differences were closely related to school size and the individual principal's attitude toward psychological services, the smaller schools having a significantly higher referral rate than the larger ones. There were some principals who were more willing to refer problem cases to the central office while others considered it only as a last resort. The study failed to find any relationship between either socioeconomic status or ethnicity and referral rate. The authors concluded that the factors of school size and the principal's attitude toward psychological services were more closely related to the referral rate than were any characteristics of the children themselves.

The most recent study dealing with frequency of school psychologist referrals (Hyde, 1974) produced findings similar to those earlier reported: i.e., boys were referred more than girls; lower grade children are referred at a higher rate; and academic difficulty is the most commonly given reason.

Barocas and Black (1974), in a study of third-grade school children, found similar sex differences in referral rates. More importantly, they also found a significant and positive relationship between the probability of being referred and the ratings of attractiveness of the children as made by an independent group of judges.

The Referral Process in Knox County Schools

Although there are a number of organizational paths which children can take which would ultimately lead to their receiving special services, by far the most common procedure is as follows: (1) A teacher experiences some difficulty with a student in his/her class. (2) A referral form is obtained, filled out by the teacher, and returned either to the principal for approval or directly to the psychologist serving that school. (3) The school psychologist meets with the teacher, discusses the child, and usually arranges a parent conference. (4) The teacher, the principal, or the school psychologist obtains a Permission to Evaluate Form from the parent. (5) The child is given a standard battery of standardized tests by the school psychologist. (6) Another parent conference is scheduled with the school M-team (Multi-Disciplinary Team), the test results are presented and discussed, and usually some kind of decision is reached concerning placement of the child. By far the most common

placement is in the resource room of the school itself where the child will receive individual or small-group assistance, usually for 1 hour or 1/2 hour a day. (7) The parent signs approval of the placement and of the psychological report which documents the test results and other information upon which the decision was made. (8) The school psychologist submits the report to be typed. (9) If the child is to be placed, an Enrollment Form is sent from Psychological Services to the Department of Special Education, and the resource teacher is notified by them that the child may now be served at the school. A flow chart of this process is shown in Figure 1.

The amount of time elapsing between the first and last steps of the process may vary considerably and may fall anywhere between 2 weeks and several months. Factors affecting the rate of action are numerous and include: difficulty of locating parents, scheduling conferences, and obtaining permissions; efficiency of the school psychologist; and, probably most importantly, the referral caseload of the school psychologist at the time.

The referral process in a school system is not a simple linear chain of events. A complete description of factors influencing it and the outcome which follows will necessarily require looking at a large number of variables. Previous studies of referrals to school psychologists have failed to examine simultaneously more than a few variables and therefore have been unable to present a complete picture of the process in the system studied. The attempt here will be to describe a much more extensive set of variables so that it will be possible to evaluate each in the context of the others. This method of trying to

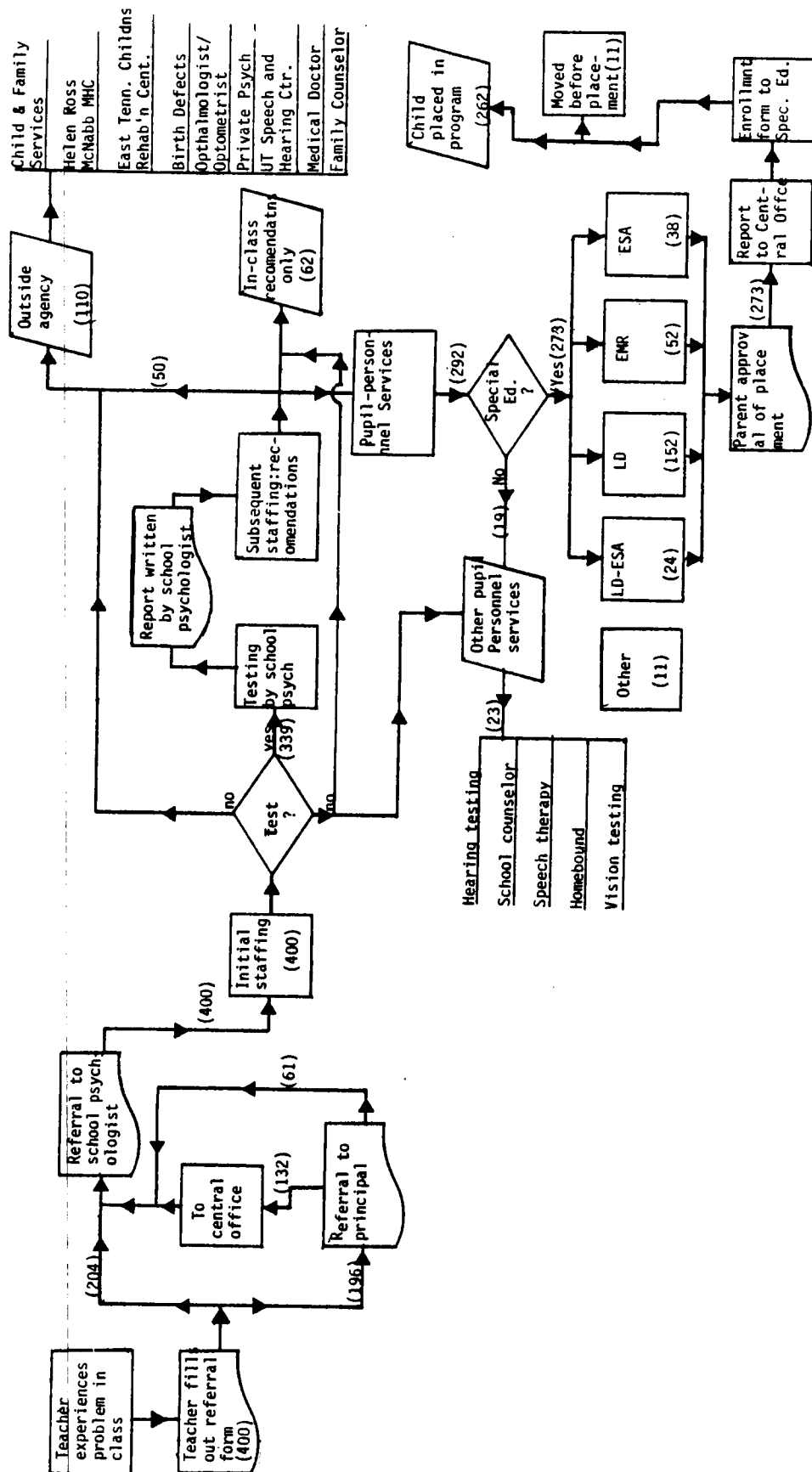


Figure 1. Flowchart of Knox County referral-output system.

examine a large number of variables may be criticized as being a "shotgun" approach to the problem; however, a broad systematic search is necessary in order to spot a significant number of problems in the referral process.

The study is solely descriptive and exploratory. It proceeds with an item-by-item analysis of referral and outcome variables with each being discussed in isolation and then in appropriate relationship with other variables. This type of approach, while somewhat cumbersome, allows better pinpointing of problem areas than if the data were grouped by multivariate techniques.

Method

The folders of children whose referrals were studied were drawn from the files of Knox County Schools, Department of Pupil Personnel. The total number of folders in the files is about 5,000 and includes all Pupil Personnel records (i.e., psychological and special education) of children currently enrolled in the school system. In the present study, a sample of 400 cases was investigated.

The sampling process involved going through the entire set of files alphabetically and extracting every 20th folder which contained an appropriate referral form--the key document in the investigation. This referral form is shown in Figure 2.

Information from the folder was recorded on a standard record form (see Appendix A). If the 20th folder did not contain a referral form or if it contained one of the obsolete forms which had been used prior to January 1973, it was discarded, and the folders immediately

Date received _____

REQUEST FOR PUPIL PERSONNEL SERVICES

Date assigned _____

Specialist Worker(s) _____

Name of pupil _____ Date of referral _____

School _____ Grade _____ Birthdate _____

Teacher _____

Parent's (or guardian's) name _____

Parent's (or guardian's) address _____

Father's occupation _____ Mother's occupation _____

Family Telephone numbers: Home _____ Work _____

Most recent standardized test scores:

Date	Pupil's grade	Name of test and level	Verbal or non-verbal

Has the pupil received a previous psychological examination? Yes _____ No _____

Reason for referral: _____

Section I: Please (✓) the appropriate reason(s) for referral.

<u>Behavioral problems</u>	<u>Other behavioral symptoms</u>
Child is disruptive in class--	Child--
fidgety, overactive, can't stay in seat	lacks self-confidence
talks out of turn	is overly sensitive to criticism
constantly seeks attention, "clowns around"	depends too much on others
overly aggressive to peers, (fights, is	pretends to be ill
overbearing, belligerent)	has poor grooming or personal hygiene
defiant, obstinate, stubborn	
impulsive, is unable to delay action	<u>Educational problems</u>
Child is withdrawn--	Child is underachieving--
shy, timid	not working up to potential in class
does not make friends; seldom plays with	poorly motivated to achieve on school
others	work
daydreams, is preoccupied	Child has--
unable to express feelings	poor work habits
Child is anxious--	difficulty following directions
worried, frightened, tense	poor concentration and limited attention
depressed	span
cries easily, pouts, sulks	motor coordination problem
does not trust others	other, specify: _____
shows other signs of "nervousness"	Child has specific academic problems--
specify _____	reading _____ math _____ numbers _____
specific phobia _____	writing _____ colors _____ concepts _____
	language skills problems, specify _____

Section II: From your experiences with this child, please check (✓) any of the following which you believe relate to the problems you have reported.

illness or death of family members	under family pressure to succeed
adjustment to foster home placement	overprotective parents
lack of educational stimulation in the	family instability
home	sibling rivalry
economic difficulties	parental rejection
other _____	

Section III: From your experience with this child, indicate where he would lie on the following dimensions:

Know child well	Barely know child
7 4 1	
Child seems easy to like	Child seems difficult to like
7 4 1	

Signature of Person Making This Referral _____

Principal's Signature _____

Figure 2. The referral form used in Knox County Schools, 1972-1977.

following were checked in sequence until one with an appropriate form was found. The search moved on to the 20th folder from that point, and the process continued. Approximately 567 of 967 folders examined were found to have no appropriate form (i.e., either one of the older forms or no form at all). Although the sampling process was not strictly random, it is unlikely that any significant biasing affected the sample. The procedure did, however, preclude the inclusion of siblings with common surnames.

The above process resulted in a sample of 249 cases. Since a larger sample was desired, the process was repeated with every 29th case (rather than every 20th) being chosen. The second pass through the files resulted in an additional 151 cases, bringing the total sample size to 400.

Documents in the folders yielded the information which follows. The referral form contained: (1) date of referral; (2) date of birth; (3) grade; (4) sex; (5) teacher's written description of problem or reason for referral; (6) a 45-item problem checklist, filled out by the teacher; (7) whether or not the principal had screened the referral (as indicated by signature). The psychologists' reports showed: (1) what psychological tests, if any, were administered; (2) scores on those tests; (3) what type of placement was finally decided upon for the child; and (4) what referrals to outside agencies, if any, were made. Information gathered from other sources included: (1) years of experience of the referring teacher; (2) the socioeconomic status and enrollment of the school; (3) an index of the amount of psychological services provided to the school at the time of referral; and (4) the enrollment of the school.

Limitations of the Data

There were several important methodological problems in the method by which the data were collected that limit the generalizability of the results. These were related to possible biasing factors introduced by the sampling process and by the manner in which the school system's records were kept. It is doubtful that the records from which the data were taken give a complete account of what actually happens to all children when they are referred. Nor do they come close to giving a full description of how school psychologists in the system spend their time. The files include primarily the records of those children who were tested for placement in special education programs. There may have been many more "referrals" both written and informal which were acted upon by the school psychologists but never made it into the files due to the lack of necessity of completing any other paperwork on a child. Also, not until the 1977-78 school year was it required that all reports submitted to the files include a written referral form. During the period from which the sample was taken, some school psychologists may have been more "compulsive" about including the referral form than others, and thus bias may have been introduced.

Because the referral form used in the study was introduced in the middle of the 1972-73 school year, referrals from this year are necessarily lower than others. This is also true of the 1976-77 school year as a result of the data being collected during the winter and spring of that year, thus excluding referrals from the latter part of the school year from the sample.

The data regarding referrals to outside agencies as outcomes no doubt seriously underrepresents its actual incidence. Fortunately, the data regarding special education placements as outcomes were quite reliable due to the system's requirement that a child cannot be placed unless it is specifically stated in the report. Except for bias possibly introduced by the above-mentioned sampling problem, the data were considered to be a fairly accurate representation of the population they are purported to examine.

Organization of the Study

The remainder of the study will be organized in the following manner: (1) First, descriptive data (primarily demographic) will be presented which characterize the children who are referred. (2) The next section will briefly describe the referring agents in terms of both individuals (i.e., teachers) who refer them and social education systems (i.e., schools) from which they are referred. (3) Next will be a description of the characteristics (i.e., problems) of the referred children taken from the referral forms filled out by teachers at the time of referral. Also included is a description of the degree to which the forms were completed. (4) The fourth chapter will attempt to interrelate the descriptive results presented in the first three. (5) Chapter V represents descriptive results of the outcomes of referral. (6) Chapter VI attempts to interrelate outcomes with data presented in the previous sections. (7) The final section will briefly discuss various groups of referral characteristics in terms of their value in predicting outcomes.

CHAPTER I

THE CHILDREN REFERRED

Grade and Sex

Of the 400 referred children in the sample, 294 (73%) were male and 106 (27%) were female, a 2.8:1 ratio. The percentage of boys in the sample ran slightly higher than those found by other researchers in other locations: 67% (Cowen, 1973), 65% (Hyde, 1974), 71% (Gilbert, 1957), 71% (Robbins, Mercer, Meyers, 1967), 65% (Lorion, Cowen, Caldwell, 1974), 72% (Schrink, 1970), and 65% (White and Charry, 1966). The ratio of males to females being referred also varied over grade. Figure 3 shows that boys were referred at a higher rate in all grades; however, the difference tended to grow smaller as the grade placement increases.

Boys were referred at a higher rate during all of the school years covered by the study, although the degree of difference declined over the years that the study covered. As shown in Figure 4, less than 20% of the referrals during the 1972-73 school year were girls, whereas they comprised 33% of the 1976-77 referrals.

The overall rate of referral drops in an almost linear fashion from the first grade on, except for the sixth grade. One possible explanation for this would be that children at this age are just beginning to experience the onset of pubescence and its accompanying problems. This explanation, however, seems unlikely since there is considerable variability of ages at which children enter puberty.

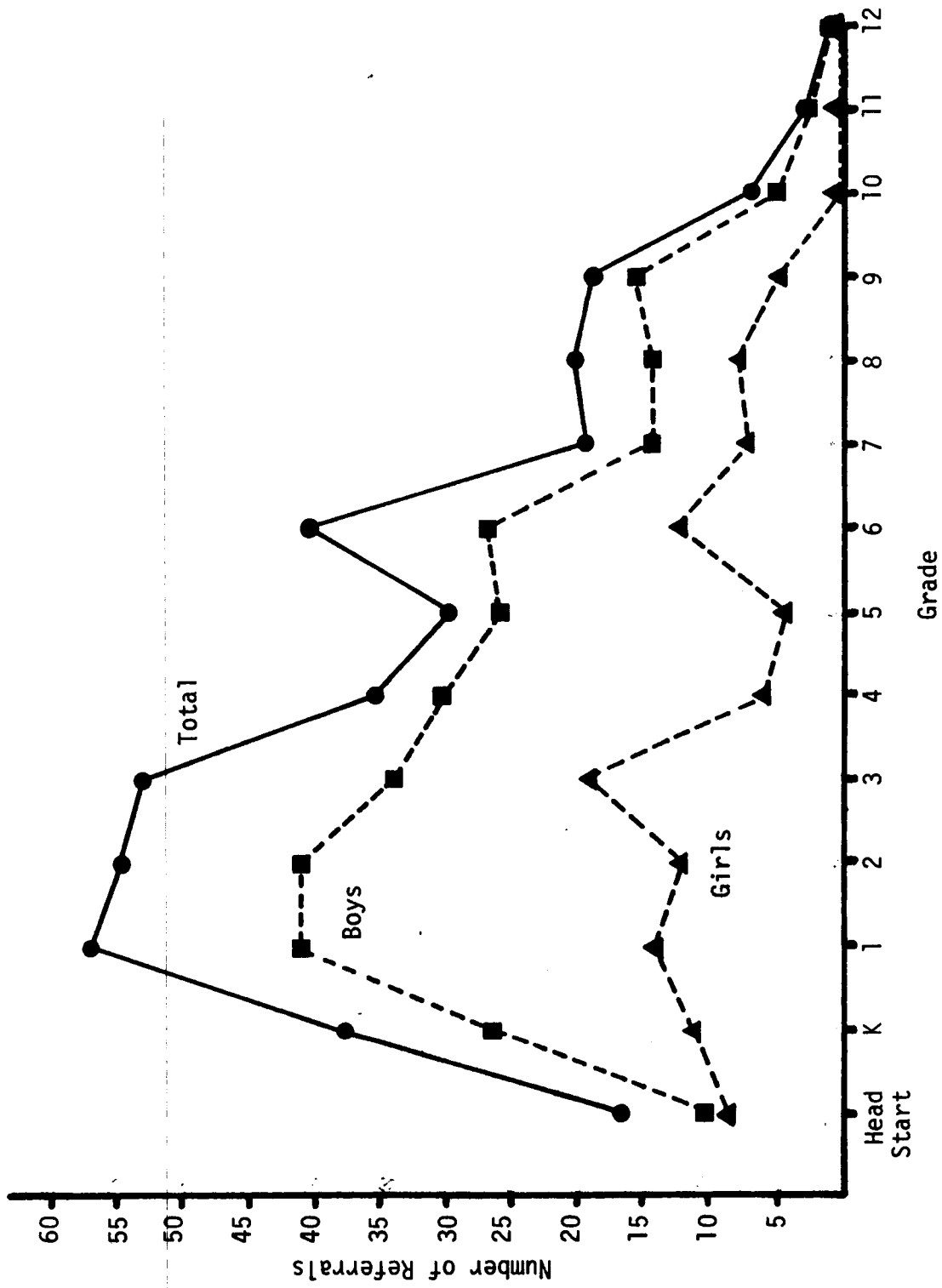


Figure 3. Referrals by grade level.

