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ABSTRACT

This publication is one in a series summarizing final reports of research projects concerned with improving health services for mothers, children and physically handicapped youth. Topics of the 10 reports include: (1) ambulatory care patterns of urban adolescents in New York City, (2) selected parameters of school achievement among New York City junior high school students, (3) evaluation of a self-administered health questionnaire in a private pediatric practice, (4) progression of allergies in adolescents, (5) evaluation of stress (hypertension) examinations of adolescents, (6) followup study of adolescents born on Kauai, Hawaii, in 1955, (7) guidelines for self-evaluation of programs serving adolescent parents, (8) comprehensive service programs for school-age pregnant girls, (9) research utilization and information sharing regarding school-age parents, and (10) characteristics of biological fathers identified by black adolescent mothers. These research projects have produced a number of major findings that have practical applications in local and State health programs. Workers are encouraged to adopt or adapt these findings to their own programs for mothers and children. (Author/RH)

# STUDIES IN ADOLESCENT HEALTH

*research to improve health services for mothers and children*





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# FOREWORD

This publication is one in a series presenting summaries of the final reports of research projects concerned with improving the operation, functioning, and effectiveness of health services for mothers and children and for crippled children. These research projects are funded by the Office for Maternal and Child Health of the Bureau of Community Health Services, Health Services Administration, under the 1963 amendments to title V of the Social Security Act (Public Law 88-156). Initially, the research grants were administered by the Children's Bureau and later by the Maternal and Child Health Service.

The research projects have produced a number of major findings that have practical applications in local and State programs of maternal and child health. Federal, State, and local health agencies and individual workers are encouraged to adopt or adapt these findings to their own programs for mothers and children.

Summaries of research projects were prepared by the Maternal and Child Health Program, School of Public Health, University of California, Berkeley, under MCHS grant MC-R-060208. Readers interested in more detailed information about the studies should direct their requests to the principal researchers of the projects.

## PROJECTS

# AMBULATORY CARE PATTERNS OF URBAN ADOLESCENTS: A REPORT ON FOUR EXPLORATORY STUDIES IN NEW YORK CITY

BETTY SIMONS, M.D., M.P.H.; *and* ELINOR F. DOWNS, M.D., M.P.H.;
*Columbia University School of Public Health and Administrative Medicine, New York City, 1967.* *Grant No. PH-100.*

As part of an evolving research effort on adolescent health, a series of studies was conducted in the spring of 1966 to gather basic information on adolescents who use established health and medical institutions in New York City. The objectives were to learn more about where young people in New York City go for medical care, what conditions bring them to seek medical advice, how they use existing services, what types of care they receive, and how well the medical services are meeting the needs of these young people. The focus was on adolescents who were attending general ambulatory medical care facilities.

The methods of approach differed with each study. Procedures involved:

1. A survey of six general adolescent clinics established in New York City since 1960, with special attention given in the survey to professional orientation, administrative structure, referral procedures, admission policies, and nature of services.

2. An analysis of interview and medical record data on a random sample of more than 300 young people, 12 through 20 years of age, who visited the outpatient departments of all 15 New York City municipal hospitals during 1964. Information was obtained on morbidity patterns, utilization of medical services, attitudes toward the municipal hospital clinics, and socioeconomic characteristics of the adolescents who were treated.

3. A review of about 150 medical records of adolescents admitted to the mental hygiene outpatient department of a municipal hospital during 1965, with the reviewers focusing on demographic and diagnostic factors.

4. A secondary analysis of interview data gathered on about 350 young people who visited the emergency rooms of 3 general voluntary hospitals and 1 municipal hospital in 1964.

Although each of these studies dealt with a different adolescent population, identifiable patterns emerged on the unmet health needs of urban adolescents who depend on public services for their medical care.

## Adolescent Clinics

The adolescent clinics studied provided ambulatory medical care to limited numbers of young people in New York City in a person-oriented health maintenance program. The program differed greatly from the

condition-focused approach of outpatient and emergency room services. Adolescents were willing participants in preventive care as well as treatment. Because of the limited hours available, these clinics rarely saw acute and traumatic conditions. Young people with serious health difficulties, such as psychiatric disorders and crippling conditions or those who were pregnant, were often referred elsewhere. As a consequence, the medical diagnoses most often mentioned were common or recurrent conditions frequently associated with adolescence such as emotional, dental, optometric, nutritional, dermatologic, and gynecologic complaints.

It was noted that although these highly specialized adolescent clinics helped to fill existing gaps in medical care services for young people, there were too few such clinics for the demand. Also, the use of a means test in some clinics and the pre-admission and referral and screening procedures in others made them less freely accessible.

## Municipal Hospital Outpatient Departments

While adolescents ages 12 through 20 constituted about 12 percent of the New York City population, they represented 14 percent of the total municipal hospital outpatient population. Of the outpatient population, 80 percent were black or Puerto Rican and were of a low socioeconomic status.

These adolescents attended a wide range of general and special clinics in the municipal hospitals. Prenatal and postnatal clinics cared for the largest group, with adolescents accounting for about 20 percent of the patients. General medical, surgical, and dental clinics were the second most frequently utilized; in each clinic adolescents comprised more than 15 percent of the patients.

Among the younger adolescents (12 to 16 years old) more boys and girls were seen for dental conditions than for any other disorders; injuries were the most common cause of surgical problems, especially among the boys; and of the medical conditions treated, the most frequent were allergies, respiratory difficulties, and acute infective and parasitic diseases.

For the older adolescents (17–20 years old), particularly the boys, care of surgical problems such as injuries, postoperative checkups, and other special examinations held first place; dental problems predominated for the girls. A disproportionate number of the 17- to 20-year-old girls suffered from genitourinary disorders, which the investigators surmised might have been related to pregnancy experiences.

Close correlation was found between the adolescent's perception of his medical problem and the physician's primary current diagnosis. This gives credence to the suggestion that older adolescents may be better informed about their health than is commonly believed.

When queried about their reasons for attending a particular municipal hospital, 44 percent of the unaccompanied adolescents said they had chosen it for its geographic convenience. Other reasons given were financial considerations, family tradition, and advice of others. Only 50 percent would have preferred visiting a private physician if money were of no consideration. More than 66 percent favored having all of their medical treatment carried out in a central place such as one hospital, as opposed to several different places.

## Voluntary Hospital Outpatient Clinics

Adolescents who attended voluntary hospital outpatient clinics appeared to have similar medical problems but were somewhat younger than their municipal hospital counterparts (median age was 14.5 years compared to 16.5). More were white than black or Puerto Rican, and they had a higher socioeconomic status than those who went to municipal hospital clinics.

## Psychiatric Outpatient Departments

Despite the limitation of the sample size and the participation of only one municipal hospital psychiatric outpatient department, the findings of this study were remarkably similar to those of a national survey of adolescent patients served in psychiatric outpatient clinics.

The younger adolescents were more likely than the older group to have transient behavior problems such as difficult school adjustments, whereas symptoms in the 16- to 20-year-olds indicated more serious emotional disorders. The 14-year-olds utilized the clinics most. Girls, particularly the older ones, were more likely than boys to have symptoms of depression and withdrawal.

## Emergency Rooms

Trauma accounted for over one-third of the emergency room visits by adolescents. The next most common complaints related to ear, nose, and throat disorders; allergic reactions; and skin problems. Contributing to the appeal of the emergency unit as a medical resouree were its ready accessibility, lack of red tape, absence of a means test, a degree of anonymity, and 24-hour service. A large number of adolescents used it on a drop-in basis for nonurgent problems.