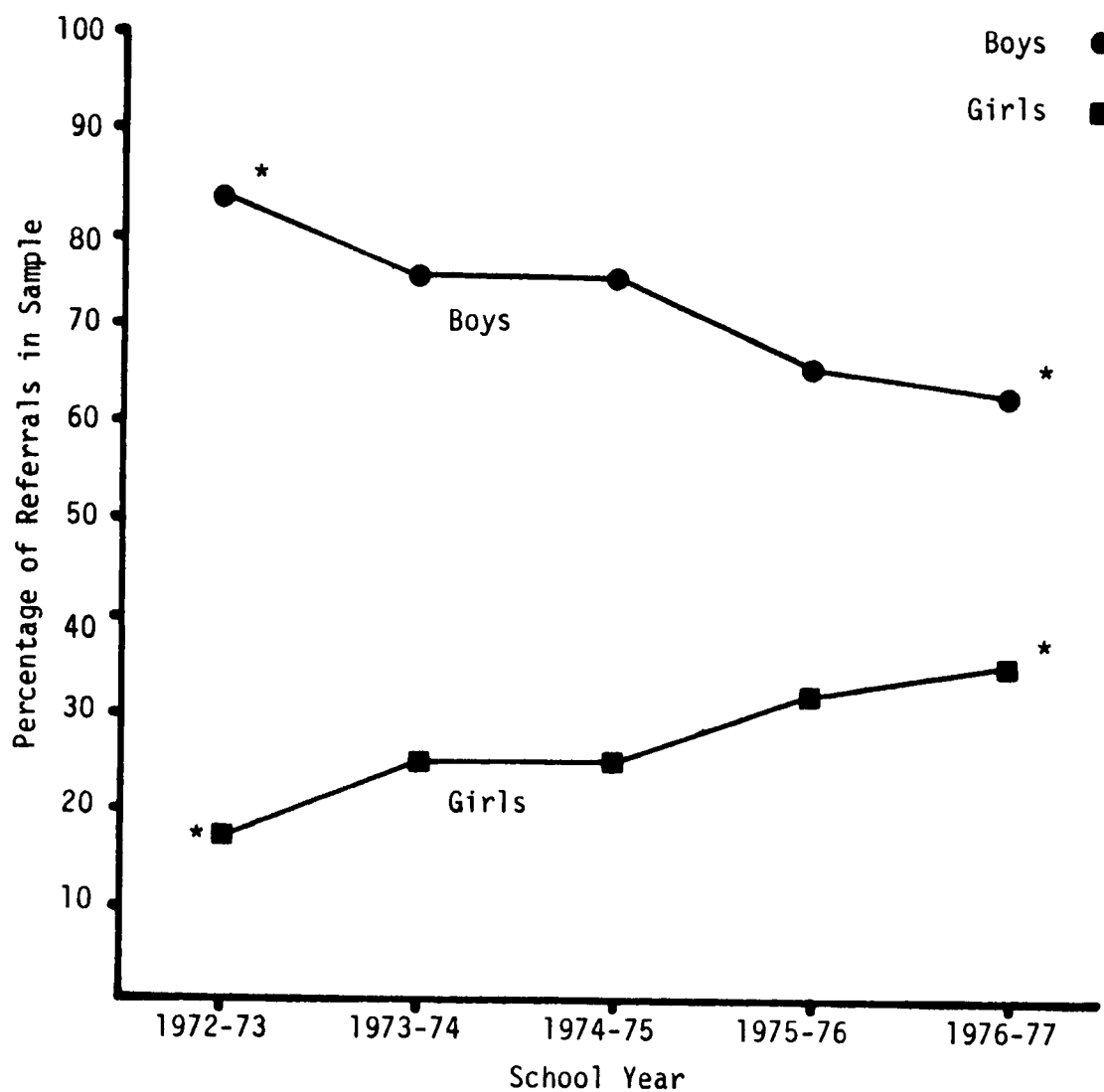


Figure 4. Percentage of boy and girl referrals in sample by school year.

*Incomplete data for these years.

Instead, the data tend to suggest what might be termed the "middle-school phenomenon." That is, when children change schools from elementary school at grade five to middle school at grade six, they are more or less unknown to their teachers who, possibly in an attempt to know more about them, refer them for testing.

Part of the reason for such a low number of referrals from high schools in the sample was due to the inappropriateness of the referral form for high school students. This was evidenced by the fact that at least two of the high schools had developed their own referral forms. Also, most of the case load of a school psychologist in the high schools is made up of students who do not go through the normal referral channels as shown previously in Figure 1, page 6.

Table 1 shows a comparison of Knox County referral rates by grade and those obtained by other researchers in other settings (Rice, 1963; Nicholson, 1967; Hyde, 1974; and White and Charry, 1966). Because of the way in which some of the other studies presented their data, it was necessary to group all the data into four levels in order to make comparisons.

Unfortunately, these data as well as those from most other studies do not permit statements to be made regarding the reason for drop in referral rates. On one hand, they suggest that problems referred at the lower grades were corrected thus eliminating the necessity of referral at the higher grades. On the other hand, in systems with limited resources, services may be allocated more to younger children (due to the current emphasis on "early identification and intervention") with the necessary reduction of services for the problems of older

Table 1

Percentages of Referrals by Grade Level: Reports of Five Studies

Study	Location	K	Grade level			
			1-3	4-6	7-9	10-12
Present (1972-77)	Knox Co., Tennessee	9.3	41.2	23.6	16.1	2.1
Rice (1963)	California*	*	24.7	31.1	28.3	15.9
Nicholson (1967)	State of Ohio	*	58.2	25.9	11.5	4.2
Hyde (1974)	Cleveland--inner city	15.0	41.7	25.2	10.5	5.7
White & Charry (1966)	Westchester Co., New York	10.5	32.9	24.7	18.6	13.1

*Not reported

children. That is, the incidence of problems in the higher grades may be just as great, but due to availability of limited resources, they are given reduced priority. Also, it may be that most of the children who are ever going to be referred and placed in a special program are so processed during the early grades, and thus it would seem redundant to refer a "placed" child again, even if he or she was having problems. A final but related explanation lies in the possibility that a child at the higher grades has been in a school long enough to have been discussed frequently among past and present teachers, and although the child may not have been previously referred and officially placed in a special program, the discussions among teachers may have been sufficient to informally label him or her (e.g., "he's just always been slow") thus precluding the necessity of referral.

Referral Rate by School Year

Frequencies of referrals by school year were recorded for the entire sample which extended over the 5-year period covered by the study. As shown in Figure 5, there is considerable variation. As noted previously, the low figure for the first year of the study (1972-73) may be the result of the present referral form being introduced at mid-year and thus used for only the latter half of that year. (Referrals turned in during the first part of the year made use of the old form and were hence excluded from the sample.) The frequency for the 1976-77 school year was also limited by the fact that half of the sample was collected during the spring of that year thus precluding those cases which were placed in the files in late spring from the sample. Whether the decline

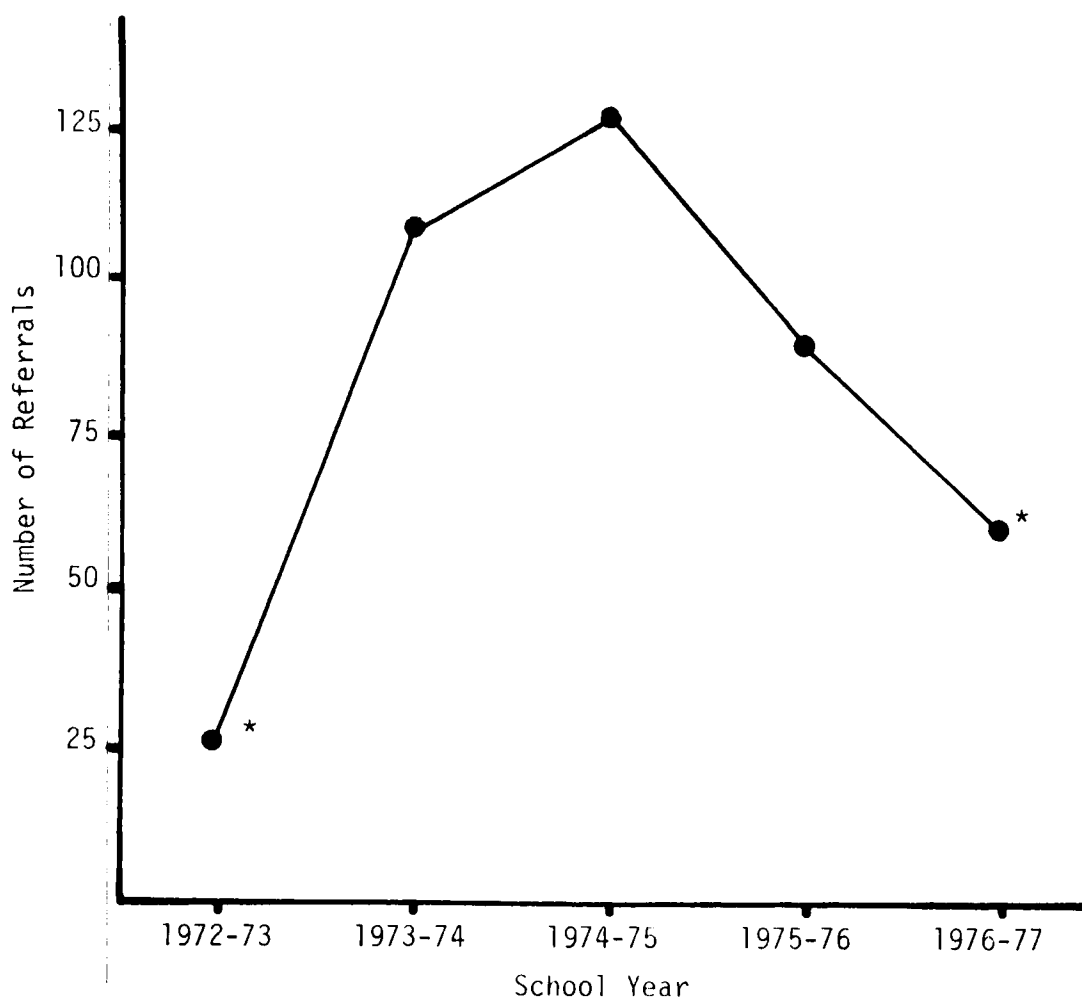


Figure 5. Total referrals by school year.

*Incomplete data for these years.

in number of referrals between 1975-75 and 1975-76 is statistically significant is not known.

Referral Rates Within the School Year (By Month)

Referral forms are filled out and submitted throughout the school year. However, as seen in Figure 6, there is a considerable amount of variability in rate by month. (It should be noted that these frequencies are not adjusted for number of school days per month. This may account for low frequencies in months such as December which has 2 weeks of Christmas vacation.) The frequencies decline over the school year as would be expected.

Month of Birth and Referral Rate

The frequencies of referrals were analyzed in terms of the child's month of birth; results are shown in Figure 7. Of note is the significantly greater number of children with October birth dates in the sample than that expected from natality rates by month for all live births in Tennessee (U.S. Dept. of HEW, Vital Statistics, 1973). Using these latter data to determine expected frequencies results in a highly significant chi-squared ($\chi^2 = 32.5$; $df = 11$; $p < .001$). As shown in Figure 8, this trend appears to diminish for older children.

A possible explanation for this finding is related to age differences with grade levels. The cut-off date for enrollment in Knox County Schools is October 31. Thus, children born in that month would be the youngest in their respective classes. Likewise, those born in November would be the oldest. Whether the difference in referral rates is

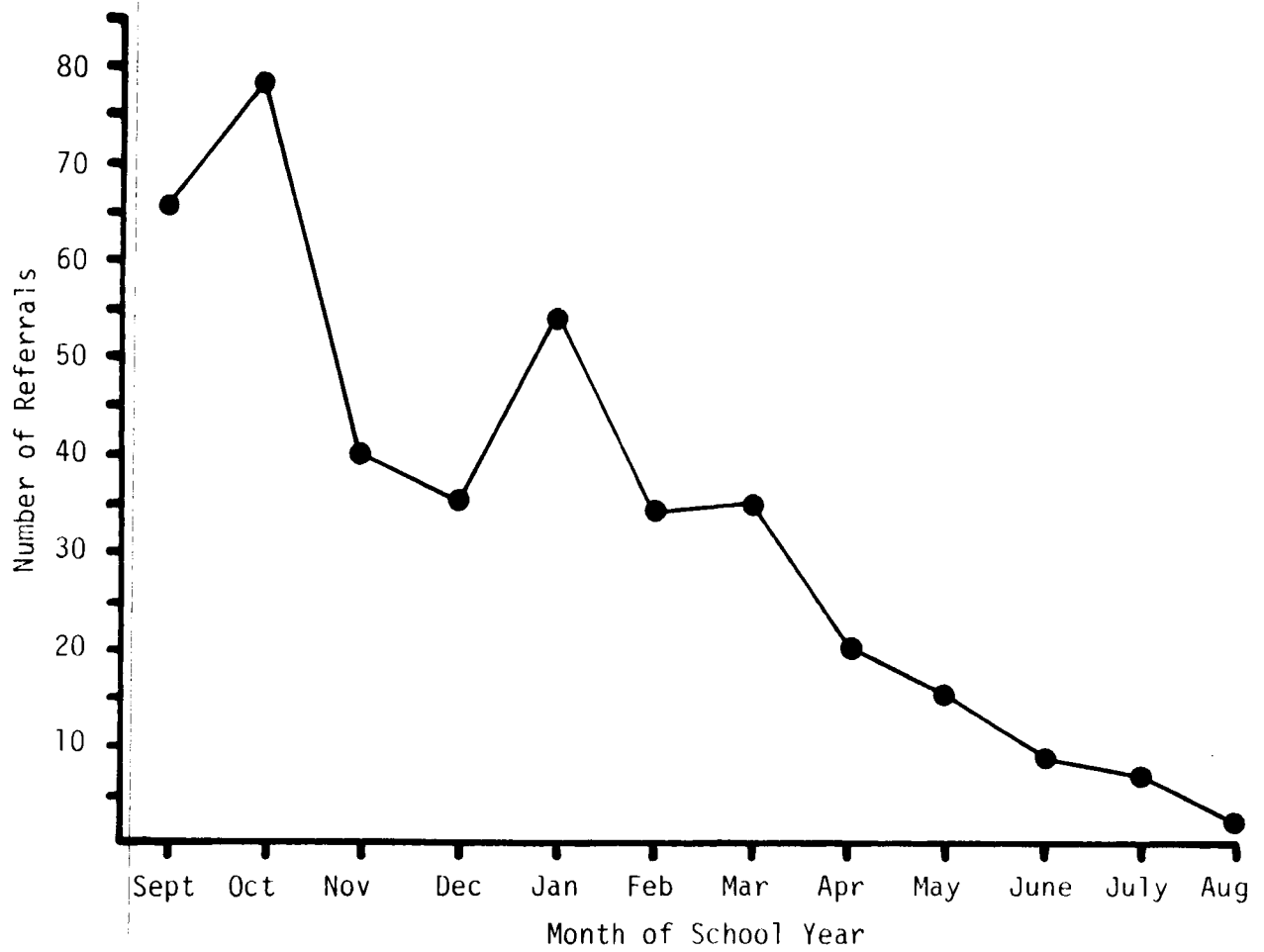


Figure 6. Number of referrals by month of school year.

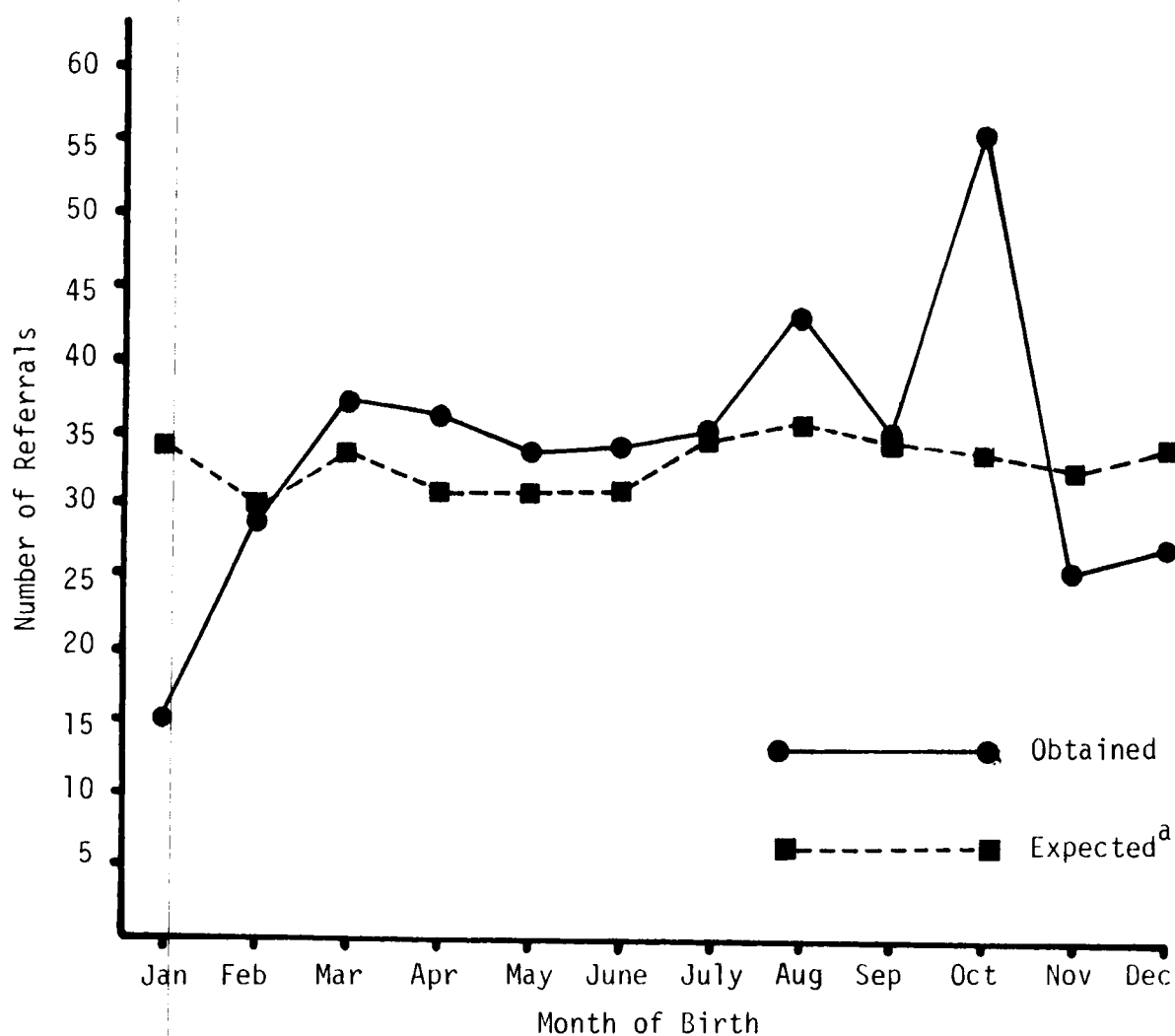


Figure 7. Referral rate by month of birth.

^aBased on natality rates for the state of Tennessee (U.S. Dept. of HEW, Vital Statistics, 1973).

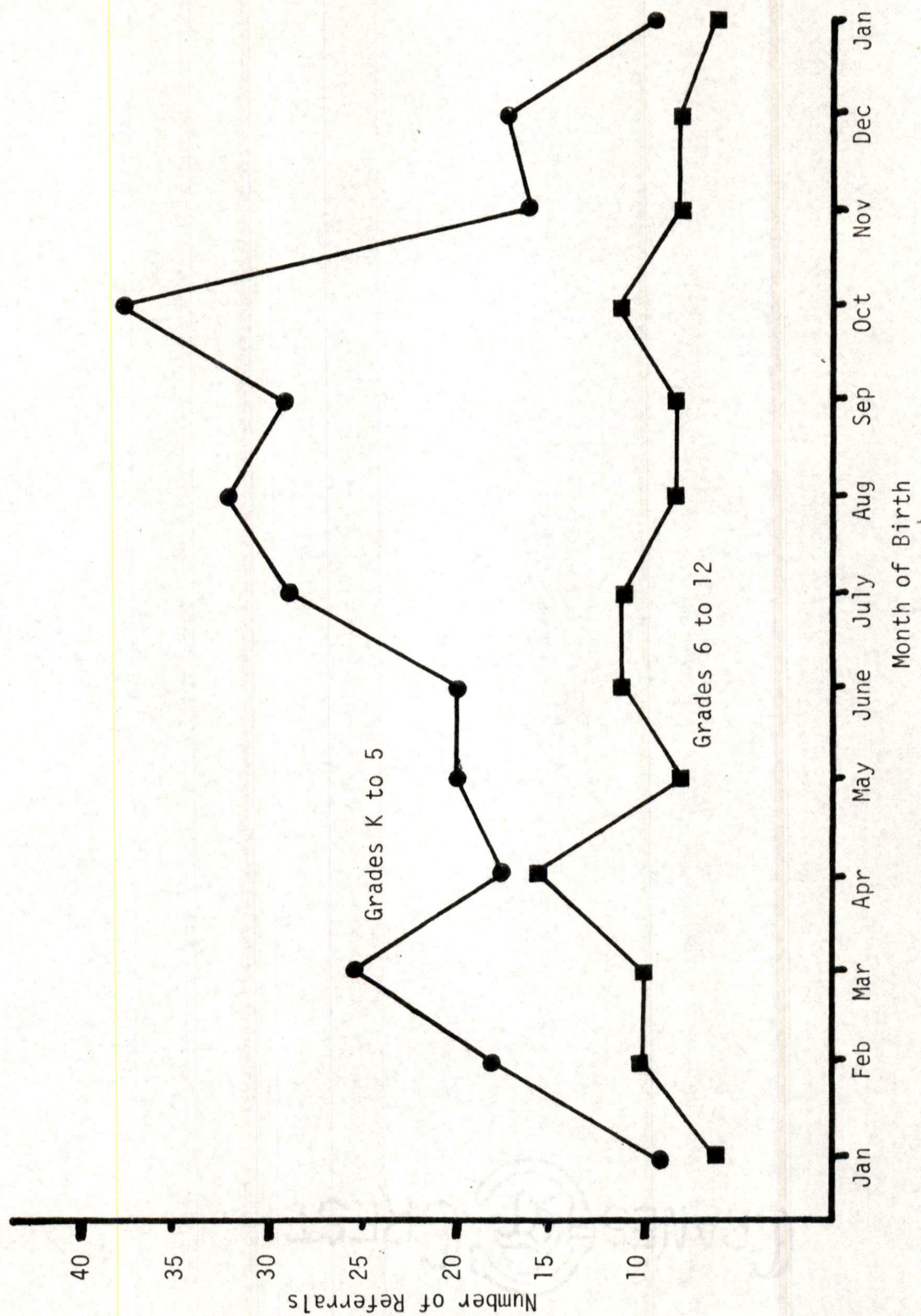


Figure 8. Month of birth and referral rate for children in grades K to 5 and grades 6 to 12.

attributable to relative "immaturity" or to low social status of the younger children is a matter for further investigation.

Referral and Repeat-In-Grade Status (Retention)

For each child in the sample, the expected or normal grade placement at the time of referral was calculated on the basis of his/her birth date. This was done by using a table constructed specifically for this purpose. For example, a child born December 23, 1965, would according to Tennessee law, be expected to be in fourth grade during the 1975-76 school year. Reasons for a child being off grade level are usually one or more of the following: (1) the child was previously retained (held back); (2) the child entered school at a later year; (3) the child entered school earlier than he/she normally would (which sometimes happens with children born in November just after the October 31 deadline); (4) the child transferred into the system from another state which has a different deadline for enrollment.

The relationship between the expected grade placement and actual grade placement at the time of referral was calculated for each child, and the results are presented in Table 2.

The most salient feature of these data is that approximately 27% of the children referred were 1 or 2 years behind their expected grade level at the time of referral. Only five were reported as retained as a result of their being referred.

That 27% of the children in the sample were at least one grade behind that expected by their chronological age appears even more surprising in light of data obtained regarding retentions of all students

Table 2
Repeat-in-Grade Status of Referred Children^a

Repeat-in-grade status	<u>f</u>	%
In expected grade	280	70.0
One grade behind	98	24.5
Two grades behind	8	2.0
Three grades behind	3	.8
One grade behind	4	1.0

^aN = 400

in the system. Between the school years 1972-73 and 1976-77, there was a mean of 156 out of an average enrollment of 18,472 students (.9%) retained each year, a proportion which is miniscule compared to that in the sample ($\chi^2 = 188$; $df = 1$; $p < .001$). Since so few of the total school enrollment were retained each year and because such a large percentage of the referred children in the sample had been previously retained, it appeared that the bulk of children who were retained earlier were eventually referred for special education or psychological services. The irony lies in the system's policy regarding retention which states that "consideration [for retention] should be given to those students with average or above ability who have no identified learning problems, yet are working one or more years below grade level" (Clapp, 1977). Contrary to the policy, the data suggest that a large number of children with "learning problems" are retained. The only difference is that the "official" identification of such problems did not come until after they were retained.

As shown in Figure 9, the percentage of referred children who had been previously retained increases with grade level. Much of the increase can, of course, be attributed to the fact that children in the higher grades have had more "opportunities" to have been retained than the younger student. Nevertheless, this data as well as the simple fact that an overall 27% of the sample had been previously retained pose some serious questions about the benefits of retention. Whether or not the children who were retained and later referred had the same teacher for both the retention year and the year they were referred is not known.

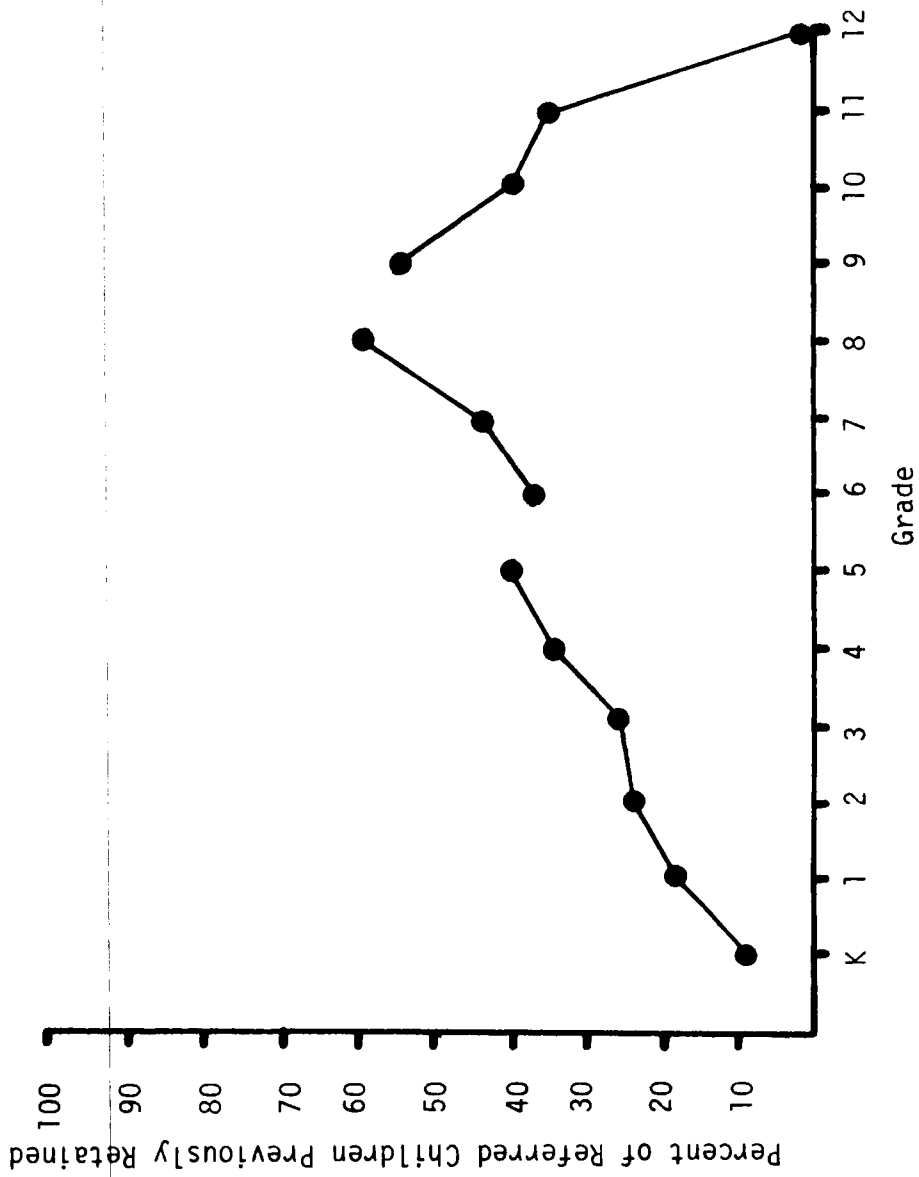


Figure 9. Percentages of children previously retained, by grade at time of referral.

This information would be beneficial in shedding more light on the relationship between retention and referral.

Discussion

The fact that boys are referred at an overall higher rate than girls was no surprise and has been found to be true in all other studies that reported sex differences in incidence of any type of childhood problem. However, no other studies have analyzed changes in boy/girl rates over these years, and the results shown here suggest a significant shift in the ratio. The increase in the percentage of girls referred is corroborated by anecdotal comments of persons working with children with problems. They have made comments to the effect that they feel that they are now seeing noticeably more girls than they did several years ago. The predominance of the number of boys to girls in terms of problem incidence has been so well established for years across almost every type of psychological, emotional, or learning disorder that any change has significant implication. Further research might investigate whether this change is due to actual change in the behavior of girls (and, if so, what behaviors) or to changes in the ways in which adults respond to them.

CHAPTER II

REFERRERS AND THEIR IDENTITY

Referrers

Teachers were the primary source of referral. In only 42 cases did it appear that parents may have initiated or participated in the referral. Even in those cases, it is not clear whether the referral was initiated by parents or teachers. This is evidenced by statements in the written reason for referral such as: "Mrs. X wants me to decide if Johnny should be taken out of kindergarten"; "Mother feels testing would help to know what the problem is"; "parent request due to under-achieving and emotional problems"; or simply "parent request." It was difficult to consider the parent as the sole referrer in these cases since, in all but one, the teachers went on to state their own concerns with the child and his/her behavior in the classroom. The teachers also checked the items on the behavior checklist that they themselves felt were appropriate. In only one case did the parent actually fill out the referral form, and, even in this case, the teacher added comments on the back of the form.

The mean number of years of experience of all teachers in Knox County for the 1976-77 school year was 8.36 (SD = 8.72). The mean number of years of experience of the teachers who referred children in the sample was 8.72 (SD = 8.04) suggesting that, at least in terms of years of experience, teachers who referred children were not different

from the total group. A frequency distribution of referrals by years of teaching experience is shown in Figure 10. Also shown is the expected number of referring teachers based on the proportion of teachers in the system with varying years of experience.

Although the data show no overall significant pattern, there is one instance which relates to a concern of the system's administrators. This is the suspected low number of referrals from the first-year teachers (zero years' experience). The concern arises because these teachers are not often placed in the lower grades (particularly Kindergarten and first grade), and therefore low referral rates may be hampering the system's goal of early identification. The data from Figure 10 showing referral rates for these teachers suggest that these concerns may be warranted.

Discussion

As noted, 90% of the referrers in the study were teachers. The remaining 10% were parent/teacher combinations. This is at variance with results reported by others. For example, White and Charry (1966) in a large-scale study of 2,866 referrals to school psychologists found that 18% of the sources of referrals were parents and another 7% were other sources such as community agencies, other school psychologists, and self-referrals. Nicholson (1967) found that 73% of the referrers were teachers who combined with other school personnel such as principals to make up 93% of the total source of referrals. The degree to which the populations from which these results were obtained is comparable to the present population is questionable. Nevertheless, the results do

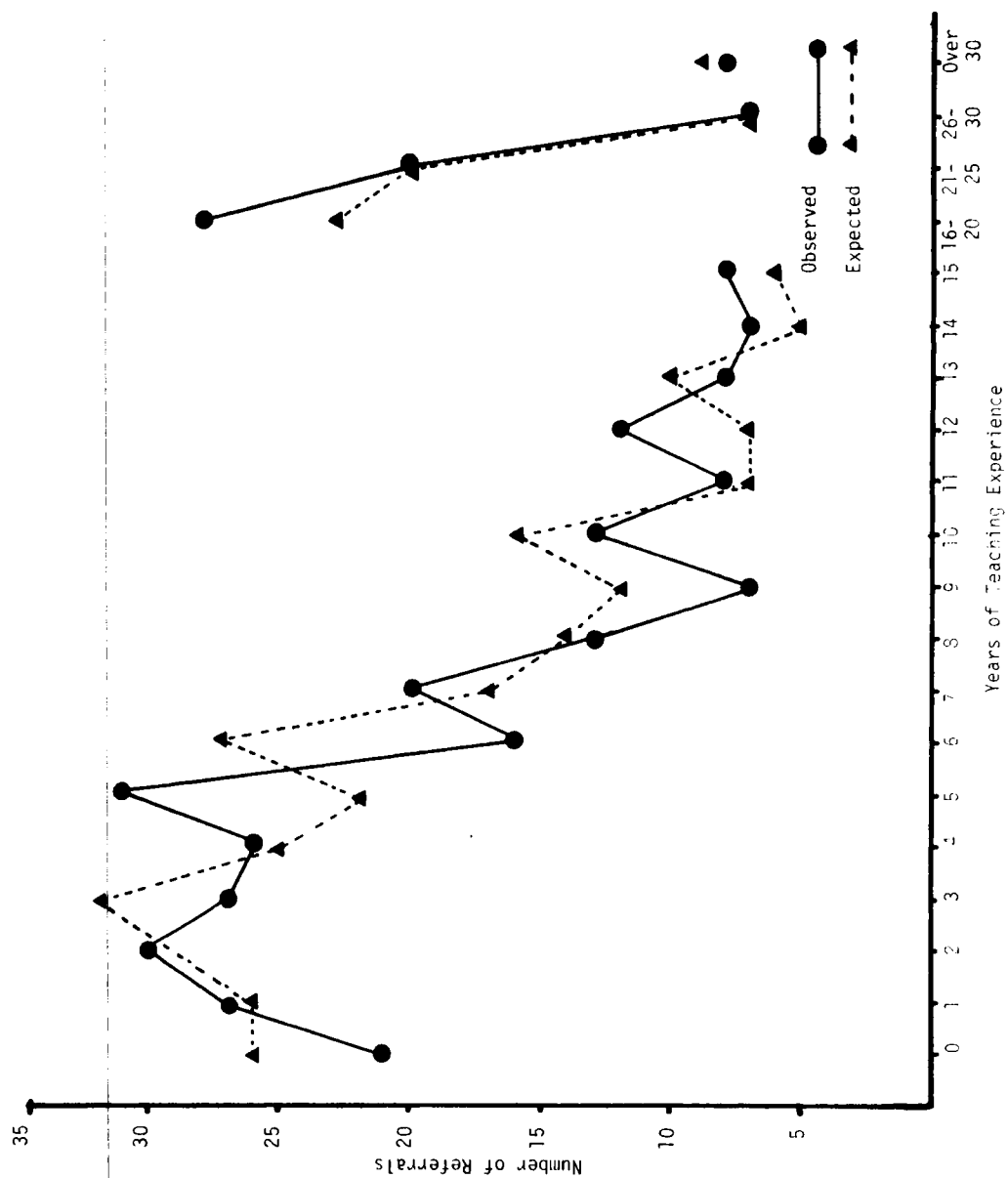


Figure 10. Number of referrals by years of experience of referring teachers.

at least force the issue of referral source to be considered. In the present study the original impetus for some of the referrals may have been other than the teachers, but this information was not consistently recorded. Even in such cases it is likely that the teacher is the one individual who fills out the form and submits it to either the principal or directly to the school psychologist and thus acts as a censor or facilitator of parents' views. This practice most likely evolved from a desire to keep the teachers informed on which of their children are being seen by the school psychologist as well as insuring that their input regarding the child is recorded in some fashion. Whether this practice facilitates or censors "appropriate" referrals cannot be determined from the data. It is, however, a matter worth further investigation.