Generally, adolescents who utilized hospital emergency room services were more affluent than their outpatient counterparts in the same hospitals, and sought care from private physicians and dentists more

frequently. More boys than girls used these facilities, and the median age was comparable to the voluntary hospital outpatient counterpart.

## Conclusions

The investigators concluded that urban adolescents, especially those of low socioeconomic status, have a wide range of health problems. Most of the problems are acute, short term, and not serious, but of sufficient concern to the adolescents themselves that remedies are sought. The annual visit rate per patient in the outpatient departments was low, but the frequency with which these same patients turned to other medical resources refuted the assumption that this group of young people were healthy, and indicated that they may have a large store of unmet medical needs. More than one-third of their visits to emergency rooms were for conditions that had been under treatment in the previous year.

Despite the large number of established health services, the investigators believed that the medical problems of many young people may go unrecognized or unsolved. This situation exists either because ambulatory care based on traditional or obsolete methods of delivery does little to motivate the preventive approach, or because the existing facilities fail to provide a satisfactory range of services, a satisfying milieu, or an appropriate method of delivery.

## Publication

B. Simons, E. Downs, "Ambulatory Medical Care for Urban Adolescents," New York State Journal of Medicine, Vol. 68, No. 6, pp. 755-62, March 15, 1968.

# SELECTED PARAMETERS OF SCHOOL ACHIEVEMENT AMONG URBAN ADOLESCENTS: A STUDY IN FOUR NEW YORK CITY JUNIOR HIGH SCHOOLS

MADELINE HURSTER, M.S., M.P.H., PH. D.; *and* MORTON ARCHER, M.B.A., M.P.H.; *Columbia University School of Public Health and Administrative Medicine, New York City, 1967. Grant No. PH-100.*

The objective of this study was to learn whether relationships exist between scholastic achievement and physical growth, personality traits, or other selected factors.

The investigators reviewed the permanent school and health records of 319 students (153 males and 166 females) who were in their final

year in 4 public junior high schools in New York City. The records are cumulative and, at the junior high level, provide long and continuous documentation. At each school a sample of records was selected at random. Since the records for the eighth and ninth grades were not complete, the investigators focused on the records for the sixth and seventh grades. Reading test scores were used as indicators of scholastic achievement, and height and weight figures were used as indicators of physical growth. Personality traits of the students were evaluated at the end of each school year by the homeroom teacher on the basis of criteria established by the Board of Education.

The great majority of the children, about two-thirds, were born in New York City. Almost half of the remaining group were native to the southeast portion of the United States. The patterns for boys and for girls were similar.

## Reading Test Scores

In both sixth and seventh grades, significantly more of the students were reading below their grade level than above. This was due almost entirely to the poor record achieved by the girls. More boys were reading above level than below; accordingly, there was a significant difference between the sexes in reading ability at both grades. Place of birth did not appear to be related to reading scores.

Comparison of the sixth- and seventh-grade reading scores of the same students showed that almost 54 percent of the boys had been able, in a year's time, to better their sixth-grade reading score by a year or more. Only about 46 percent of the girls had made that improvement. Not only did proportionately more boys in the sixth grade read at or beyond grade level, but 1 year later a significant number of them had improved their scores by at least a year. Place of birth appeared to be related to the sex difference in the ability to improve reading scores. The superiority of the boys was attributable in large part to those born outside New York City, mostly in the southeastern United States.

## Personality Traits

The great majority of boys and girls exhibited positive personality traits, according to evaluations by their homeroom teachers. "Responsibility" had the lowest rank of all the traits, with only 60 percent of the boys and 84 percent of the girls being given a positive rating. A higher proportion of girls than of boys had positive personality traits. The only exception was "participates in classroom activities." There the boys held a slight edge.

Pupils with higher reading scores tended to have more of the positive personality traits than pupils with lower reading scores. Among the

boys, the magnitude of difference between the high and low reading groups in "obeying rules," "carrying out responsibilities," "satisfaction with reasonable amount of attention," and "self-control" was statistically significant. In addition, between sixth and seventh grades the proportion of boys who read at or above grade level gained significantly in the category "self-control," from 78 percent to 87 percent. This was the only personality trait that showed any significant change during the 1-year interval.

Place of birth seemed to have little effect on personality development except in the case of boys born in the southeastern part of the United States. They showed fewer positive personality traits than any other group of pupils, and were the only group that exhibited more negative than positive traits.

## Developmental Ratios

Height and weight data on each child were plotted on the Wetzel Grid, then translated into developmental ratios according to the Wetzel Grid formula. (A developmental ratio of 1 indicated normal or average growth and development for chronological age.) Developmental ratios were not computed for 38 percent of the sixth-grade students and 14 percent of the seventh-grade students because of inadequate data on height and weight. A majority of those for whom ratios were computed had developmental ratios above 1. A significantly larger proportion of the girls than of the boys were advanced in growth and development. Roughly 5½ times as many girls in the sixth grade had developmental ratios above 1 as below 1; by contrast, only 3 times as many boys had ratios above 1 as below 1. The differences between the sexes in the group who had advanced physical growth was not as statistically significant in the seventh grade as it had been in the sixth grade.

## Relationships

A positive association was found between physical growth and scholastic achievement for both boys and girls. Those with developmental ratios of 1 or more tended to read better than those with ratios below 1.

The initial findings of significant differences in reading ability between the sexes also showed up in this analysis, but the sex differences occurred irrespective of developmental ratio. Underdeveloped boys read better than underdeveloped girls.

Neither the place of birth nor personality traits seemed to affect physical growth.

The investigators stated that the results of the study could not be extrapolated to the entire New York City junior high school population,

but hoped that the findings would point out possible avenues for future inquiry.

## Publication

M. Hurster, M. Archer, "Selected Parameters of School Achievement Among Urban Adolescents: A Study in Four New York City Junior High Schools," Journal of School Health, Vol. XXXVII, No. 10, pp. 511-18, 1967.

# EVALUATION OF THE SELF-ADMINISTERED HEALTH QUESTIONNAIRE IN A PRIVATE PEDIATRIC PRACTICE

N.G. ALEXIOU, M.D., F.A.A.P.; J. COOPER, M.D., F.A.A.P.; *and* M. SILVERMAN, B.S., R.N.; *Johns Hopkins University School of Hygiene and Public Health, Baltimore, Maryland, 1967.* *Grant No. H-25.*

In this 3-year project a self-administered health questionnaire for secondary school students was developed, tested, and evaluated. The primary objective was to provide a reliable questionnaire that would serve as a screening method to facilitate routine examinations by the school physician and channel high-risk students for priority appraisal. The questionnaire was also evaluated for use in private practice.

The school physician's appraisal of the student's health was chosen as the validating criterion against which the completed student questionnaire would be compared. Health was considered in its broad aspect, and included medical, dental, and mental health.

Selected for a sample were 1,166 students from the 7th and 10th grades in public and private schools in Baltimore, Maryland, and in three rural schools in North Carolina. Factors considered in selection were IQ, socioeconomic status, race, sex, and grade-level reading ability.

## Reliability Study

During the second year of the project, the investigators studied the reliability (consistency) of information provided by the students. Several editions of a questionnaire were tested before a formal reliability study was performed, using the test-retest technique. A correlation coefficient of 0.90 was obtained for the questionnaire when it was retested after a 2-week interval. It was thought that the test, as a whole, was highly reliable for each race, sex, age, and socioeconomic group sampled, and that IQ did not affect the usefulness of the scale. Reliability data were published in 1968.

The final questionnaire consisted of 182 health questions constructed to elicit either "yes" or "no" responses, with no omissions permitted. In scoring the questionnaires, the investigators counted the yes responses. Generally, each yes was considered as affirming the presence of a symptom, a specific problem, or a health concern. A greater number of yes responses suggested a greater degree of pathology.