Regardless of the exact identity of the referrers in terms of their relationships with the children, they all have in common two important characteristics: (1) they are identifying the existence of a problem in another individual and (2) they are adults. Children (particularly those below the high school level) rarely refer themselves for help with either academic or emotional problems, whereas adults frequently seek help for personal problem on their own. This distinction is important to note when comparing problem incidence data for the two groups as well as when interpreting the findings of "longitudinal" studies.

CHAPTER III

REFERRAL FORM CHARACTERISTICS

The manner in which the teacher completed the referral forms represents the primary variables of the study. Included are not only the problems indicated but also variables related to formal aspects such as how complete were the submitted forms. The present study differs from previous ones in that it does not necessarily assume that problems indicated on a referral form are entirely a function of the child's behavior. This accounts for the inclusion of a variable such as "completeness" in filling out the forms which says more about the referrer than the referree.

This section presents descriptive results pertaining to how the referral forms were filled out.

Degree of Completeness

The degree to which teachers completed the referral forms varied considerably. Although the form is relatively self-explanatory, in no place did it state that it must be completed in its entirety.

The first part of the referral form requests (a) scores from previous standardized testing and (b) demographic information concerning the child. Seven of these items were checked for each child as to whether or not the referring teacher had included them when filling out the referral form. The items were: (1) parents' name, (2) parents' address, (3) father's occupation, (4) mother's occupation, (5) family

telephone number, (6) most recent standardized test scores, and (7) whether or not the child had received a previous psychological examination.

Counts of completion of each of the above items yielded a simple index with values ranging from 0 to 7 for each project. Responses such as "none," "not available," or "NA," or even a dash or check mark were counted as a completion of the item.

These seven items were chosen because there appeared to be variability in the frequency with which they were completed. (Other items such as grade, school teacher's name, and name of student were complete in all but 1 to 2% of the cases studied, and therefore such incidences of carelessness had too little variability to be of interest.) Also, they were chosen because acquisition and recording of this information by the teacher required some degree of time and energy and thus might indicate relative degrees of involvement in the referral. Of the 400 cases sampled, only 109 (27%) were found to have all seven items completed while 18 (4.5%) had none of them completed. These data are presented in Table 3.

The second part of the form contained four blank lines in which the teachers could write in their "reason for referral." Of the 400 referrals, only 44 (11%) did not have a single word in this section. The median number of words written was 18.9 ($\bar{X} = 23.7$, $SD = 20.9$). In all the statements which included at least one word, the median number of words was 21.7 ($\bar{X} = 26.6$, $SD = 20.3$).

The third part of the referral form was the 45-item checklist. Only 18 referrals (4.5%) had no problems checked.

Table 3
 Number of Items Missing from Section 1
 of the Referral Form^a

Number of items missing	Frequency	% (<u>N</u> = 400)	Cumulative %
7	18	4.5	4.5
6	6	1.5	6.0
5	10	2.5	8.5
4	14	3.5	12.0
3	36	9.0	21.0
2	94	23.5	44.5
1	113	28.3	72.8
0	109	27.3	100.0

^aKey items were: parents' name, parents' address, father's occupation, mother's occupation, most recent test scores, indication of previous psychological testing.

The final section of the form had two 7-point scales where the teachers could indicate by placing a check mark how well they knew the student and how "easy to like" the student was. Thirty-nine of the referrals (9.8%) failed to indicate how well the teacher knew the student, and substantially more, 81 (20.3%), failed to indicate how easy to like the student was.

The last two lines were for the "signature of person making this referral" and for the "principal's signature." Of the 400 referrals, 351 (87.8%) were signed by the person making the referral (teachers), and 196 (49.0%) were signed also by the principal. There were no instances in which there was a principal's signature without a teacher's signature.

In general, the referral forms were relatively complete with the most notable exception being the rating of how "easy to like" the referred child was where 20% failed to respond. This was probably due more to the embarrassment of rating a child as "difficult to like" than lack of involvement in the referral. Although only about 1/2 of the principals signed the referral, this is not especially significant in terms of completeness. Its inclusion does, however, indicate an extra step in the referral process, and its incidence was taken as the indication that the referral went through the principal before being submitted to the school psychologist (see Figure 1, page 6).

Written-in Reasons for Referral

As mentioned previously, the referral form contained a four-line space in which teachers were allowed to write their reason for referral. These 336 statements were broken down into 11 categories in terms of content. As in any categorization of verbal or written responses, the number of ways in which they may be categorized is extremely large. These 11 were selected for study because of their possible relevance to other referral characteristics as well as outcomes. Some are not mutually exclusive. The names, descriptions, and examples of these categories follow.

1. Social Problem. This category is limited to statements which make reference to the child's behavior (or lack of it) in relation to another child(or other children). Examples: "does not take part in play activities"; "hits and picks on others"; "the children try to ignore him"; "does not have many friends."

2. Study Habit Problem. This category is limited to statements referring to behaviors which are considered to be prerequisites for learning, such as: following directions and attendance, as well as other attributes, such as attention, motivation, and concentration. It also includes statements referring to the outcomes of study habit problems such as "not completing assignment" and "not working up to capacity."

3. Educational Problem. This category refers only to statements concerning the child's lack of acquisition of academic skills (or readiness, as in the case of some very young children). It includes statements which refer to the process of learning (e.g., "unable to

achieve in school work") as well as outcomes ("is reading on 1st grade level"; "cannot grasp word analysis").

4. Discipline Problem. This category includes statements citing problems in behavior, either generally ("is a constant problem in my class"; "disruptive") or specifically ("talks out"; "out of seat"). Many of the statements in this category refer to behaviors which violate school or classroom rules (e.g., "chews gum when told not to"; "smoked marijuana at school"). This category differs from social problems in that disciplinary problems are not limited to behavior which involves other children. Behavior such as "fighting" would be included in both categories since it is a violation of school rules as well as an interaction with another child.

5. Physical Problem. This category is limited to statements referring to some physical or medical condition in the child which is either a possible cause of some other problem ("was premature") or a problem in itself ("eye problem").

6. Emotional/Psychological Problem. This category refers to the existence (or lack) of behaviors which are judged to be emotional responses (e.g., "cries"; "lacks confidence"; "poor self-concept"; "withdrawn"). It also refers to statements made concerning the child's intellectual functioning (e.g., "suspected low functioning"; "seems to lack the ability to do school work").

7. Positive Comment. This category is scored if the statement makes some positive reference to the child. It may be citing of a desired behavior ("is helpful with other children"; "tries hard"; "has

ability") or a reference to the lack of some undesirable behavior (e.g., "is not a discipline problem").

8. Request for Information. This category is scored when the referral statement includes a request for information regarding the child (e.g., "would like to know what her ability is"; "parent wants to know if child should be retained").

9. Gives Diagnosis. This group of statements consists of those which label the child with one or more diagnostic categories (e.g., "seems to be hyperactive"; "is emotionally disturbed"; "seems to have a neurological condition"; "parent told me child had brain damage at birth").

10. Gives Explanation for Problem. This category is scored when the referral statement included a reason, explanation, or cause for the child's problem at school. The reason, explanation, or cause may be physical, medical, cultural, or related to the home environment, and need not be directly related to a specific problem at school. For example, the referral may include "child sleeps with mother," and it may be difficult for the reader to relate this to any problem which the child is having at school. Nevertheless, it should be scored. Other examples: "his brother is retarded"; "was premature at birth"; "mother had trouble with school work"; "parents are divorcing."

11. Gives Recommendation. This category is scored when the teacher recommends or suggests a placement alternative or other outcome which could result from making the referral. Examples: "needs more individual attention"; "needs benefit of resource room"; "will probably become a dropout later unless he repeats a grade now."

Because the categories were not mutually exclusive, each statement may have been scored on more than one. To have constructed mutually exclusive categories would have greatly reduced the amount of information available and would have been inconsistent with the fact that children are usually referred for more than one reason. The frequencies for each category are presented in Table 4.

Problem Checklist

As mentioned previously, the referral form contained a checklist of 45 items, each stating a type of problem which a child might have in school. Of the 45, the last 10 pertained to home-family-type problems, and the teacher was asked to check any which he/she believed were related to the school problems.

The frequencies with which these items were checked by the referrers are presented later in Table 5. The median number of items checked for each student was 10.46 ($\bar{X} = 10.50$, $SD = 5.67$). The modal frequency was 11. Boys had a slightly higher mean (10.83) than girls (9.57).

Clarfield (1972), the developer of the checklist, required teachers filling out the referral form to use a single check mark to indicate "problems which are sufficiently serious to contribute significantly to [the] referral" and double check marks to indicate those "that represent profoundly difficult problems that are markedly interfering with the child's ability to profit from the school experience." In the system under study, only single check marks are used. A rank order correlation of frequencies with which the items were checked

Table 4

Frequencies of Types of Written-in Reasons for Referral Statements

Statement category	<u>f</u>	% of cases (<u>N</u> = 400)
None written	44	11
Problem		
Educational problem	164	41
Study habit problem	106	27
Social problem	67	17
Emotional problem	66	17
Discipline problem	63	16
Physical problem	42	11
Parent request	42	11
Nonproblem		
Positive comment	50	13
Gives explanation for problem	40	10
Gives "recommendation"	30	8
Request for information	22	6
Gives diagnosis	20	5

Table 5

Interrelationship of Problem Checklist Items and Written-in Reasons for Referral

No.	Checklist items (by rank)	Total		Study				Physical problem
		f	%	Education problem	habits problem	Social problem	Emotional problem	
26	Poor concentration and limited attention span	259	64.8	66.5	79.2	64.2	69.7	64.3
25	Difficulty following directions	248	62.0	71.3*	74.5**	50.7	60.6	66.7
29	Reading	221	55.3	70.7***	55.7	47.8	47.0	52.4
22	Not working up to potential in class	220	55.0	37.8*	64.2*	50.7	59.1	40.5
24	Poor work habits	204	51.0	51.8	63.2**	49.3	51.5	42.9
17	Lacks self-confidence	169	42.3	48.2	38.7	40.3	69.7***	42.9
32	Math	164	41.0	51.2***	41.5	37.3	42.4	31.0
1	Fidgety, overactive, can't stay in seat	160	40.0	34.1	51.9**	59.7***	28.8	42.9
23	Poorly motivated to achieve on school work	147	36.8	37.8	48.1**	34.3	33.3	21.4

Table 5, continued

No.	Checklist items (by rank)	Total		Education problem	Study habits problem	Social problem	Emotional problem	Discipline problem	Physical problem
		f	%						
31	Language skills problems, specify	143	35.8	46.3***	34.9	28.4	40.9	25.4	23.8
30	Writing	137	34.3	43.3**	46.2**	35.8	39.4	27.0	33.3
9	Daydreams, is preoccupied	127	31.8	35.4	41.5*	25.4	48.5	25.4	42.9
2	Talks out of turn	116	29.0	25.0	33.0	35.8	16.7*	55.8***	35.7
10	Unable to express feelings	114	28.5	32.9	32.1	31.3	43.9**	20.6	21.4
19	Depends too much on others	113	28.3	32.3	34.0	22.4	42.4**	12.7	33.3
35	Concepts	104	26.0	34.1**	35.8**	20.9	37.9*	25.4	28.6
7	Shy, timid	99	24.8	34.1***	25.5	23.9	47.0***	4.8***	21.4
38	Lack of educational stimulation in the home	99	24.8	25.6	29.2	23.9	22.7	27.0	21.4
6	Impulsive	94	23.5	18.3	30.2	38.8**	19.7	52.4***	26.2
34	Numbers	90	22.5	31.1***	32.1**	20.9	31.8	19.0	21.4

Table 5, continued

No.	Checklist items (by rank)	Total		Education problem	Study habits problem	Social problem	Emotional problem	Discipline problem	Physical problem
		f	T						
----- % -----									
3	Constantly seeks attention, "clowns around"	88	22.0	18.9	27.4	35.8**	15.2	58.7***	16.7
27	Motor coordination problems	85	21.3	24.4	24.5	17.9	27.3	14.3	47.6***
8	Does not make friends; seldom plays with others	83	20.8	20.7	26.4	40.3***	33.3*	20.6	4.8*
5	Defiant, obstinate, stubborn	82	20.5	14.0**	18.9	43.3***	16.7	61.9***	23.8
4	Overly aggressive to peers (fights) is overbearing	79	19.8	15.2	21.7	55.2***	16.7	58.7***	16.7
11	Worried, frightened, tense	78	19.5	18.3	18.9	20.9	34.8***	14.3	21.4
43	Family instability	66	16.5	16.5	22.6	20.9	19.7	23.8	16.7
18	Is overly sensitive to criticism	63	15.8	15.2	14.2	31.3***	22.7	20.6	19.0
39	Economic difficulties	63	15.8	14.6	16.0	14.9	10.6	15.9	14.3
13	Cries easily, pouts, sulks	61	15.3	11.6	19.8	23.9*	21.2	23.9	16.7

Table 5, continued

No.	Checklist items (by rank)	Total f	%	Study					Physical problem
				Education problem	Study habits problem	Social problem	Emotional problem	Discipline problem	
15	Shows other signs of nervousness; specify ____	51	12.8	11.0	12.3	17.8	22.7**	12.7	16.7
20	Pretends to be ill	43	10.8	7.9	13.2	10.4	16.7	9.5	7.1
42	Overprotective parents	40	10.0	3.0***	15.1	10.4	10.6	11.1	7.1
21	Has poor grooming habits or personal hygiene	39	9.8	11.6	12.3	13.4	9.1	12.7	4.8
14	Does not trust others	37	9.3	3.0***	5.7	26.9***	21.6***	23.8***	7.1
33	Colors	33	8.3	8.5	12.3	7.5	18.2**	12.7	7.1
12	Depressed	30	7.5	3.7*	5.7	16.4**	13.6	11.1	2.4
45	Parental rejection	29	7.3	7.3	5.7	7.5	13.6	6.3	0.0
44	Sibling rivalry	28	7.0	3.7	7.5	9.0	10.6	7.9	4.8
36	Illness or death of family member	23	5.8	4.3	8.5	7.5	7.6	11.1	9.5
28	Other, specify ____	19	4.8	5.5	3.8	4.5	9.1	4.8	14.3**

Table 5, continued

No.	Checklist items (by rank)	Total		Study					Physical problem
		f	%	Education problem	Study habits problem	Social problem	Emotional problem	Discipline problem	
41	Under family pressure to succeed	19	4.8	4.9	8.5	6.0	4.5	4.8	7.1
40	Other _____	13	3.3	3.0	2.8	6.0	7.6	1.6	2.4
16	Specific phobia	9	2.3	.6	.9	1.5	7.6**	1.6	0.0
37	Adjustment to foster home placement	9	2.3	1.8	0.0	4.5	1.5	4.8	0.0

* χ^2 , (1), $p < .05$

** χ^2 , (1), $p < .01$

*** χ^2 , (1), $p < .001$

yielded a very high positive correlation between Clarfield's results and those of the present study ($R_s = .89$, $N = 43$, $p < .01$). This suggests that teachers in Knox County, Tennessee, and those in Rochester, New York, respond in a similar way to the school problems they encounter. This may have been due either to similar problems in their respective schools or characteristics of the scale.

Liking and Knowing

The referral form asked teachers to indicate how well they knew the student and how easy the student was to like. Both were measured on scales from 1 to 7. The "knowing" scale had as end points "barely know student" (1) and "know student well" (7). The "liking" scale varies from "student seems difficult to like" (1) to "student seems easy to like" (7). On the 400 referrals, 361 (91%) checked the knowing scale, and 319 (80%) checked the liking scale.

The median response was 4.38 ($\bar{X} = 4.56$, $SD = 1.50$) on the knowing scale and 5.68 ($\bar{X} = 5.36$, $SD = 1.65$) on the liking scale. There was a statistically significant correlation between the two ($r = .25$, $df = 344$, $p < .001$).

Cowen, Lorion, and Wilson (1976) had referring teachers rate students on the basis of knowing and liking on scales that were keyed in just the opposite direction of that in the present study (i.e., "1" represented not knowing and not liking, and "7" represented knowing and liking). The present study found a mean knowing rating of 4.5 ($SD = 1.5$) which was 3.4 scale units from the "know well" end of the scale. Cowen et al. found a mean rating of 3.8 ($SD = 1.6$), thus representing a

difference of only a .4 scale unit difference between the two studies.