## Validity Study

In the latter part of the project, the investigators studied the validity of the students' responses by comparing them with the physicians' findings on examination of the students. Six school physicians of the Baltimore City Secondary School Health Program, who had been specially trained for this project in order to standardize their examination procedures, provided the validating data.

From November 1966 to February 1967, a total of 388 students in the 7th and 10th grades who were due to be examined according to the usual health program route completed the self-administered questionnaire. The students were then examined and appraised. The examining physicians had not seen the students' responses on the questionnaire.

The correlation of the scores on the questionnaire with the physician's findings was statistically significant for the whole test and for 13 of the 18 systems or sections (head, eye, ear, nose, etc.) of the test. Validity was not influenced in any consistent fashion by the children's grade, IQ, socioeconomic status, or race.

Although statistical significance was achieved for the whole group, it was concluded that the scores did not warrant the questionnaire's use for clinical diagnosis in individual cases. However, the questionnaire was considered useful as a supplementary clinical instrument for the physician and as a tool for researchers in adolescent health.

## Evaluation of Use in Private Practice

The final report on this project explores the use of the questionnaire in private practice.

During a 3-month period (January to March 1967), 101 adolescents who visited the office of a Baltimore pediatrician filled out the questionnaire while waiting to see the physician.

When all the data had been collected, three investigators reviewed the physician's records of histories, physical examinations, and laboratory tests, and compared the outcomes of these to the outcomes implied by the teenagers' responses to the questionnaire.

The investigators set up standards for judging whether the questionnaire responses agreed with the physician's examinations and

appraisals of the teenagers' health. By these criteria, 77 percent of the questionnaires showed "good" or "fair" agreement. The section of the questionnaire showing the least agreement with the physician's evaluations was the mental hygiene portion. The investigators felt that the yes answers on this portion probably reflected concern of adolescents with their moods and feelings, all of which the physician considered normal.

The nurse reported no difficulty with or resistance from the teenagers about completing the questionnaire. She believed it was a valuable use of their waiting time. Several patients remarked on the completeness of the questionnaire, and said they were pleased that their physician had enough interest in adolescents to take part in the study.

In some instances, the questionnaire revealed information the pediatrician had never elicited on previous visits. In three cases, the physician declared that had the information from the questionnaire been available to him at the time of the examination he would have altered his management.

The investigators concluded that the questionnaire has positive value in private practice settings, and that it was well accepted by the physician, the nurse, and the teenage patients.

## Publications

Nicholas G. Alexiou, Gerald Weiner, "Reliability of a Self-Administered Health Questionnaire for Secondary School Students (Adolescents)," American Journal of Public Health, Vol. 58, No. 8, pp. 1439-46, August 1968.

Nicholas G. Alexiou, Gerald Weiner, Mary Silverman, Toby Milton, "Validity Studies of a Self-Administered Health Questionnaire for Secondary School Students," American Journal of Public Health, Vol. 59, No. 8, pp. 1400-12, August 1969.

# PROGRESSION OF ALLERGIES IN ADOLESCENTS—A 4-YEAR FOLLOWUP

GERALDINE L. FREEMAN, M.D., *and* SAMUEL JOHNSON, M.D., *Denver, Colorado, 1969. Grant No. H-207.*

This research provided a 4-year followup on a prevalence survey for atopic disorders conducted in 1963 among 8th graders in the public schools of Denver, Colorado.

The followup study was conducted in 1967 with the same sample of students, who by that time were 12th graders, and with the same general questionnaire format and definitions.

Conducting the followup by mail and telephone, the investigators sought information from the students about their 4-year experience with

asthma, hay fever, allergic rhinitis, eczema, and hives. The response was 78.5 percent (763 of 960 students in the original survey).

As 8th graders, almost 21 percent of the students had allergy symptoms; as 12th graders, 28 percent had symptoms. The increase was due primarily to the acquisition of seasonal hay fever. (A group of 12th graders also surveyed in the 1963 sample had a 27 percent prevalence rate.) Prevalence was lower for the lower socioeconomic group (19 percent) and higher for the upper group (34 percent).

Although over 80 percent of the students retained their previous classification, some who as 8th graders had been classified as "doubtful" or "not allergic" were, as 12th graders, reclassified as "definitely allergic." Of the students whose condition changed, 51 acquired allergies, 15 had recurrences of symptoms, and 24 who had had symptoms in the 8th grade were allergy free in the 12th grade. The prevalence of hay fever rose from 16 percent to 21 percent. Manifestations present in the 12th grade were most often nasal allergies; least common were skin allergies.

Of the asthmatic students, 60 percent had lost their symptoms by the 12th grade, and an additional 22.5 percent were improved. However, regression of asthma in both sexes usually had occurred before the 8th grade. Nasal allergies were more prone to change for either better or worse during mid-adolescence.

There was no indication that hay fever was an antecedent to asthma.

Of the allergic students, 43 percent were receiving medical care for the allergy at the time of the survey. Among those with supervision, specialty care was obtained more frequently by those in the higher income brackets (68 percent, upper; 56 percent, middle) than in the lower income bracket (42 percent).

Allergic students reported that one-quarter of their school absence days were related to allergies.

Both in 1963 and in 1967, there was correlation between multiple allergic manifestations at any time and the tendency to retain allergic symptoms in adolescence.

It was found that 7.9 percent of the students' families had moved to Colorado because of allergy in some member of the family. A high correlation existed between close family allergy and allergy in the students; 75 percent of definitely allergic students reported family atopy.

The investigators commented on the paucity of services available for children with allergic conditions, in spite of the great need for these services.

# EVALUATION OF STRESS [HYPERTENSION] EXAMINATIONS OF ADOLESCENTS

PAUL KOVNAT, M.D., SANDRA P. LEVINSON, M.D., *and* NINA L. STEG, M.D., *Adolescent Program, The Medical College of Pennsylvania, Philadelphia, 1975. Grant No. MC-R-420280-02-0.*

In this study, hypertension in adolescence was examined in a group of black adolescent males at a Philadelphia public school in 1975.

The objectives were to define hypertension in adolescence, and to find reliable, noninvasive screening methods for early detection of asymptomatic adolescents who are at risk of developing hypertension.

Adolescent males in the 9th and 10th grades, together with their families, were invited to participate in the study if they had no restriction of physical activity. The sample selected consisted of 398 students and their families. Paramedical technicians examined and interviewed the students at school, and interviewed the families at home.

For each student, blood pressure determinations were made from 27 blood pressure and pulse measurements taken on 3 different days, and included readings at rest and readings following exercise. Urine specimens were collected on three occasions, and hematology studies were conducted. Physical characteristics were also recorded.

In the interviews with the families, three random blood pressures were taken and physical characteristics and relationship to the student were recorded. Also, family histories of hypertension, renal disease, myocardial infarction, stroke, and lead poisoning were obtained.

Abnormal hemoglobin and lead findings of the students were reported to the school nurse for followup and counseling, and the parents of students with hypertension were notified.

## Findings

The investigators found that 90 percent of the students had a resting systolic blood pressure of 130 mm or less, a resting diastolic blood pressure of 79 mm, an exercise systolic blood pressure of 173 mm or less, and an exercise diastolic blood pressure of 72 mm or less.

Although exercise resulted in a decrease in diastolic blood pressure for most students, there were a few whose diastolic blood pressure increased and in others it remained unchanged.

Of the 345 mothers examined, 10 percent had diastolic pressures exceeding 96 mm Hg. The mean blood pressure for the total group was 118/79. Ten percent had systolic blood pressures greater than 140, and 16.5 percent had systolic blood pressures greater than 90 mm Hg.

Examinations were completed for 150 of the fathers. Ten percent had systolic blood pressures exceeding 155 mm Hg, and 10 percent had diastolic blood pressures exceeding 100 mm Hg. The mean blood

pressure for that group was 129/84. Of these fathers, 21 percent had systolic blood pressures greater than 140 and diastolic blood pressures greater than 90.

The mean hematocrit of 290 students was 42 percent. None of the students had sickle cell anemia or hemoglobin SC; 13.0 percent of the students had hemoglobin S, and 3.2 percent of the students had hemoglobin C. Increased lead load as evidenced by enzyme levels below 10 units was observed in 7.3 percent of the students whose blood was analyzed for delta aminolevulinic acid dehydratase.

In the urine studies, there was no evidence of renal disease as determined by abnormal protein excretion. Nor was there any correlation between sodium excretion and level of blood pressure.

Cross-tabulation of the combination of the students' exercise and resting blood pressures indicated that those students in the highest and lowest ranges for resting blood pressure were also in the corresponding ranges for exercise blood pressure.

There was a significant correlation between the students' resting systolic and diastolic blood pressure and the maternal systolic and/or diastolic blood pressure.

In this survey, 17 percent of the mothers and 21 percent of the fathers had documented hypertension and 64 percent of the families had a history of hypertension. This high prevalence of hypertension occurred despite the fact that some of the parents were receiving treatment for hypertension. Thirty-nine percent of the families manifested severe complications of hypertension, such as stroke, myocardial infarction, and severe hypertension despite therapy.

## Recommendations

Because the prevalence of hypertension was so high in these families, the investigators stated that there is no way to predict hypertension in adolescence by the use of arbitrary adult norms. They recommended repeated, careful blood pressure determinations at rest and with dynamic exercise, using age-adjusted levels for interpretation of normal. In addition, they urged repeated measurement of blood pressure particularly in students who had family histories of hypertension.

The investigators stressed the importance of establishing norms in blood pressure for this adolescent population. Blood pressures greater than the adult mean resting systolic blood pressure plus 1 standard deviation of 129 mm Hg (measure of variability) were observed in 40 boys, and resting diastolic blood pressures greater than 78 mm Hg were observed in 38 boys. The investigators stated that if the arbitrary figure of 140/90 mm had been applied, only nine boys would have been selected for resting systolic blood pressures greater than 140 mm Hg and only five boys would have been selected for resting diastolic blood pressures greater than 90 mm. Therefore, between 21 and 33 boys might not have been scrutinized as hypertensive if these arbitrary adult

norms had been applied. The investigators recommended using values exceeding 1 standard deviation above the mean for systolic and diastolic blood pressure in order to detect the potentially hypertensive adolescent as well as to determine prevalence rates with accuracy.

Because of the large number of hypertensive persons detected in this study, a program was developed and coordinated with the school to provide care and counseling for affected and interested students, teachers, and families.

## THE KAUAI STUDY: FOLLOWUP AT ADOLESCENCE

EMMY E. WERNER, PH. D., *University of California, Davis, 1974. Grant No. MC-R-060220-01-02.*

This research provided a followup study at adolescence of multiracial youths born on the island of Kauai, Hawaii, in 1955. The followup, which is the fourth phase of a longitudinal study initiated in 1954, was conducted from July 1972 to June 1974. Some 600 youths, ages 17 and 18, participated. They comprised 90 percent of the sample studied in the third phase, which was the 10-year followup.

The entire Kauai study was unique in that it followed all births that occurred on the island (in 1955), over a wide socioeconomic and ethnic spectrum, for nearly two decades. The study began in the perinatal period, with an assessment of the reproductive histories and the physical and emotional status of the mothers from the fourth week of gestation to delivery. It continued with an evaluation of the cumulative effects of perinatal stress and the quality of family environment on the physical, intellectual, and social development of the children at 2 years of age and again at 10 years.

The purpose of the followup in late adolescence was:

- To assess the long-term consequences of learning and behavior disorders identified in childhood.
- To discover new problems in adolescence.
- To evaluate the predictive power of diagnostic tools used at birth, in infancy, and in childhood.
- To examine the effectiveness of the community's response to youth "at risk."
- To delineate family and interpersonal variables that contributed to improvement.

### Methodology

Educational, health, and social service agency records were surveyed. Also, a biographical questionnaire and group tests of ability,

achievement, and personality were used to assess the 18-year status of the entire cohort of births.

In addition, an in-depth study was completed through interviews and diagnostic tests of selected groups of youths "at risk" and control youths without problems. These were matched by age, sex, socioeconomic status, and ethnicity. Youths termed "at risk" included those who had been diagnosed as being in need of long-term and short-term mental health services and those with learning disabilities at age 10, as well as those who developed new behavior problems between the ages of 10 and 17 or 18.

The interviews were concerned with: the youths' overall attitude toward school, their achievement motivation, the realism of their educational and vocational plans beyond high school, the extent of their participation in social activities and quality of social life, their identification with their mother and father, their feelings of security as part of their family, the extent of their goal and value differentiation and self-insight, the intensity of their conflict feelings, and their self-esteem.

The majority of the youths were of Oriental and Polynesian descent (Japanese, Filipino, part- and full-Hawaiian), and more than half came from poor families.

## Findings

### Effects of Perinatal Stress by Age 18

Among the 2 percent in the cohort (14 youths) who were survivors of severe perinatal stress at birth, four out of five had significant behavior, learning, and physical problems in late adolescence. Twenty-nine percent were classified as mentally retarded, 21 percent had become delinquent, 15 percent had significant mental health problems (high anxiety, schizoid, paranoid, obsessive-compulsive behavior), and another 15 percent had physical handicaps (growth retardation, orthopedic problems, speech and hearing problems).

Among the 10 percent (69 youths) who had suffered from moderate perinatal stress, the incidence rate of significant mental health problems (9 percent) was three times as high as that of their peers in the 1955 cohort, and the incidence rate of mental retardation (6 percent) and illegitimate teenage pregnancies (14 percent) was twice as high. There was no difference in the incidence rates of significant physical handicaps between this group and the total population of 18-year-olds.

### Followup of Children with Learning Disabilities at 10 Years

About 3 percent of the cohort had been diagnosed in need of placement in a learning disability class at age 10 because of serious reading and communication problems (in spite of normal intelligence), visual-motor impairment, hyperactivity, and difficulties in attention and

concentration. One out of five in this group had physical evidence of "organicity" (symptoms due to organic disease) on pediatric-neurological examinations. For the overwhelming majority in this group, serious problems persisted throughout adolescence: agency records for four out of five indicated continued academic underachievement compounded by absenteeism, truancy, and a high incidence of repetitive, impulsive acting-out behavior. Only one of four was judged to have improved by age 18.

**Followup of Children Considered in Need of Mental Health Services at Age 10**

About 3.5 percent of the cohort had been considered in need of 6 months or more of mental health services at age 10 because of emotional problems identified by behavior checklists. The checklists were filled out independently by parents and teachers and confirmed by diagnostic evaluations. Four out of five cases in this group involved acting-out problems; the others had been diagnosed as childhood neuroses, schizoid, or sociopathic personalities.

During adolescence, more than three out of four in this group had contacts with community agencies, the majority as consequences of persistent serious behavior problems. Rates of contact (many with multiple agencies) were six times as high as those for controls, matched by age, sex, socioeconomic status, and ethnicity. The problems included psychosomatic and psychotic symptoms, sexual misconduct or difficulties with sexual identity, assault and battery, theft and burglary, drinking and drug abuse, and continued poor academic performance coupled with absenteeism and truancy. Because of these serious problems, the youth had few constructive options for the future as they reached young adulthood.