There was even greater similarity on the liking scale where Cowen et al. found a mean of 2.8 ($SD = 1.5$) and the converted scale mean from the present study was 2.7 ($SD = 1.6$), thus representing a difference of only .1 scale unit. These results suggest the existence of a position habit in responding to the rating scales.

Teacher ratings of how well they knew the children yielded a low positive correlation with how many words they wrote about the child in the written reason for referral ($r = .12$, $df = 350$, $p < .02$). Ratings of how easy to like the child was weakly negatively correlated with the total number of problems checked ($r = -.21$, $df = 347$, $p < .001$) but had a weak, yet positive correlation with the number of years of experience of the referring teacher ($r = .10$, $df = 291$, $p < .05$). Cowen et al. found a similar relationship between liking and the total number of problems checked. If the total number of problems checked can be assumed to be an indication of the degree of disturbance, the findings from both studies suggest that the "more disturbed" children are generally less well liked.

Discussion

The data from both the problem checklist and the written-in reasons for referral sections clearly show that teachers are primarily concerned with academic/learning problems. There was a total of 4,198 check items across all cases, and 2,055 (49%) of these were from the 13 (29%) of 45 items that referenced problems with either (a) prerequisites to learning (e.g., poor concentration, limited attention span, poor work

habits) or (b) specific academic areas (e.g., reading, writing, math). Nine out of the 11 most frequently checked items fall in one or the other of these two groups. The prevalence of teachers' concern for academic problems was further substantiated by data from the written referral section where Educational Problem and Study Habit Problem were the two most frequently mentioned categories.

The primary concern was clearly with education/learning problems while the second most frequent concern appeared to be with behaviors that disrupt the learning of others. This was evidenced by checklist items such as fidgety, overactive, can't stay in seat; talks out of turn; impulsive; constantly seeks attention; and by the written reasons-for-referral categories, Discipline Problem and Social Problem.

These results from the ~~problem~~ checklist are congruent with results found in the factor solutions of Clarfield (1974) and Lorion, Cowen, and Caldwell (1975). Both of these studies found three main factors which they labeled (in order of variance accounted for) learning problems, acting-out, and shy-anxious.

In the nonproblem categories of the written reason-for-referral statements, an interesting finding was that only one out of eight referrals made a positive comment about the child referred. This may have been partially due to a response set induced by the overwhelmingly negative nature of the referral form in general. Had some items been statements in the opposite form (e.g., "talks only when appropriate" for "talks out of turn") been included, this finding might have been quite different.

CHAPTER IV

INTERRELATIONSHIPS AMONG REFERRAL CHARACTERISTICS

Problem Checklist Items and Written Reasons for Referral

The relationship between the written reasons for referral and the checklist items was assessed by calculating chi-squared coefficients for the two sets of data. The percentages are presented in Table 5, page 41, and summarized here.

Teachers who wrote in their reason for referral that the child had some type of Educational Problem ($N = 164$) were significantly more likely than other teachers ($N = 236$) to mark the following items in the checklist: (7) shy, timid; (25) difficulty following directions; (29) reading; (30) writing; (31) language skills problems; (32) math; (34) numbers; and (35) concepts. They were less likely to check items which describe the child as: (5) defiant, obstinate, stubborn; (12) depressed; (14) does not trust others; (22) not working up to potential; (42) overprotective parents; and (44) sibling rivalry.

Teachers who wrote in their written reason for referral that the child had a problem in the area of Study Habits ($N = 106$) were more likely than the others to check the following items: (1) fidgety, overactive, cannot stay in seat; (9) daydreams, is preoccupied; (22) not working up to potential; (23) poorly motivated to achieve on school work; (25) difficulty following directions; (26) poor concentration and limited attention span; (30) writing; (34) numbers; and (35) concepts.

Teachers who wrote that the child was being referred because of a Social Problem (N = 67) were more likely to check the following items: (1) fidgety, overactive, cannot stay in seat; (3) constantly seeks attention, "clowns around"; (4) overly aggressive to peers (fights), is overbearing; (5) defiant, stubborn, obstinate; (8) does not make friends; (12) depressed; (14) does not trust others; (18) is overly sensitive to criticism.

Teachers who mentioned an Emotional Problem (N = 66) in their written reason for referral were more likely to check items describing the child as: (7) shy, timid; (15) shows signs of nervousness; (16) specific phobia; (17) lack of self-confidence; (19) depends too much on others; (33) colors; (35) concepts. They were significantly less likely to check that the child (2) talks out of turn.

The 63 teachers who included in their written reason for referral that the child was a Discipline Problem were more likely than the other teachers to check the following problems: (1) fidgety, overactive, cannot stay in seat; (2) talks out of turn; (3) constantly seeks attention; (4) overly aggressive to peers (fights), is overbearing; (5) defiant, obstinate, stubborn; (6) impulsive, unable to delay action; (14) does not trust others; (24) poor work habits. They were less likely to check that the child was: (7) shy, timid; (17) lacks self-confidence; (19) depends too much on others.

The 42 teachers who mentioned a Physical Problem in their written reason for referral were more likely than the others to check that the child had a (27) motor coordination problem. They were less likely to check that the child (8) does not make friends, seldom plays with others

and was (23) poorly motivated to achieve on school work.

The 40 teachers who gave an Explanation of why the child was having difficulty were more likely than the others to check the following items: (27) motor coordination; (36) illness or death of family members; (43) family instability. They were less likely to check that the child was not working up to potential in class.

Teachers who gave a Recommendation ($N = 30$) were not significantly more likely to check any item than other teachers. However, they checked the following items significantly fewer times: (1) fidgety, overactive, cannot stay in seat; (2) talks out of turn; (4) overly aggressive to peers; (5) defiant, obstinate, stubborn; (6) impulsive, unable to delay action; (8) does not make friends; and (9) daydreams, is preoccupied.

Teachers who included in their written reason for referral that it was a Parent Request were more likely than other teachers to indicate that the child (9) daydreams, is preoccupied and that (44) sibling rivalry could be related to problems at school. These teachers were less likely than others to check that (43) family instability was related to problems at school.

The overall relationship between the checklist items and the written-in reason for referral is difficult to globally summarize. Nevertheless, a few clusters appear to emerge. For example, there appears to be a group of children who are described by their teachers as having only specific educational problems. Otherwise, these children are mentally healthy and well behaved. This is in contrast to children experiencing academic problems due to problems with the prerequisites of

learning (study habits). These latter children are not likely to be otherwise described as well behaved. Another cluster might be made up of the aggressive, acting-out characteristics, and a final one might be made up of the withdrawn, anxious-type characteristics.

Sex Differences in Referral Characteristics

The sex of the referred child was found to be a significant factor relative to how teachers filled out the referral forms and the types of problems they indicated. In their reasons for referral, teachers wrote more words about girls ($\bar{X} = 25.9$) than boys ($\bar{X} = 22.8$), but they tended to check more problems for boys ($\bar{X} = 10.8$) than girls ($\bar{X} = 9.5$); however, these differences are not statistically significant.

The frequencies of reasons for referral are presented in Table 6 by both boys and girls. The only statistically significant differences between boys and girls were that teachers were more likely to refer boys for Discipline Problems ($\chi^2 = 12.4$, $df = 1$, $p < .001$) and were more likely to Give Recommendations for girls ($\chi^2 = 3.7$, $df = 1$, $p < .05$).

Sex differences were much more pronounced in the checklist. Teachers checked differentially for boys and girls on 13 out of 45 items. Teachers were significantly more likely to check boys as: (1) fidgety, overactive, etc., $\chi^2 = 21.9$, $df = 1$, $p < .0001$; (2) talks out of turn, $\chi^2 = 16.9$, $df = 1$, $p < .0001$; (3) constantly seeks attention, $\chi^2 = 10.7$, $df = 1$, $p < .001$; (4) overly aggressive, etc., $\chi^2 = 4.6$, $df = 1$, $p < .05$; (5) defiant, obstinate, stubborn, $\chi^2 = 10.2$, $df = 1$, $p < .002$; (6) impulsive, unable to delay action, $\chi^2 = 15.2$, $df = 1$, $p < .001$; (24) poor work habits, $\chi^2 = 11.6$, $df = 1$, $p < .001$; (25) difficulty

Table 6

Frequencies of Types of Statements in the Written
Reason-for-Referral Section:
Broken Down by Sex

Statement category	Sex			
	Boys		Girls	
	f	%	f	%
Social problem	55	18.8	12	11.2
Study habits problem	80	27.3	26	24.3
Educational problem	114	38.9	50	46.7
Discipline problem	58	19.8	5	4.7***
Physical problem	29	9.9	13	12.1
Emotional problem	47	16.0	19	17.8
Positive comment	31	10.6	19	17.8
Request for information	13	4.4	9	8.4
Gives diagnosis	15	5.1	5	4.7
Gives explanation for problem	27	9.2	13	12.1
Gives recommendation	17	5.8	13	12.1

* $p < .05$

*** $p < .001$

following directions, $\chi^2 = 7.6$, $df = 1$, $p < .01$; (26) poor concentration, limited attention span, $\chi^2 = 9.13$, $df = 1$, $p < .01$; and (27) motor coordination problem, $\chi^2 = 4.0$, $df = 1$, $p < .05$. They were significantly more likely to check girls on the following: (7) shy, timid, $\chi^2 = 4.4$, $df = 1$, $p < .05$; (19) depends too much on others, $\chi^2 = 5.4$, $df = 1$, $p < .02$; and (32) math, $\chi^2 = 9.8$, $df = 1$, $p < .001$.

SES Differences in Referral Characteristics

To determine if schools with different socioeconomic status referred different types of problems, the schools were divided into two groups based on the percentage of "low-income" families residing in their respective attendance areas. Schools with more than over 17% of the families designated as low income comprised the "lower SES" group while those with less than 17% made up the "higher SES" group. Analysis of the types of problems referred produced the following results:

(a) low SES schools were less likely to refer children for the checklist problem of "nervousness," $\chi^2 = 3.89$, $df = 1$, $p < .05$, but referred a greater proportion of academic problems such as "reading" ($\chi^2 = 3.84$), "writing" ($\chi^2 = 4.86$), "language skills problems" ($\chi^2 = 5.68$), and "colors" ($\chi^2 = 6.23$); (b) teachers at lower SES schools were more likely to check "lack of educational stimulation in the home" ($\chi^2 = 3.77$) and "economic difficulties" ($\chi^2 = 5.9$) as related to school problems; (c) surprisingly, teachers from lower SES schools were more likely to check "overprotective parents" ($\chi^2 = 3.88$) as related to children's problems at school, although they were less likely to indicate in the written referral section that the reason for referral was a "parent request" ($\chi^2 = 3.96$).

Teacher Experience and Referral Characteristics

The number of years taught was found to correlate with several aspects of referral in terms of form and content. Correlation of the number of words written in the reason for referral and the number of years of teaching experience showed a small but significant negative relationship, $r = -.13$, $df = 335$, $p < .01$. This suggests that the longer a person has taught, the less likely they are to write extensive reasons for referring a child. There was no relationship, however, between teacher experience and the total number of items checked on the problem checklist. Teacher experience correlated positively with ratings of how "easy to like" the child was, $r = .10$, $df = 291$, $p < .05$. The more experienced teachers like the children they refer a little more (the wisdom/tolerance of experience?).

The degree to which teacher experience related to other variables was further analyzed by dividing them into two groups and using chi-squared. The less experienced group includes teachers with 6 or less years of teaching ($N = 179$) and the more experienced group those with 7 or more years ($N = 157$). The two groups were found to be similar in most respects in referring children. The more experienced teachers referred a slightly greater percentage of boys (74.5%) than did the less experienced teachers (69.3%). The referral forms submitted by the more experienced teachers had a significantly greater number of principals' signatures on them, $\chi^2 = 6.72$, $p < .05$. The two groups, however, showed no differences in carefulness in signing their own referrals. The two groups were identical ($\bar{X} = 4.54$) in reporting how

well they knew the students they were referring. As shown in the correlational data above, the more experienced teachers rated their referrees as easier to like ($\bar{X} = 5.54$, $SD = 1.44$) than did the less experienced group ($\bar{X} = 5.31$, $SD = 1.55$). This difference, however, was not statistically significant.

Frequencies of written reason for referral were compared for the two groups. The only significant difference between them was that the less experienced teachers reported more Educational Problems than the more experienced group ($\chi^2 = 6.75$, $df = 1$, $p < .05$).

A comparison of frequencies of items checked on the problem checklist indicated that the less experienced teachers were more likely to check that the child "is overly sensitive to criticism" ($\chi^2 = 6.75$, $df = 1$, $p < .01$) and "family instability" as being related to the problems the child was having at school ($\chi^2 = 4.32$, $df = 1$, $p < .05$).

Relationships Among Indices of Completeness

The number of items which the teachers completed in the first part of the referral form (e.g., parents' occupation, previous test scores, etc.) was found to correlate weakly but positively with the number of words they wrote in the reason for referral section, $r = .10$, $df = 398$, $p < .01$. However, neither of these related to the total number of items checked on the problem checklist. This suggests that the propensity to write extends across sections of the form and does not relate to propensity to check. The fact that the former is a type of verbal behavior and the latter is a locomotor response to verbal stimuli may account for some of the difference.

Interestingly, the number of words which teachers wrote correlated positively with their ratings of how well they knew the child, $r = .12$, $df = 351$, $p < .01$, while the total number of problem items they checked correlated negatively with their ratings of how easy the child was to like, $r = -.21$, $df = 347$, $p < .001$. Whether this is a difference between children or between teachers or among interactions is moot.

Discussion

The fact that 58 (21%) of the 270 crosstabulations between the checklist items and the written referral categories obtained significant chi-squares attests to the consistency with which teachers filled out the forms. Most of these, however, were to be expected. For example, that teachers who write about Educational Problems check items such as "reading," "math," and "difficulty following directions" should be no surprise. However, some of the "unexpected" relationships which emerged may be of benefit in enabling a more accurate specification of what children are referred for and for what reasons. For example, teachers who write in their reason for referral that a child has educational problems are also more likely to check the child as shy and timid but less likely to describe the child as defiant, obstinate, stubborn; depressed, not trusting others; and not having overprotective parents. This tends to suggest that either (a) children who have only educational problems are generally well adjusted otherwise or (b) teachers who are primarily concerned about educational problems are different from other teachers in that they tend to ignore some of the nonacademic types of problem behaviors.

Except for the fact that teachers saw girls as having more math problems, there was little difference between the two sexes in terms of academic/learning problems. However, in terms of emotional/social behavior, the differences were considerable. Boys were much more likely to be described as having aggressive "acting-out" characteristics such as talking out of turn, seeking attention, impulsive, fidgety, overactive, discipline problem, etc., whereas girls were described as shy, timid, and too dependent on others. The only noteworthy aspect of these descriptions is how well they conform to "stereotypic" notions of sex-role behaviors. Also, it is interesting to note that teachers gave significantly more recommendations with girl referrals as if they were more concerned for or protective of them.

The lack of relationships between teacher experience and various referral characteristics was notable and suggests that relatively inexperienced teachers find the same problems as more experienced ones. That the less experienced teachers were more likely to write about Educational Problems was of interest since it goes against the notion that older teachers are more traditional and thus place more emphasis on the "3 R's."

The comparison of referral characteristics between higher and lower SES schools was marked by a noticeable lack of differences in the referral of behavior problems. Although White and Charry (1966), in a study of referrals from suburban Westchester County, New York, found significantly more referrals for "acting-out" behavior problems in lower SES schools, this trend does not appear to apply here. This may be partially accounted for by the limited range of SES in Knox County

Schools where only one very low SES school (Vestal) was extremely different from the others. Also, the identification of behavior problems is probably norm-referenced within school or class and what is excessive in one may be acceptable in another.

Instead of referring more behavior problems, lower SES schools referred significantly more academic-type problems.

CHAPTER V

OUTCOMES

The dispositions for the referred children fall into three main classes of outcomes: (1) placements in special programs within the child's school; (2) further referral either to another service within the school system; or (3) referral to some agency outside the system. In a large percentage of cases, an intermediate result of referral would be testing by the school psychologist. Since testing is not assumed to be any type of final disposition (in a few cases, unfortunately, it was terminal), it will be considered prior to the discussion on the main classes of outcomes.

Figure 11 presents a flowchart highlighting the proportion of cases which fall into the three main classes of outcomes and the routes taken to get there. (In 13% of the cases more than one outcome resulted as they are not mutually exclusive. The flowchart presents total outcomes and thus it may appear that the system "output" more children than it took in.)