The majority had recognized a need for help but turned to their peers for assistance rather than to their families or community agencies. Only one out of three was judged to have been improved by age 18.

The prognosis was much more favorable for that group of children (about 10 percent of the cohort) who, at age 10, had been considered in need of mental health services of less than 6 months' duration. The majority were shy or anxious children who lacked self-confidence and who had developed some chronic nervous habits to deal with their insecurities. By age 18, 6 out of 10 were rated improved.

**New Problems in Adolescence**

Based on records from schools and community agencies, 45 additional youth were identified who had developed serious behavior problems in adolescence. The ratio of girls to boys in this group was 2 to 1. Among the girls were 23 teenage pregnancies.

Most of the youths who became delinquent in adolescence had, by age 10, been considered in need of remedial education, special class placement, or mental services. A majority of the youth in this group had, at the threshold of adulthood, persistent problems in their social

and family life. They reported intense conflict feelings, accompanied by little self-insight, a low self-esteem, and lack of faith in the control of their own fate.

Only one out of five of the pregnant teenagers had been considered in need of remedial education, special class placement, or mental services by age 10. The interview responses of the pregnant teenagers told a depressing tale of lack of opportunities, lack of close friends and confidants, lack of parental support and understanding, lack of faith in the efficacy of one's own efforts, and most of all, lack of self-esteem.

A high proportion of the youths who developed new problems in adolescence came from homes that, in the 10-year followup, had been rated low in socioeconomic status and low in educational stimulation.

### Subcultural Differences

Among the five ethnic groups (Japanese, Filipino, part- and full-Hawaiian, Portuguese, and other ethnic mixtures), the Japanese continued to rank consistently above the other groups in verbal and numerical skills. Social class differences in communication skills were greater than ethnic differences, and increased during the high school years.

There were no significant social class or ethnic differences in the results of the Novicki Locus of Control Scale. The Japanese, especially the girls, showed the least external control. (They had faith in their ability to use their intellectual resources to improve scholastically and to make positive changes in behavior.) In contrast, the Portuguese, especially the boys, showed the most external control. (They believed that events happen as a result of fate, and they lacked faith in their ability to improve scholastically and to better their behavior.)

Achievement or lack of achievement appeared closely related to what the youths believed about their control of the environment. Girls appeared to absorb more readily new cultural traits and to be more achievement-oriented than boys. The Japanese and Filipino girls had the highest levels of educational and vocational aspirations.

On the California Psychological Inventory, the Japanese scored high in socialization, responsibility, and achievement; the Filipinos, in self-assurance and interpersonal adequacy; and the Hawaiians, in social presence.

### Educational Status and Plans

Ninety-seven percent of the cohort of 18-year-olds had graduated from high school. Of these, 19 percent planned to pursue some technical, vocational, or business training beyond high school; 21 percent were about to enroll in the local community college; 29 percent planned to attend a 4-year college; and 13 percent hoped to attend graduate school.

The vocational aspirations of the youths seemed to reflect a desire for upward mobility.

About 67 percent of the girls interviewed planned to take a paying job and marry later. About 33 percent wanted to marry first. A few were interested in marriage only and not in outside work.

The interview responses of Kauai's youths showed a great deal of parental influence, not only in matters of education and vocation but also in matters of morality and personal goals for their future lives.

**Evaluation of Predictors**

Predictions of serious learning and behavior problems in childhood and adolescence from data at birth, infancy, and early childhood were consistently more accurate for children from poor homes, and tended to run higher for girls than for boys.

About a dozen variables—some biological, some psychological, and some sociological—singly and in combination, showed significant relationship across time with poor developmental outcomes at 2 years and serious learning and behavior problems at 10 and 18 years. They were: moderate to marked degrees of perinatal stress; the presence of congenital defects; very high or very low levels of infant activity; Cattell IQ scores (Infant Intelligence Scale) below 80 by age 2; low PMA (Primary Mental Abilities) IQ score; moderate to marked degree of physical handicap; a recognized need for placement in a learning disability class; a recognized need for more than 6 months of mental health services by age 10; low level of maternal education; low family standard of living at birth, at age 2, or at age 10; and low family stability at age 2.

**Community Agency Involvement**

The majority of the youths in the 1955 cohort were able, with the help of parents, peers, and older friends, to cope effectively with their problems. Only 1 out of 5 of all the youth had some contact with the police during their adolescence, and fewer than 1 out of 10 had contacts with other social agencies in the community.

Overall, only one out of three youths with serious learning and/or behavior problems in middle childhood and adolescence came to agency attention. Two out of three among the mentally retarded and nearly one out of two children with learning disabilities were served by various community agencies during their teens. Four out of 10 youths in need of long-term mental health services at age 10 had the benefit of some intervention by social and community agencies during adolescence. But only 1 out of 10 of those in need of short-term mental health services and 1 out of 10 of the pregnant teenagers sought or obtained outside help. One-third of the children with new problems in adolescence obtained community assistance.

**Improvement Factors**

Overall, less than half of those who did receive some assistance from community agencies during adolescence improved. The highest rate of

improvement was among youths who had been in need of short-term mental health services at age 10. Although only 1 out of 10 received assistance, 6 out of 10 improved with or without the benefit of community intervention. It was found that significant correlates of improvement were: the youths' perception of parental understanding and peer support, a greater belief in the efficacy of their own actions and their "hard work and persistence," and better communication skills.

## Conclusions

Childhood learning and behavior disorders that persisted into young adulthood had a strong biological and temperamental underpinning, according to the principal investigator, who stressed developmental screening and early intervention for these children.

Poverty alone was not a sufficient condition for the likelihood of significant coping problems. A low standard of living, especially at birth, increased the likelihood of exposure of the infant to both early biological stress and early family instability. But it was the interaction of early biological stress and early family instability that led to a high risk of developing serious and persistent learning and behavior problems in children from both lower- and middle-class homes.

Youths who were doubly vulnerable because of early biological and environmental stress appeared to profit least from community intervention after age 10. Many of the key predictors of potential problem behavior were already recognizable by the time of the developmental examinations at age 2. Therefore, the investigator suggested that the critical time period for intervention of these children is in early childhood, preferably as early as age 2, or certainly before they enter school. Special follow-through kindergartens for children "at risk" might be another early point of entry for the prevention of serious learning and behavior disorders.

The investigator believed that a monitoring agent was necessary to interpret to the parents the need for intervention (based on the results of a developmental screening examination), and to help the family with the child from infancy through at least the first three grades. She suggested that both parents be involved in any kind of intervention program, since the parents' (including the father's) understanding and emotional support appear to play a crucial role in the likelihood of positive change. She further suggested that peer counselors and concerned older volunteers could serve as a source of intervention during school years, since peers and older friends ranked far above any kind of professional help as a source of counsel for this cohort.

Resolution of the conflicting demands between the individual rights of parents and children and the public and private responsibility to take care of their needs may be aided by the following: Federal or State legislation; greater expenditure of money from the public and private sector; more investment in manpower training; and translation of

research findings into social action programs. But an effective balance cannot be reached unless all parties concerned—the helping agencies, the parents, and the youths themselves—can reach a consensus on their mutual expectations.

## Publications

E.E. Werner, J.M. Bierman, F.E. French, "The Children of Kauai: A Longitudinal Study from the Prenatal Period to Age Ten," University of Hawaii Press, Honolulu, 1971.

E.E. Werner, R.S. Smith, "Kauai's Children Come of Age," University of Hawaii Press, Honolulu, 1977.

# GUIDELINES FOR SELF-EVALUATION OF PROGRAMS SERVING ADOLESCENT PARENTS

E.L. HUSTING, E.C. KHOURY, P.B. COHEN, J.R. MARKEL, *and* E.R. SCHLESINGER, *Maternity Care Research Unit, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania, 1973. Grant No. MC-R-420054-01-0.*

This research project provided for the development of a monograph "Guidelines for Self-Evaluation of Programs Serving Adolescent Parents." It was prepared in response to a need expressed by administrators and staff of such programs who wished to evaluate their efforts or reexamine their goals in the light of new needs.

The objectives were:

1. To explain basic evaluation procedures.
2. To present alternative approaches to evaluative issues, with their advantages and disadvantages.
3. To compile a reference that will serve in locating other resources.
4. To suggest ways in which activities that presently occur in existing programs might be evaluated.

In addition, the investigators wanted to provide a medium through which problems, issues, and ideas could be exchanged, which would facilitate communication.

Several activities at the University of Pittsburgh preceded and led to the writing of these guidelines. The activities included a national survey of programs, a survey of the literature, on-site studies of 19 programs, and studies of a local agency. Also, a workshop was held in which the authors of "Guidelines" sought guidance and suggestions from directors of a variety of programs.

The monograph contains chapters on needs and resources for evaluation; the kinds of objectives that can be evaluated; the evaluation of educational, medical, and social services of an agency; adequacy and cost of a program; day care; and a brief summary of the evaluation of one program.

The introductory chapter outlines the steps in the evaluation process; for example, involving program staff in the study, choosing one person to be responsible for the study, clarifying the focus and potential uses of the study, defining the population served, developing objectives, planning activities for meeting objectives, initiating the data-collection process, analyzing data, reexamining objectives and activities, and implementing changes. In the chapter on "Needs and Resources," the monograph gives suggestions for considering and quantifying the needs likely to be encountered by each program, and the resources available to each particular program. The chapter on objectives defines and distinguishes between different kinds of objectives and shows how objectives are written.

In the chapter on "Adolescent Pregnancy: The Educational Costs and Consequences," the monograph discusses the objectives, strengths, and weaknesses of the most common kinds of programs. Another chapter discusses the health aspects of pregnancy, including nutrition, obstetrics, abortion, psychiatry, dental needs, and contraception. Clinic models are also outlined.

To document social services, the monograph suggests recording demographic characteristics of patients, psychosocial problems of patients, psychosocial problems treated by the program, and psychosocial problems referred to other agencies for treatment. In addition, it suggests ways to classify methods of treatment and outcome of treatment, and a model for the patient's evaluation of social service.

The chapter on "Estimating the Program Effectiveness and Adequacy" deals with strength, potency, or impact of programs, defining this as "the extent to which pre-established program objectives are attained as a result of program activity." In discussing cost, the monograph covers the standard accounting approach, process and activity analysis, the measuring of cost through measuring of patient utilization, allocation of resources, budgetary value of activities analysis or utilization, and evaluation of alternatives.

Included in the discussion of "process" are research approaches, longitudinal studies, and systems studies. The chapter on "Day Care" discusses the pros and cons of day care, the kinds of decisions that will need to be made, and the information that will have to be collected to make the decision.

The final chapter of the monograph discusses the consumer evaluation of an educational-medical program for pregnant school-age girls. This is a description of the Educational Medical (Ed-Med) Program of Pittsburgh, Pennsylvania, sponsored by the Urban League of Pittsburgh for mothers between the ages of 15 and 17.

Each chapter except the last concludes with a bibliography of literature relevant to the chapter topic.

# INFORMATION SHARING PROJECT: A REPORT ON 25 COMPREHENSIVE SERVICE PROGRAMS FOR SCHOOL-AGE PREGNANT GIRLS

DONALD R. DEVERS, M.A., *Consortium on Early Childbearing and Childrearing, Child Welfare League of America, Inc., Washington, D.C.,* *1973. Grant No. MC-R-360212-01-0.*

In the United States in 1968, more than 200,000 girls under 18 years of age gave birth to a child. The plight of the school-age parents and their infants was becoming a national issue.

During 1968, 1969, and 1970, several conferences were held by the Cyesis Consortium to determine the extent of comprehensive service programs available at that time to school-age pregnant girls. The Cyesis Consortium, formerly under the auspices of George Washington, Pittsburgh, and Yale Universities, became the Consortium on Early Childbearing and Childrearing in 1972, under the auspices of the Child Welfare League of America, Inc. Participants in the Cyesis conferences formed the Information Sharing Project (ISP), a part of the Consortium.

After the national conferences, 35 programs for pregnant adolescents were invited to participate in the Information Sharing Project. Of these, 25 programs actually joined and agreed to provide information concerning the girls in their programs and the services offered to them. This report describes the project and presents the findings.

## The Girls Enrolled

The 25 comprehensive service programs served 4,482 girls who were enrolled between September 1968 and June 1969. The number reported as enrolled in each program varied between 29 and 1,017, with the program median falling between 110 and 130 girls. Most programs were located in or near major metropolitan areas.

Although the median age of enrolled girls was 16, about one-third of the girls were below this age. More than half of the girls in the programs were 16 years old (1,274 girls) or 17 years old (1,093 girls), and only about one-tenth (542 girls) were 18 and older. Since 16 is the age limit for compulsory education, many older pregnant adolescents were not in school and thus were unavailable for program enrollment.

The majority of the girls (88 percent) enrolled in the programs were black. Of the remaining girls, 7 percent were white and 4 percent were from diverse ethnic backgrounds, such as American Indian, Chicano, Oriental, and Spanish-speaking. These findings reflected the tendency for early programs to have originated in large metropolitan areas, primarily those with predominantly black populations.

The findings concerning religious affiliation reflected, on the average, those of the total population: 69 percent Protestant, 10 percent Catholic, 4 percent other, and 17 percent no religious affiliation.

Most of the girls (72 percent) had good behavior records before enrollment in the programs. The data analysis showed that pregnant girls 16 and older were significantly more likely to have had good behavior records than those under 16.

Program data showed that school systems referred more than 33 percent of the girls to the programs. An additional 33 percent of the girls contacted the programs themselves or through friends, parents, or relatives. Autonomous referral (referral by self) was significantly more common among girls who were 16 or older than among the younger girls.

The number of girls in each program who reported they had knowledge of or had used birth control methods varied dramatically. Only four programs reported birth control practices for more than 70 percent of their girls. Of the 25 programs in all, 12 had an average "not known" rate of 87 percent. Community and school policies concerned with this often controversial topic contributed to the difficulties in obtaining comprehensive data.

Of the 1,998 girls for whom data were available regarding their knowledge of birth control, 70 percent reported knowledge of at least 1 or more methods. However, of the 2,477 girls responding to the question on use of birth control methods, only 16 reported that they used 1 or more methods of birth control.

Six percent (272) of the girls served by the programs were known to have had one or more previous pregnancies; 4 percent (199) of the girls served by the programs had experienced one or more live births before being enrolled in the programs.

## Family and Home Background

Wages were the predominant source of income in families of 59 percent of the girls. Fewer than 31 percent of the girls came from families supported by public assistance.

Only 36 percent of the girls came from families in which the natural parents of the girl were still living together at the time the girl enrolled. (This contrasts to the national statistics for nonwhite youth between 14 and 17 years old, indicating that 44.5 percent of nonwhite youth in 1970 were living in 2-parent families.)

The proportion of older girls living with two parents (41 percent) was greater than that of younger girls living with two parents (37 percent). By contrast, more girls under 16 years old lived in homes headed by only their natural mothers (51 percent) than did girls who were 16 and older (43 percent). These data, though not statistically significant, suggest that younger pregnant girls come from less stable homes than older girls.