Tests Administered and Results

At least one test was given to 339 (85%) of the children. Intelligence tests were given to 283 (71%) of the children in the sample. Of these, 225 received one of the Wechsler Scales and 58 received Stanford-Binets. The other frequently administered test was one or more of the subtests from the Wide Range Achievement Test:

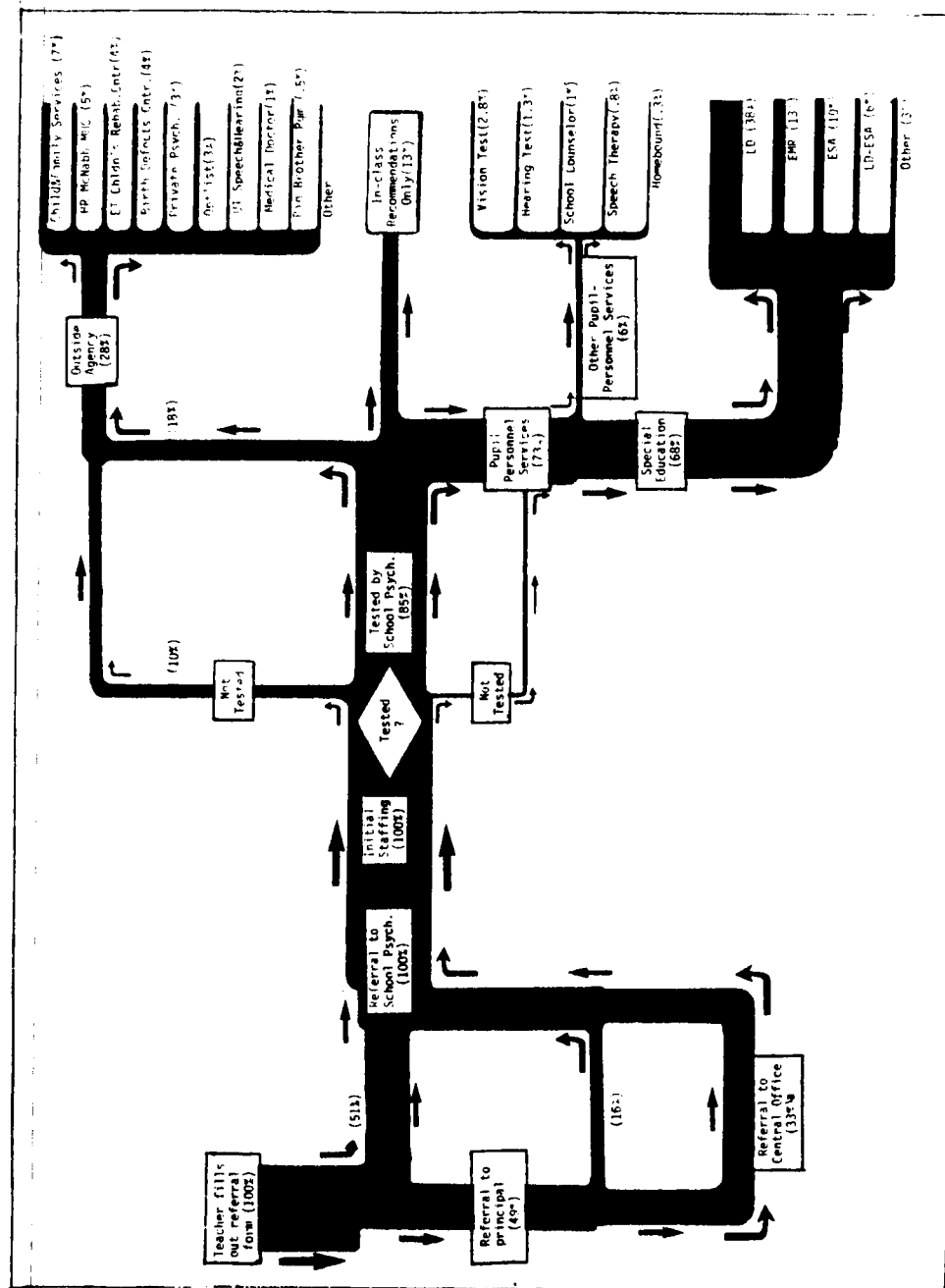


Figure 11. Flowchart of Knox County Schools pupil personnel referral/outcome traffic.^b

^aAll referrals before 1974-75 school year went through central office.

^bWidths of lines indicate percentages of total cases (N = 400).

Reading, $N = 258$; Spelling, $N = 106$; and Arithmetic, $N = 249$. The Bender-Gestalt was administered to 301 (75%) of the sample.

The mean I.Q. score for the 339 children who received intelligence tests was 86.7 ($SD = 16.06$). Of note was a significant difference between boys with a mean of 88.10 and girls with a mean of 83.23 ($T = 2.32$, $df = 281$, $p < .05$). This suggests that either boys are referred for something other than intellectual deficiency or that girls must have a more significant problem in this area before teachers will refer them.

Scores from the Wide Range Achievement Test (WRAT) yielded mean grade level equivalency scores of 2.94 in Reading ($N = 258$, $SD = 2.13$), 2.51 in Spelling ($N = 106$, $SD = 1.67$), and 2.75 in Arithmetic ($N = 249$, $SD = 1.38$). When these scores were compared with the respective grade levels in which the children were enrolled, the results show that the children were an average of 1.5 grades behind in reading and 1.4 grades behind in math. There were no significant differences between boys and girls on the WRAT.

The number of days between when the child was referred and when he/she was tested was computed for each child. These data are presented in Figure 12 as cumulative percentages. The modal number of days are 7. This, of course, is exactly 1 week and corresponds to the interval at which most school psychologists in Knox County visit each of their schools. The data presented in the figure are based on calendar days (not elapsing successive school days) and thus do not take account of holidays, summer vacations, weekends, etc.

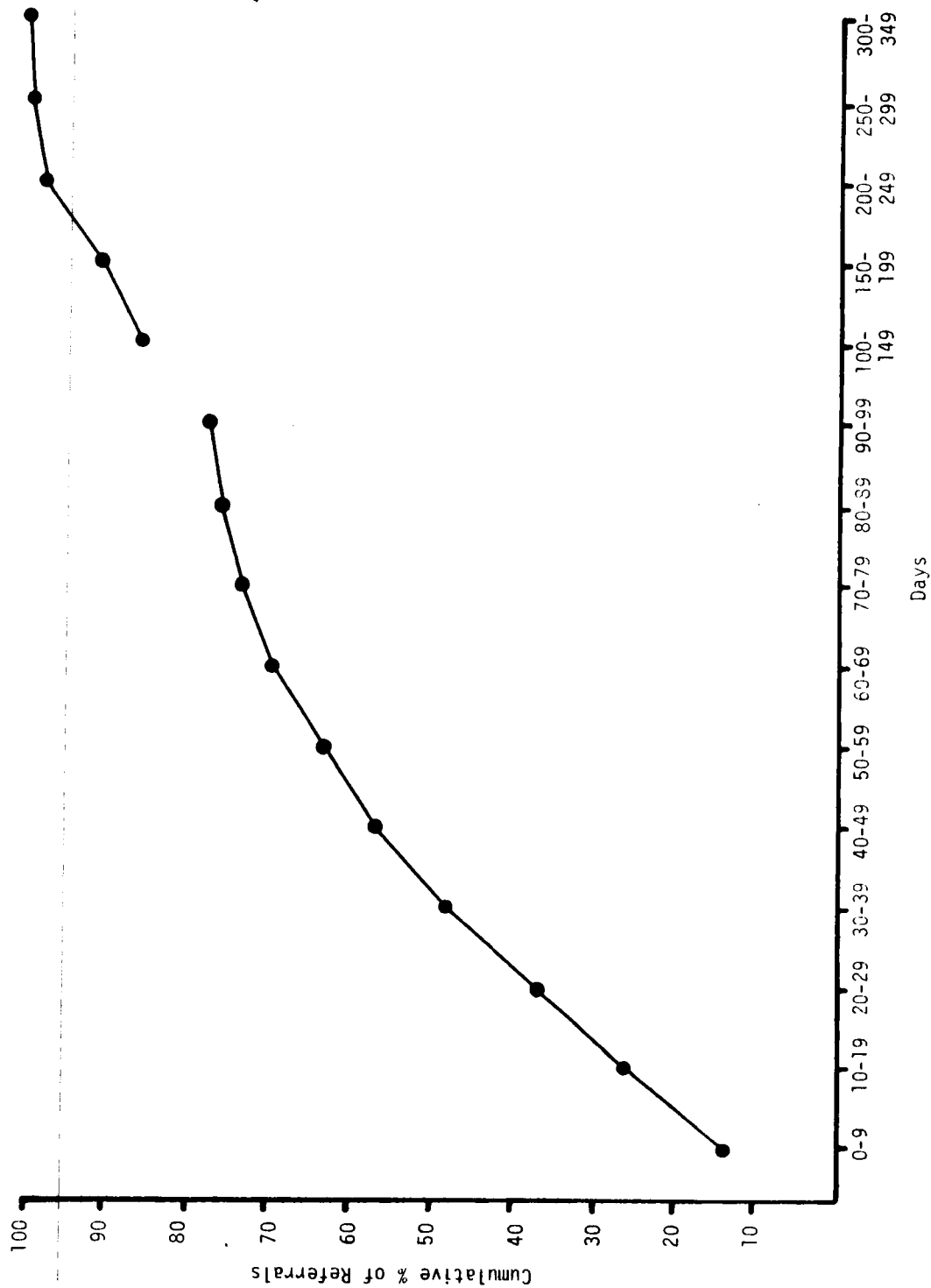


Figure 12. Elapsed calendar days between date of referral and date of testing.

Figure 13 shows a semilog probability plot of the elapsed time (in calendar days) between date of referral and date of testing. The fact that the points between 0 and 219 days approach linearity suggests that the behavior of the system in terms of "reaction time" in responding to referrals is similar to the power functions as discussed in some of the psychophysical literature (Stevens, 1975). The inflection around 250 to 270 days probably represents those children referred in the latter part of September and early part of October (the time of highest referral rate) who had to wait over the summer and be tested the following fall. Likewise, the small inflection at about 100 days most likely corresponds to Christmas vacation when, as during summer, little or no testing is done. The data suggest that after a child has waited a year (365 calendar days), the system reacts differentially, and the children are tested at a rate higher than that expected from a log-normal distribution. This is evidenced by the greater slope at the top end of the distribution.

Within-School Outcomes--Special Education Placement

By far, the most frequent type of outcome of being referred was placement in one of four types of special education programs. Of the 400 children, 155 (39%) were so placed. Within the special education programs, by far the most frequent was placement in a resource program for learning disabilities (LD). Children placed in resource programs normally leave their regular classroom for about an hour a day and go to the school's "resource room" to receive individual or small-group instruction in the deficient area(s). Usually this area is reading. One hundred

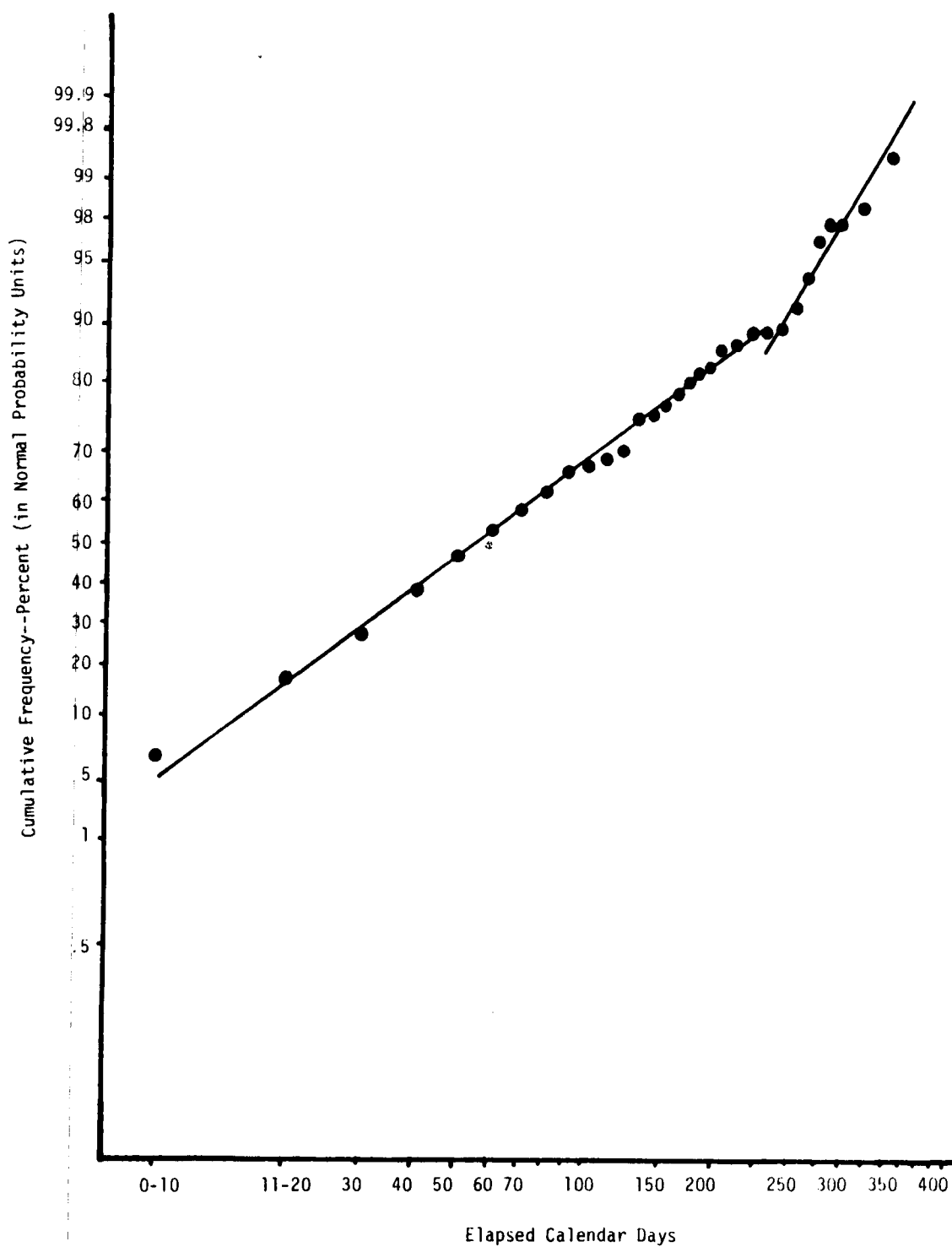


Figure 13. Semi-log probability plot of elapsed calendar days between date of referral and date of testing.

fifty-two (38%) of the referred children in this investigation were placed in such programs.

Six (1.5%) were designated as "LD consultative." In this type of placement, the special education resource teacher consults with the student's regular classroom teacher to provide indirect assistance and special materials for the child.

The second most frequently occurring special education placement was in one or another program for the educably mentally retarded (EMR). Ordinarily, to fall into this status, the child must have scored below 75 on an individually administered intelligence test. Of all the children referred, 52 (13%) were placed in EMR programs. For children designated "EMR," placement options were more variable than in the case of LD children. At the elementary and middle school levels, EMR children are usually placed in the school's resource program along with LD children and frequently work on the same types of basic skills. Some of these children may spend most of the day in the resource room. At the high school level, most EMR children are placed in special vocational programs at their schools for most of the school day. The exact amount of time these children spend in special programs was not obtained.

The third most frequent type of school placement was in programs for emotional and social adjustment problems (ESA). There were 38 children who were placed in such programs. A child could not be designated "ESA" unless the school which he or she attended employed a resource teacher with training or experiences in working with emotionally disturbed/behavior-problem children.

A final type of special education placement was in programs for children designated as LD-ESA. Normally children in this category had both academic and behavior problems and received services from both the school's resource teacher and two itinerant specialists trained in working with children who have emotional/behavior problems. There were 24 (6%) children who were designated as LD-ESA, 15 in the 1974-75 school year alone. In the combined 1975-76 and 1976-77 school years, only 3 children were placed in LD-ESA programs; it appears that this category may be becoming extinct.

Within-System, Outside-School Outcomes

A second class of within-the-system outcomes for the referred child is further referral to other services within the Department of Pupil Personnel. Twenty-four (24) children in the sample were so referred during the 5 years of this study. Table 7 shows the frequencies of the outcomes. These data, taken from the reports of school psychologists, may not include all the referrals made to these services for these children since such referrals are frequently made informally and, hence, are not written into the recommendations section of the reports.

Referrals to Outside Agencies

The third class of outcomes of referrals to school psychologists was made up of those cases in which the child, his/her family, or both, were further referred, this time to one or another agency outside of the school system. Table 8 shows frequencies of referral to outside agencies. It is important to note that these data, like those pertaining

Table 7

Referrals Made to Services Within the Department of Pupil
Personnel as a Result of Referral to
Psychological Services

Service	<u>N</u>
Vision evaluation	11
Hearing evaluation	5
School counselor	4
Speech therapy	3
Homebound instruction	1

Table 8

Referrals to Outside Agencies as an Outcome of
Being Referred to Psychological Services

Agency	<u>N</u>
Child and Family Services	26
Helen Ross McNabb Mental Health Center	19
East Tennessee Children's Rehabilitation Center	15
Birth Defects Clinic	14
Optometrist/Ophthalmologist	12
Private Psychologist/Psychiatrist	11
The University of Tennessee Speech and Hearing Clinic	6
Medical Doctor	6
Big Brother	1
TOTAL	110

to within-the-system referrals, were taken from the psychological reports which accompanied the 400 sample referrals. There may have been many more referrals to outside agencies made by school psychologists which were not written down in the recommendations in the reports. There are no data as to whether the child arrived at the referral agency or what happened to him/her there.

Discussion

For 85% of the children in the sample, the first result of being referred was the administration of at least one of several types of "psychoeducational" tasks. The majority of them were given a WISC-R, WRAT, Bender-Gestalt, and one of the projective drawing techniques. The percentage of children tested is much greater than that reported in other studies. White and Charry (1966) reported that only 20.4% of the children in their sample were given intelligence tests, and only 14.4% were given "personality tests." In another study of a referral population, Robbins, Mercer, and Meyers (1967) found that 30% of their cases were tested after referral. The large percentage of children tested in the present study may have been artificially inflated by a sampling biasing factor which excluded unwritten, informal referrals from the sample. (This is discussed further in an earlier section on limitations of the data.) Nevertheless, the fact that school psychologists in the system spend much of their time processing referrals is supported by data showing that principals estimate that 42% of their time is used in this manner (Carroll, 1977). Much of the testing is necessary to comply with state regulations and local policies which

require this type of documentation for placement in special education programs.