In both age groups (girls under 16, and those 16 and over), the percentage of behavioral difficulties was higher for the girls living with only the mother (15 percent and 8 percent, respectively) than for girls living with two parents.

## Father of the Baby

The median age of the fathers was 18, with a range extending from 13 to 40 years. A very small proportion (4 percent) were younger than 16. For 9 out of 10 known cases, the boy was older than the girl.

Thirty-two percent of the boys were students. In 23 percent of the cases, the student status or occupation of the father was not known. Nonstudents who were employed comprised 39 percent of the total sample, and nonstudents who were unemployed comprised 6 percent of the sample.

Twenty-three percent of the fathers contributed continuing financial support. Twenty percent planned to marry the mother; 18 percent remained at least emotionally supportive to the adolescent mother; and 2 percent contributed financial support for only the pregnancy and birth. Thus a positive involvement with the girl occurred in 3,566 cases, far outweighing lack of involvement. Fathers under 16 or over 25 years old were least likely to remain involved with the mothers.

## Marriage

At enrollment into the programs, 8 percent of the girls were married. (Several programs specifically excluded adolescent mothers who were married at conception.) Approximately 27 percent reported, at enrollment, that they had plans to marry; and at the time of the baby's birth, 5 percent of the mothers had changed their marital status from single to married.

## Health

Health data were taken from 10 programs that served 1,286 girls.

The vast majority of the girls (95 percent) received some form of prenatal care, with 58 percent having been within a clinic setting. Slightly more than 78 percent of the girls in this selected sample were receiving prenatal care before their seventh month of pregnancy. Nine percent began their medical care in the last 3 months of their pregnancy. For 14 percent of the girls, either the data were incomplete or no care was begun.

About 20 percent of the girls in the programs suffered from illness (heart diseases, venereal diseases) and handicaps (such as blindness, disfigurement, orthopedic defects).

Of the 1,286 pregnancies, 62 percent were classified as full-term normal births. Fewer than 1 percent were premature births; 1 percent were stillbirths, and 4 percent ended with abortion. The results of 10 percent were not known, and 22 percent were not full term by the end

of the survey. Among the 1,286 pregnancies, 252 girls had 316 complications of pregnancy.

For those babies for whom data were available, the average APGAR score was 8, a score of 9 being most frequent. (The APGAR test, done shortly after birth, recorded skin tone, respiration, and basic reflex responses.) Birth weight of the baby was reported for 916 cases of the sample; for 592 of the babies, birth weights were from 6 to 8 pounds. Sixty-nine of the babies weighed less than 5 pounds at birth. In the sample, there were 10 sets of twins out of 1,006 pregnancies.

### General Outcome of Programs

Among all the pregnancy programs studied, more than 20 different services were available for pregnant girls. The data showed that 49 percent of the girls used from 6 to 10 services offered by their programs; only a few girls (7 percent) used from 0 to 2 services. More than 80 percent of all the girls enrolled attended school courses, health education courses on pregnancy, and prenatal care services. Between 55 and 60 percent of the girls used post partum care and continued casework services. Least often used components of the programs were religious or spiritual counseling, psychiatric treatment, living facilities before and after childbirth, services for the baby's father, vocational training and placement, and legal or adoption counseling.

More than 46 percent of the adolescent mothers were enrolled in the program for 5 months or longer. A total of 3,488 girls left the programs. Analysis of the reasons given for leaving implied that the programs had succeeded. For example, slightly more than 35 percent left to return to school, 11 percent graduated while in their programs, nearly 46 percent continued enrollment to the end of the school year, and 8 percent were reported to have completed the program.

Of the mothers in the survey, over 80 percent (both single and married) planned to keep their babies. No differences in the percentages of girls planning to keep their babies were found between girls under 16 years old and those 16 and older.

## RESEARCH UTILIZATION AND INFORMATION SHARING REGARDING SCHOOL-AGE PARENTS

NATIONAL ALLIANCE CONCERNED WITH SCHOOL-AGE PARENTS, *Syracuse University, Syracuse, New York, 1973. Grant No. MC-R-360101. (1976 address: 7315 Wisconsin Avenue, Suite 211-W, Washington, D.C. 20014.)*

This report documents the role of the National Alliance Concerned with School-Age Parents (NACSAP) in encouraging the development of comprehensive service programs for school-age parents and their infants.

The plight of the school-age parents emerged as an issue of national importance during the 1960s, when services for a majority of pregnant students and young parents were either inaccessible or unavailable and punitive policies were evoked. (In many schools, pregnant students and young fathers were barred from school.)

Concerned for the health, education, and social service needs of the pregnant school girl, administrators in the District of Columbia schools began a demonstration program in 1968 that offered students an opportunity to continue their education in a school-based program and to receive appropriate counseling and health care. The Webster School became the successful prototype for community programs throughout the country.

An increase nationally in the number of comprehensive service programs fostered the establishment of the Cyesis Consortium (later called the Consortium of Early Childbearing and Childrearing). The Consortium collected and disseminated information about school-age parent programs but did not offer extensive on-site technical assistance. Thus, the need for an advocacy organization that could fulfill this function led to the formation of the National Alliance Concerned with School-Age Parents.

The school-age parent programs provided students with continuing education during pregnancy, either in their regular classrooms or in separate classes for pregnant students. The students also received early and consistent prenatal care while participating in lectures and discussions on childbirth, childrearing, family life, and family planning. Further counseling on a group basis and an individual basis was offered, and occasionally it involved young fathers. In addition, special courses and information about child care services were provided.

The activities of NACSAP during the grant period (July 1, 1970, through June 30, 1973) included conducting national and State conferences, providing technical assistance, conducting surveys, and producing educational materials. Statewide conferences were aimed at key legislators and public agencies in the health, education, and welfare fields, to acquaint them with the nature and scope of the problem and ways of dealing with it on an integrated basis. Interdisciplinary technical assistance teams made site visits to communities to help plan and implement the type of comprehensive programs most suited to their needs.

## Legislative Survey

In 1970 and 1972, letters were sent to the Office of the Attorney General and the Office of Public Instruction in each of 50 States, requesting information concerning policies and statutes affecting the attendance of school-age mothers and fathers and pregnant girls in the school system. Information was also sought concerning alternate programs and policies of readmission after delivery of a child.

Comparison between the surveys indicated a growing belief in the importance of education for all school-age persons. There was a trend toward relaxing restrictions that prohibited pregnant teenagers and school age parents from continuing their studies in the regular schools.

In 1970, 15 States excluded pregnant girls from public school. In 1972, only one State excluded these girls. As of June 1973, there were at least 34 States with school districts that allowed pregnant girls to attend regular school. Twenty of these States provided alternate programs in addition to regular school, and in half of these States the choice of attending the alternate program or continuing in the regular classroom was left to the girl. There also has been a liberalizing of State regulations that affect the right of a school-age mother to attend regular schools after pregnancy. The 1970 survey showed that districts in seven of the States refused to readmit the school-age mother after the birth of her child. However, in 1972 all States permitted school-age mothers to return to regular school.

## Expansion of Programs

In 1968, approximately 10,000 girls of school age were being reached through comprehensive programs. By 1971, as a result of additional programs and support efforts of NACSAP and the Consortium on Early Childbearing and Childrearing, 40,000 of the estimated 200,000 school-age girls who became pregnant that year were being reached.

These programs were augmented by a Federal plan in 1972. At that time, an interagency task force was created within the U.S. Department of Health, Education, and Welfare, to promote advocacy for services to young parents and their infants.

NACSAP set future priority on helping States develop independent school-age parent organizations through an expanded membership and technical assistance program.