CHAPTER VI

INTERRELATIONSHIPS AMONG OUTCOMES AND REFERRAL CHARACTERISTICS

Referral Characteristics and Special Education Placements

The relationship between what teachers wrote in terms of written-in reasons for referral and the type of special education placement as an outcome of that referral was assessed by calculating chi-squared coefficients. The results are shown in Table 9. Those which obtained statistical significance are summarized as follows: (1) When compared with all other children in the sample, those who were eventually placed in a program for learning disabilities (LD) were more likely to have been initially described as having Study Habits Problems ($\chi^2 = 5.80$, $df = 1$, $p < .05$) and Educational Problems ($\chi^2 = 29.43$, $df = 1$, $p < .001$) but were less likely to have been described as having a Discipline Problem ($\chi^2 = 6.96$, $df = 1$, $p < .05$). (2) When compared with all other children referred, those who were eventually placed in EMR programs were less likely to have been originally referred because of Study Habits Problems ($\chi^2 = 4.48$, $df = 1$, $p < .05$). When compared with other children, those eventually labeled as having emotional and social adjustment (ESA) problems were more likely to have been initially described as having Social Problems ($\chi^2 = 11.04$, $df = 1$, $p < .001$) and Discipline Problems ($\chi^2 = 22.89$, $df = 1$, $p < .001$) but were less likely than others to be referred because of Physical Problems ($\chi^2 = 6.73$, $df = 1$, $p < .01$).

Table 9

Frequencies of Types of Statements in the Written Reason-
for-Referral Section: Broken Down by
Special Education Placement

Statement category	Special education placement					
	LD		EMR		ESA	
	f	%	f	%	f	%
Social problem	25	14.5	6	11.5	19	31.1***
Study habits problem	56	32.4*	7	13.5*	15	24.6
Educational problem	94	54.3*	22	42.3	19	31.1
Discipline problem	19	11.0*	7	13.5	22	36.1***
Physical problem	21	12.1	4	7.7	1	1.6**
Emotional problem	29	16.8	10	19.2	11	18.0
Positive comment	17	9.8	5	9.6	8	13.1
Request for information	11	6.4*	3	5.8	5	8.2
Gives diagnosis	12	6.9	2	3.8	3	4.9
Gives explanation for problem	18	10.4	4	7.7	9	14.8
Gives recommendation	11	6.4	4	7.7	1	1.6

* χ^2 , $df = 1$, $p < .05$

** χ^2 , $df = 1$, $p < .01$

*** χ^2 , $df = 1$, $p < .001$

In terms of liking and knowing, the only significant difference was that teachers indicated that they did not know children who were later placed in EMR as well as the other students they referred.

Children placed in both LD and EMR programs were originally described as having more educational type problems than other referred children. Whereas LD children were more likely to have been described as shy, timid, unable to express feelings, and too dependent on others, EMR children were described as having problems with lack of educational stimulation at home and economic difficulties. This latter finding is consistent with data obtained on the relationship between SES and EMR placement.

ESA and LD-ESA children were more likely to have been originally seen as having more of the "acting-out"-type behavior problems. These data are presented in Table 10.

Children placed in various special education programs also differed in other "nonproblem" aspects of the written referral section. Teachers wrote significantly fewer words about children who were later placed in EMR programs than other children, $T = 2.58$, $df = 397$, $p < .01$. Also, teachers were less likely to have indicated that the referrals were Parent Requests for children later placed in EMR programs, $\chi^2 = 3.7$, $df = 1$, $p < .05$. Teachers were more likely to have written as a reason for referral that it was a Request for Information for children later placed in LD programs than for other children, $\chi^2 = 4.5$, $df = 1$, $p < .02$.

Table 10

Relationship Between Problem Checklist Items and Special Education Placement Outcomes

No.	Checklist item	Total f %					LD-ESA
				LD	EMR	ESA	
							-----%
26	Poor concentration and limited attention span	259	64.8	67.7	67.3	68.4	83.3
25	Difficulty following directions	248	62.0	69.0*	63.5	60.5	70.8
29	Reading	221	55.3	65.2**	75.0**	50.0	66.7
22	Not working up to potential in class	220	55.0	62.6*	51.9	63.2	79.2*
24	Poor work habits	204	51.0	53.5	44.2	60.5	75.0*
17	Lacks self-confidence	169	42.3	42.6	48.1	42.1	41.7
32	Math	164	41.0	47.1	59.6**	31.6	41.7
1	Fidgety, overactive, can't stay in seat	160	40.0	37.4	26.9	55.3	45.8
23	Poorly motivated to achieve on school work	147	36.8	40.0	46.2	39.5	54.2
31	Language skills problems, specify _____	143	35.8	41.9*	38.5	39.5	29.2

Table 10, continued

No.	Checklist item	Total		LD	EMR	ESA	LD-ESA
		f	%				
30	Writing	137	34.3	44.5***	40.4	28.9	41.7
9	Daydreams, is preoccupied	127	31.8	33.5	26.9	36.8	37.5
2	Talks out of turn	116	29.0	25.8	25.0	44.7*	33.3
10	Unable to express feelings	114	28.5	36.1**	32.7	34.2	20.8
19	Depends too much on others	113	28.3	35.5**	28.8	18.4	33.3
35	Concepts	104	26.0	31.6	40.4*	23.7	29.2
7	Shy, timid	99	24.8	31.6**	30.8	18.4	20.8
38	Lack of educational stimulation in the home	99	24.8	24.5	53.8***	18.4	16.7
6	Impulsive, is unable to delay action	94	23.5	20.6	13.5	36.8	33.3
34	Numbers	90	22.5	31.6***	26.9	10.5	16.7
3	Constantly seeks attention, "clowns around"	88	22.0	18.1	17.3	39.5**	33.3
27	Motor coordination problems	85	21.3	27.7**	15.4	13.2	16.7

Table 10, continued

No.	Checklist item	Total		LD	EMR	ESA	LD-ESA
		f	%				
8	Does not make friends, seldom plays with others	83	20.8	20.0	26.9	28.9	25.0
5	Defiant, obstinate, stubborn	82	20.5	18.1	15.4	44.7***	29.2
4	Overly aggressive to peers (fights), is overbearing	79	19.8	17.4	9.6	34.2*	37.5*
11	Worried, frightened, tense	78	19.5	15.5	19.2	18.4	16.7
43	Family instability	66	16.5	12.9	23.1	28.9	33.3*
18	Is overly sensitive to criticism	63	15.8	13.5	9.6	18.4	20.8
39	Economic difficulties	63	15.8	15.5	32.7***	10.5	16.7
13	Cries easily; pouts; sulks	61	15.3	16.1	19.2	18.4	12.5
15	Shows other signs of nervousness; specify _____	51	12.8	10.3	11.5	13.2	8.3
20	Pretends to be ill	43	10.8	7.7	19.2	10.5	12.5
42	Overprotective parents	40	10.0	7.7	3.8	21.1*	4.2
21	Has poor grooming habits or hygiene	39	9.8	9.7	13.5	13.2	25.0*

Table 10, continued

No.	Checklist item	Total		LD	EMR	ESA	LD-ESA
		f	%				
14	Does not trust others	37	9.3	5.2*	11.5	21.1*	16.7
33	Colors	33	8.3	11.6	7.7	7.9	8.3
12	Depressed	30	7.5	4.5	9.6	10.5	4.2
45	Parental rejection	29	7.3	5.2	7.7	10.5	12.5
44	Sibling rivalry	28	7.0	5.8	7.7	10.5	12.5
36	Illness or death of family member	23	5.8	3.9	11.5	13.2	8.3
28	Other, specify _____	19	4.8	5.2	3.8	0.0	4.2
41	Under family pressure to succeed	19	4.8	5.2	0.0	7.9	8.3
40	Other _____	13	3.3	4.5	1.9	2.6	4.2
16	Specific phobia	9	2.3	2.6	0.0	0.0	0.0
37	Adjustment to foster home placement	9	2.3	1.9	1.9	5.3	4.2

* χ^2 , (1), $p < .05$ ** χ^2 , (1), $p < .01$ *** χ^2 , (1), $p < .001$

Test Scores and Special Education Placement

The mean Full Scale I.Q. score for all children who were tested in the sample was 86.7. Children placed differentially in the special education programs had the following mean Full Scale I.Q. scores: LD, 87.2 ($SD = 11.4$); EMR, 67.7 ($SD = 10.42$); ESA, 91.0 ($SD = 16.7$). Only the EMR group was significant below the total mean ($T = 10.26$, $df = 281$, $p < .001$), and this was to be expected since a child must have an I.Q. score of less than 75 in order to be designated as EMR.

The only other significant test score difference was that children who scored significantly lower than others on the Wide Range Achievement Test Reading Subtest ($T = 4.4$, $df = 225$, $p < .001$) and Arithmetic Subtest ($T = 3.25$, $df = 225$, $p < .001$) were more likely to be placed in LD programs. These differences, however, are difficult to interpret since the scores were reported as grade equivalents and thus are meaningful only when the individual child's grade placement is taken into account.

School SES and Outcomes

For the purpose of analysis, the schools were divided into two groups on the basis of the percentage of low-income families residing in their attendance areas. The percentage of low-income families was assumed to be a fairly reliable indicator of the socioeconomic status of the school. Schools with over 17% of their families designated as low income made up the "lower SES" schools and those with less than 17% comprised the "higher SES" schools. (This split is the same used by

the school system to determine eligibility for ESEA Title I funding.) While lower SES schools comprised 31% of the total County enrollment, they accounted for 42% ($\chi^2 = 13.6$, $df = 1$, $p < .001$) of the total referrals in the sample and 46% of the Special Education placements ($\chi^2 = 5.1$, $df = 1$, $p < .05$). When broken down by type of placement, the data showed that while the lower SES elementary schools (grades K through 8) made up 42% of the referrals, they accounted for 64% of the elementary EMR placements ($\chi^2 = 7.89$, $df = 1$, $p < .01$); 40% of the LD placements; 47% of the ESA placements; and 40% of the LD-ESA placements.

There were also significant differences in the test scores of children referred from higher and lower SES schools, as shown in Table 11; the mean Full Scale I.Q. score of children referred in the higher SES schools ($\bar{X} = 90.03$, $SD = 16.4$) was substantially greater than that of children referred from lower SES schools ($\bar{X} = 83.59$, $SD = 14.6$, $T = -3.46$, $df = 275$, $p < .001$). Contrary to popular notions regarding the difference between Verbal and Performance "intelligence," children referred from lower SES schools scored no better on the Performance than on the Verbal section of the WICS-R. In fact, the difference between their scores and those of higher SES school children was larger on the Performance section than on the Verbal. The children referred from lower SES schools also performed less well on the reading and arithmetic tests of the Wide Range Achievement Test with a grade deficit of 1.8 in reading and 1.8 in arithmetic. This was significantly lower than those obtained by referrals from higher SES schools who had deficits of 1.1 in reading and 1.2 in arithmetic.

Table 11

Outcome Differences of Children Referred in Higher and
Lower SES Elementary Schools

Outcome	School SES	
	Lower	Higher
Percent of referrals placed in a Special Education program	73.6 ^{*a}	62.3
Percent of referrals placed in Learning Disabled programs	38.6	40.6
Percent of referrals placed in EMR programs	17.2 ^{**a}	7.0
Percent of referrals placed in ESA programs	11.0	9.0
Mean Full Scale I.Q.	84.1	91.7 ^{***b}
Mean Verbal I.Q.	85.5	91.5 ^{*b}
Mean Performance I.Q.	85.6	92.44 ^{**b}
Mean reading deficit	1.8	1.2
Mean arithmetic deficit	1.8	1.5

^{*a}_p, $\chi^2 < .01$

^{**a}_p, $\chi^2 < .01$

^{*b}_p, $t < .05$

^{**b}_p, $t < .01$

^{***b}_p, $t < .001$

Children from higher and lower SES schools also differed in terms of frequencies of referral to various outside agencies. These data are shown in Table 12. Of note, only one child from lower SES schools was referred to a private psychologist.

Special Education Placements by School Year

Figure 14 shows that the percentage of referred children placed in special education programs rose each year between the 1972-73 and the 1976-77 school years. About 40% of the children referred during the 1972-73 school year were placed in some type of special education program, whereas about 80% of those referred during the 1976-77 school year were placed in such programs. Much of this increase was due to the increasing percentage of referred children placed in LD programs as shown in Figure 15. Possibly, teachers were becoming more skilled in submitting a greater percentage of "appropriate" referrals; a more plausible explanation that the increase during the period when the number of special education programs available allowed places for an increasing number of children.

Outcomes by Grade Level

The type of placement for children was found to vary with grade from which the child was referred. The percentage of referred children being placed in LD programs is greatest in the first three grades, while placements in EMR programs are more evenly distributed across grades. As presented in Figure 14, the data show that between Kindergarten and the seventh grade, a referred child is more likely to be

Table 12

Outside Referrals for Higher and Lower SES Schools

Agency	School SES		Total (<u>N</u> = 400)
	Lower (<u>N</u> = 164)	Higher (<u>N</u> = 236)	
Child and Family Services	8	18	26
Helen Ross McNabb Mental Health Center	9	10	19
East Tennessee Children's Rehabilitation Center	9	6	15
Birth Defects Center	10	4	14
Optometrist/Ophthalmologist	6	6	12
Private Psychologist/ Psychiatrist	1	10	11
Medical Doctor	2	4	6
The University of Tennessee Speech and Hearing Center	1	5	6
Big Brother Program	1	0	1
TOTAL	49	61	110

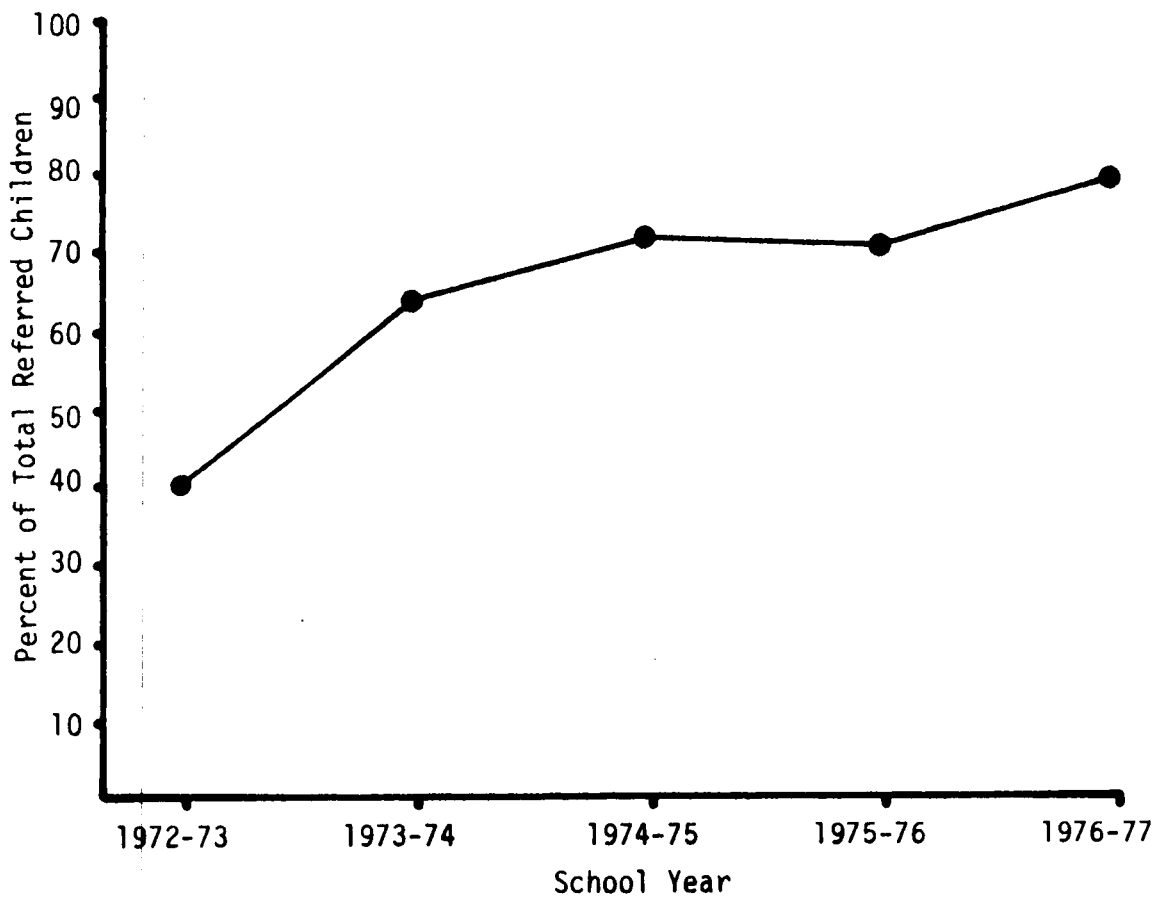


Figure 14. Percentage of annual referrals placed in Special Education programs.

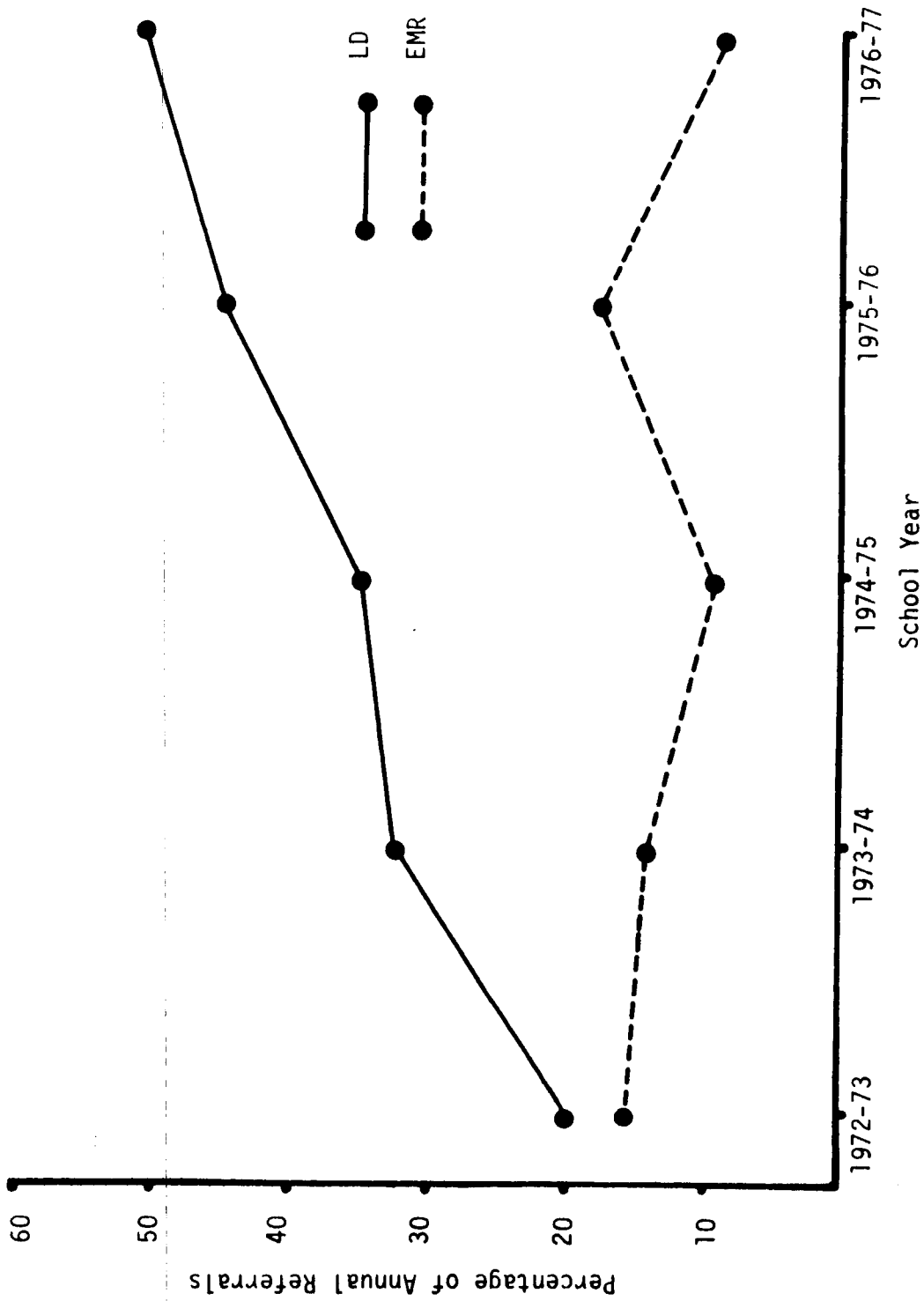


Figure 15. Percentages of total annual referrals placed in LD and EMR placements by school year.

placed in an LD program but after the seventh grade is more likely to be designated EMR. This is possibly due to increased instructional resources for EMR children at the high school level as well as a reluctance on the part of school psychologists to label a child an EMR at an early age.

Special Education Placement and Retention

As noted in Chapter II, 27.3% of the children in the sample had been previously retained in grade placement. A high proportion of these children were placed in EMR programs. Of children going into LD, ESA, and LD-ESA programs, an average of 26% had been previously retained, whereas 65% of the children placed in EMR programs were at least one grade behind, $\chi^2 = 41.6$, $df = 1$, $p < .0001$.

To some degree this answers a question posed earlier concerning the relationship between retention and referral. These data suggest that most of the children who are retained and then referred are eventually labeled "EMR." This is quite possible since the referral characteristics of EMR children suggest that they lack discipline problems and are generally less well known by their teachers. Most likely they were relatively unnoticed until referred and identified as EMR (at which time it may have been realized that the reason for their lack of academic success was not "laziness" after all).

Discussion

As noted above, the fact that the number of children diagnosed as learning disabled increases substantially over the 5-year period

which the sample covered was probably related to an increase in the number of programs for such children. While it could be stated that there would have been no purpose in labeling a child as learning disabled unless there was a "program" available, the argument could also be made that the incidence of learning disabilities is directly related to the number of programs available for treating such problems. Whether this is a matter of "finding children to meet the needs of programs" (rather than vice versa) is a question beyond the scope of this dissertation. However, the substantial increase in the number of children so labeled, as well as increases in programs and the necessary funding, is a matter badly in need of further program research.

The data which showed that 65% of the children placed in EMR programs had been previously retained are significant. As noted previously, the school system's policy stated that children with "learning problems" are not to be retained; however, these data suggest that they are retained prior to being so designated. The fact that a much greater percentage of these are eventually labeled EMR rather than LD could possibly be related to the later grade levels at which more children are labeled EMR. Children at higher grades have been retained and, as shown in Figure 16, designation as EMR (as opposed to LD) tends to cluster in the higher grades.

As noted, the diagnosis of children as LD tends to be concentrated in the lower grades and is most likely a function of both the greater availability of LD programs at that level as well as possible reluctance on the part of school psychologists to label younger children as "retarded." Since the designation of a child as EMR is primarily a

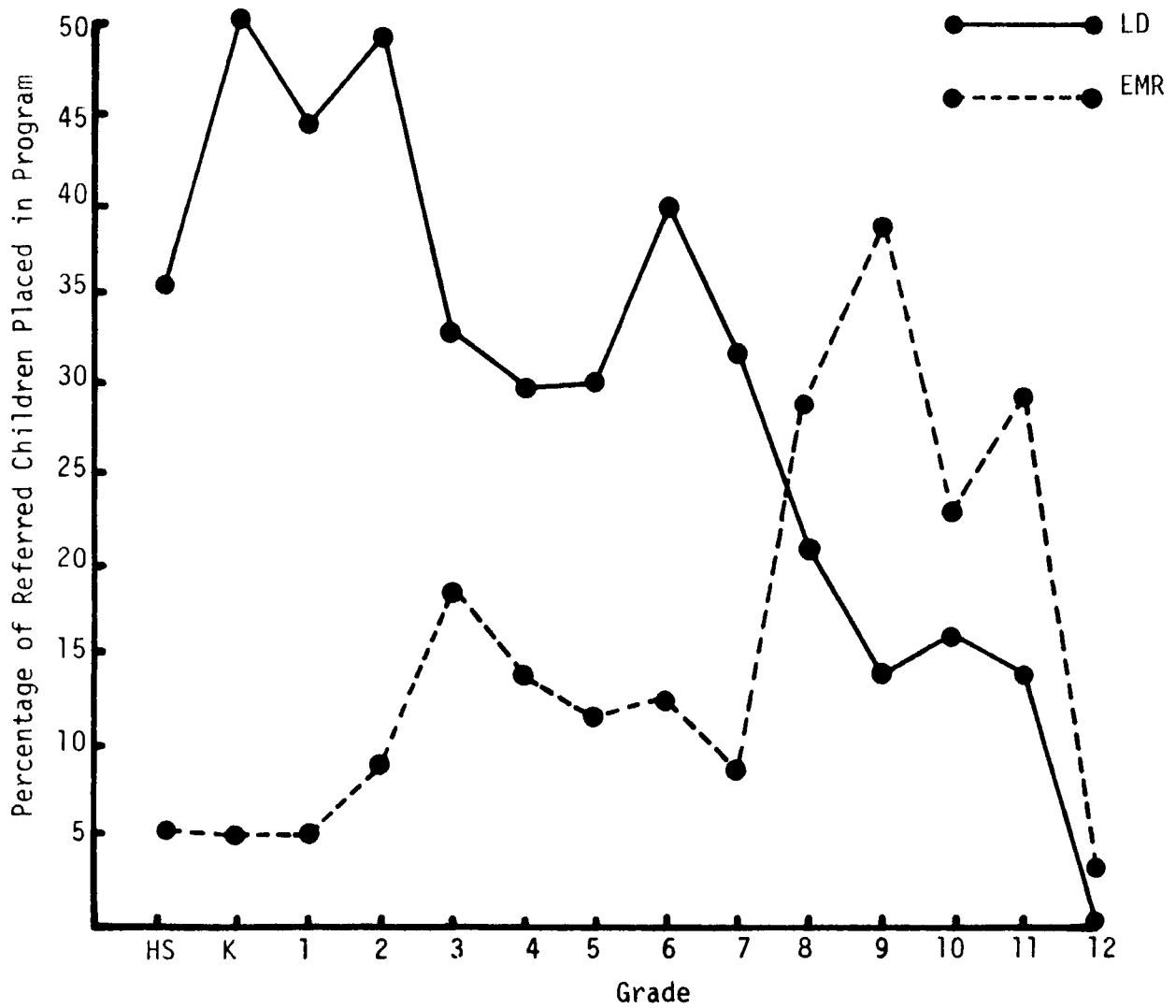


Figure 16. Percentages of referred children placed in LD and EMR programs by grade level.

function of his/her score on an I.Q. test, the "diagnosis" appears to be rather straightforward. Therefore, perhaps the reluctance to label a child as EMR at a young age may be related to a lack of confidence in scores from tests administered to younger children.

Not only does the designation of a child as EMR appear to be related to grade, but also the results also suggest a relationship with the socioeconomic status of the school the child attended. As shown previously in Table 9, page 73, only 7% of the children referred from higher SES schools were placed in EMR programs in contrast to 17% of the children from lower SES schools. Although the results did not obtain statistical significance, there was a slightly greater percentage of children from higher SES schools placed in LD programs. This result is surprising if the incidence of learning disabilities can be assumed to vary along the same socioeconomic lines as other child disturbances. The data tend to suggest that educable mental retardation is a lower SES phenomenon while learning disabilities cut across SES with a slight tendency suggesting that it is more of an affliction of higher SES.

CHAPTER VII

PREDICTION OF OUTCOMES

As shown in the previous chapters, several referral characteristics were related to outcomes. To assess the degree to which referral characteristics could predict outcomes, stepwise discriminant analyses were performed on the data. Predictor variables were grouped in the following manner for separate analyses: (1) demographic, sex, grade, school size, school SES, repeat-in-grade status; (2) written referral categories (see Chapter III) and number of words written; and (3) problem checklist items and total number of problems checked. Finally, the total group of variables including test scores was entered into the analysis.

As seen in Table 13, no one subgroup of referral characteristics consistently predicted better than the rest. The best group of variables for predicting whether or not a child would be placed in any of the four special education programs was the problem checklist which was able to accurately predict 69% of the cases. This prediction is only 19% better than chance (50%) alone. The best single checklist predictors were, in order: (29) reading; (10) unable to express feelings; and (5) defiant, obstinate, stubborn (weighted negative).

Prediction of placement/no placement in EMR programs was the most accurate with all the variables combined being able to accurately predict 96% of the cases. This was somewhat inflated by the inclusion of I.Q. scores in the group of predictors, and, as stated previously, a Full Scale I.Q. score of less than 79 is a necessary criterion for

Table 13

Accuracy of Prediction of Outcomes by Discriminant Analysis
Using Three Subgroups of Predictors

Predictor variables	Placed	Outcome criterion groups		
		LD placement	EMR placement	ESA placement
Written referral categories	59%	69%	57%	80%
Problem checklist items	69%	65%	73%	76%
Demographics	62%	58%	76%	62%
All variables	90%	87%	96%	90%
				66%
				76%
				57%
				86%

designating a child "EMR." Nevertheless, both demographic characteristics (76%) and the checklist (73%) were significantly greater than chance. Within the group of demographic variables, the single best predictors were whether or not the child had been previously retained, the grade of the child at the time of referral, and the SES of the school he or she attended.

The best group of variables for predicting placement/no placement in LD programs was the written referral section which was able to accurately predict 69% of the cases. Among the written referral categories, the best predictors were, in order: Educational Problem, Study Habit Problem, and whether or not the teacher gave a "diagnosis." Demographic variables were able to predict 58% of the cases--only 8% better than chance alone. The group of problem checklist items was able to classify 65% of the cases correctly with the best items being, in order: (29) "reading," (10) "unable to express feelings," and (31) "language skills problem." When all the variables were combined into the prediction equation, placement/no placement in LD programs was predicted with 87% accuracy.

Placement/no placement in ESA programs was best predicted by the written referral section (80%) although the checklist items (76%) had a better predictive value here than with any other special education group. The best single written referral predictor was whether or not the teacher stated that the child was a Discipline Problem, and the best single checklist predictor was item 5 ("defiant, obstinate, stubborn").

LD-ESA placement was the most difficult to predict. Nevertheless, the checklist was able to correctly classify 76% of the cases. Here,

item 4 ("overly aggressive to peers," etc.) was the best single item.

The overall best subgroup of predictor variables was the check-list followed by the written referral categories and then the demographic variable. It may be significant that this order corresponds to a ranking of the subgroups in terms of how many variables are in each.

CHAPTER VIII

SUMMARY

As stated in the introduction, the original purpose of the study was to describe in detail referral traffic within the system as it operates in Knox County Schools. This was accomplished by an item-by-item description of child referral characteristics and their relationships with the outcomes of the referrals. Although there is no clear-cut criterion for success, this process uncovered numerous relationships which permit general statements to be made regarding points at which the system succeeds as well as where it fails. Examples of the former may include the noticeable consistency with which respective teachers fill out the referral forms. Also, the data from the chapter on prediction suggest that the referral form does a good job of predicting and describing children placed in ESA programs. Another positive aspect of the referral form is an apparent stability across settings as evidenced by comparable results from other studies.

Unfortunately the study did not provide access to data which would permit statements regarding how well the process identifies and defines an "appropriate" referral. Although a high percentage of the children referred were placed in special programs, this alone cannot be accepted as a satisfactory criterion of appropriateness of referral since the results of placement may or may not have been successful.

Another area where the referral process seems to be working well is in the identification of children (notably LD) at a relatively early

point in their school career. This is advantageous due to the relatively higher success rates of intervention with younger children. (Hopefully, this is not at the expense of children in the higher grades.)

There were several instances where the results suggested need for an alteration of the system. Some of these conclusions are based on hard data, others are based on the author's experiences in the system, both as a practitioner and a handler of data. An example of the former would be results from the chapter on prediction which show that the referral form does a relatively poor job of describing and predicting children who are placed in LD programs. This problem is seen as even more substantial in light of the fact that LD placement is, by far, the most common outcome of referral. This problem is possibly due to the fact that there are so few numbers of "educational" types of items in the checklist on the referral form compared to those which reference social/emotional/acting-out problems. Even if the form could predict placement with a high degree of accuracy, it would offer little, if any, information as to what to do with the child once he/she is placed. Also, the face validity of the form might be improved if it more specifically elicited recommendations from the referrent as to the disposition of the referral.

Another significant problem lies in the referral system's apparent lack of facility for processing referrals from sources other than teachers and for systematically recording the degree of completion of referrals to outside agencies.

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APPENDIXES

APPENDIX A

DATA TABLE

Table A-1

Elementary School Referrals: Obtained and Expected Frequencies

School	Socio-economic status	Mean enrollment 1972-1977	Number referral in sample	Number referrals expected by size
Adrian Burnett	NA	123	4	2.6
Amherst	83.0	82	3	15.5
Ball Camp	77.6	703	19	15.5
Blue Grass	84.7	233	7	5.3
Bonny Kate	93.3	301	3	6.7
Brickey	89.3	960	10	21.3
Carter Elementary	76.4	636	6	14.0
Cedar Bluff Intermediate	97.3	153	3	3.2
Cedar Bluff Primary	97.3	1,027	24	22.8
Corryton	67.4	217	3	5.0
Fairview	84.9	175	3	3.8
Farragut Intermediate	91.9	131	2	2.9
Farragut Primary	91.9	678	20	14.9
Gap Creek	60.5	254	9	5.5
Gibbs Elementary	82.5	569	13	12.6
Green Hill	77.6	179	3	3.8
Halls Elementary	88.1	807	9	17.8
Hardin Valley	73.3	199	8	4.4
Heiskell	68.9	196	7	4.4
High Bluff	77.8	161	3	3.5

Table A-1, continued

School	Socio-economic status	Mean enrollment 1972-1977	Number referral in sample	Number referrals expected by size
John Sevier	59.2	200	8	4.4
Karns Elementary	89.9	719	21	16.1
Mascot	67.1	253	3	5.5
Mount Olive	86.7	402	8	9.1
New Hopewell	86.5	353	5	7.9
Powell Elementary	88.6	987	39	21.9
Ramsey	66.3	196	8	4.1
Ritta	73.4	486	10	10.8
Riverdale	75.9	213	3	4.7
Skaggston	71.2	292	3	6.4
Sunnyview	79.3	541	6	12.0
Vestal	26.1	497	16	11.1
White	77.6	186	3	4.1
TOTAL		13,109	292	292.0

APPENDIX B

DATA COLLECTION RECORD FORM

Name _____ School _____ Grade _____

Date Ref _____ Birth Date _____ Teacher _____

Address of Student _____

Reason for Referral (Y) (N) Used Additional Space (Y) (N)

Parents' Name (Y) (N)

Address (Y) (N)

Father's Occ (Y) (N)

Mother's Occ (Y) (N)

Phone No (Y) (N)

Stand Tests (Y) (N)

Previous Psych (Y) (N)

Total _____

Father's occ _____

Mother's occ _____

Problem Checklist

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

Total _____

Specification I _____

II _____

III _____

Qualifications

Know Student _____

Like Student _____

Signature Ref (Y) (N)

Signature Principal (Y) (N)

Tested (Y) (N) Date _____

Placement

In Class (Y) Outclass (Y)

EMR () LD () ESA ()

Outside Agency () _____

V P FS

WISC (Y) (N) _____

B-G (Y) (N) _____

WRAT (Y) (N) _____

PPVT

Holt Reading

DLP Eval

Otis-Lennon

Henricks

VITA

Joseph Allen Cook was born in Birmingham, Alabama, on July 29, 1948. He attended Woodlawn High School and was graduated from Birmingham Southern College in 1970. The following September he entered The University of Tennessee and began studies in Industrial Psychology. In 1973 he changed to School Psychology and later completed his internship in Great Falls, Montana, where he was employed for an additional year as a school psychologist. He returned to The University of Tennessee, Knoxville, in 1976 and received the Doctor of Philosophy degree with a major in Psychology in March 1979.

The author has been employed by Knox County Schools since 1976 as a school psychologist and program-evaluator.

Although he is single, the author is very much attached to a Golden Retriever named Bunky.