## Publications

Since NACSAP was organized, it has published a quarterly newsletter. In addition, NACSAP has identified numerous resource materials relating to various aspects of the school-age parent movement. This collection includes articles, bibliographies, pamphlets, brochures, school-age parent program descriptions, Government Printing office bulletins, and resource guides.

Publications resulting from this research include:

Bernard B. Braen, "The School-Age Pregnant Girl—The Problem and an Attempted Solution," Clinical Child Psychology Newsletter, Vol. X, Nos. 2 and 3, pp. 17-20, 1971.

Marion Howard, Lucy Eddinger, "School-Age Parents: A Health Approach," Consortium on Early Childbearing and Childrearing, Washington, D.C., and the National Alliance Concerned with School-Age Parents, Syracuse, New York, 1973, 33 pages.*

Marion Howard, Lucy Eddinger, "School-Age Parents: A Social Services Approach," Consortium on Early Childbearing and Childrearing, Washington, D.C., and the National Alliance Concerned with School-Age Parents, Syracuse, New York, 1973, 30 pages.*

Marion Howard, Lucy Eddinger, "School-Age Parents: An Educational Approach," Consortium on Early Childbearing and Childrearing, Washington, D.C., and the National Alliance Concerned with School-Age Parents, Syracuse, New York, 1973, 29 pages.*

*Available from Child Welfare League of America, 67 Irving Place, New York, N.Y. 10003 as long as supplies last.

# THE BIOLOGICAL FATHER IDENTIFIED BY A POPULATION OF BLACK PRIMIPAROUS ADOLESCENTS—A DESCRIPTIVE STUDY

PHYLLIS A. EWER, PH.D., *Department of Gynecology and Obstetrics, Emory University School of Medicine, Atlanta, Georgia, 1971.* *Grant No. H-214-2.*

This research project was undertaken primarily to supplement the scant literature on the role of the putative father in the black family. It also provides data on couples who had out-of-wedlock conception but married each other. Fathers as well as mothers were interviewed on the topics of marriage, sex, and contraception. This procedure permitted not only a description of the father as he reports his own characteristics, but also an assessment of bias that sometimes results from interviewing the mothers only.

The putative fathers were identified by 193 black adolescent mothers who participated in the Atlanta Adolescent Pregnancy Program and who delivered their first child between July 1968 and September 1970. Interviewers were unable to contact 18 of the mothers and 41 of the fathers. Twenty-three couples refused to participate in this study. Of 67 couples who were interviewed fully, 52 couples were selected for the sample. In each case, they were not married to each other at conception of their child, and it was the first pregnancy for the girl.

## Findings

### Description of Sample

Among most of the couples in the sample, the partners were from the same school community in the Atlanta metropolitan area. By the time of

the interview, 40 percent of them had married, and another 20 to 30 percent (depending on whether both partners gave the same answer) indicated that they still planned to marry each other. The median age of the males was 2 years higher than that of the females, which is characteristic of the difference in median age at marriage for U.S. couples in general. Fewer of the males than females came from families supported primarily by welfare or by a female as the chief wage earner. These data suggest that the economic level of the males' families was higher than that of the females' families.

**Perceptions of Relationship**

Several questions in the interview pertained to attitudes about exploitiveness in male-female relationships, attitudes about premarital sexual activity, and descriptions of their relationship. Most respondents reported that both partners were equally satisfied with the relationship.

Responses to an adapted version of the Reiss scale of premarital permissiveness indicated that the males were more liberal in their attitudes toward premarital sexual activity than the females were, and that both sexes had a more liberal standard for males than for females.

Responses also indicated that females thought the responsibility for sexual activity was more his than hers. Whereas 31 percent of the females said they liked sex, 52 percent were neutral and 17 percent disliked it. By contrast, 70 percent of the males thought their female partners liked sex, 18 percent thought their partners were neutral, and 12 percent thought their partners disliked sex.

Many of these relationships were reported to be disappointing to the females. More females (27 percent) than males (8 percent) reported, after the birth of their child, that they "just thought" they were in love at the time of conception. More males (69 percent) than females (54 percent) reported that they were "in love" with their partners before the child was born.

It was noted also that more males than females reported themselves as "in love" both before the pregnancy occurred and at the time of interview. The investigator speculated that males and females may apply different standards in determining when love exists, females tending to be more exclusive and stable in the relationship and males judging love simply on the basis of attraction. It was also noted that this sample selected couples with a fairly long, close relationship, and that actual differences between responses of males and females are probably greater in the population as a whole.

**Attitudes About Contraception**

Fewer than 25 percent of each sex indicated that the pregnancy was wanted. Yet only 35 percent of the respondents reported that they had tried to prevent pregnancy. Most of those who reported use of any method of contraception used the condom, irregularly. In answer to a multiple-choice question as to the time of month during which a female was most likely to become pregnant, only 18 percent of the males and

40 percent of the females gave the correct answer. Most subjects had faith in the effectiveness of the major methods of birth control: 75 percent of the females and 70 percent of the males thought that oral contraceptives were effective; 65 percent of the females and 61 percent of the males, the IUD; and 39 percent of the females and 69 percent of the males, the condom.

Generally, females approved of abortion only for reasons relating to the mother's health (60 percent); they rejected abortion as a solution to an inconvenient pregnancy. Only 42 percent approved abortion when the female cannot afford a child; 27 percent approved when the female is not married; 19 percent approved when the female does not want a child. Males indicated relatively high acceptance of abortion for reasons relating to the mother's health and for rape, but not for possible deformity or inconvenience of pregnancy.

### Perception of a Man's Obligations to His Child

Almost all respondents (male and female) indicated they thought a man should support his child. They expected the father to support the child whether or not he was living with the mother and whether or not they were married. Support was defined as (1) money, (2) visiting the child, and (3) babysitting. Both males and females reported a median monetary contribution of $30 a month from males, with 83 percent of the males reported contributing to support. The fathers claimed to be filling these support roles more often than the mothers reported.

### Attitudes Toward Marriage

In general, the subjects expressed favorable attitudes toward marriage. Most did not view it as favoring one sex over the other. The large majority (94 percent) believed that finding a good marriage partner was "one of the most important things that can happen to a person."

In defining the characteristics of a good partner, only 8 percent of the males reported that virginity was necessary. Although 73 percent of the males indicated that it would not matter if the female already had a child by another man, only 14 percent felt that the "neighborhood girl" (one who was too easily accessible to others sexually) would make a good wife. Sixty-nine percent of the females indicated that a potential husband should have "a lot of experience with girls."

There was consensus that a woman should be at least 18 years old at marriage, a man at least 19, and that both should have graduated from high school.

### Actions Regarding Marriage

Age and birth order seemed to relate to the issue of whether or not the couple married. Older respondents (females 16 or older and males 19 or older) were more likely to marry than the younger ones. Respondents who were the oldest children in their families were more likely to marry than those who were not the oldest. Also likely to marry

were those who reported they were in love and planning to marry before the pregnancy, and males who reported that the relationship was an exclusive one for them.

Thirty-one percent of the couples actually did marry before the birth of the baby, and 40 percent married by the time of interview.

## Implications for Social Policy

This study confirms the findings of other researchers who have noted that out-of-wedlock pregnancies are typically the result of a fairly long-term courtship and relationship. Further, many biological fathers not living with their families do contribute financially, provide emotional support, and assist with child care. It is likely that the absent father does not perform these functions as frequently or as dependably as the father who lives with his family, but absence from the household is not the equivalent of having no father for the children involved.

Although all subjects in this study engaged in premarital sexual activity, the females were less permissive than the males. The males were older and tended to come from families with higher income levels. Also, more males than females were involved in a relationship with still another partner. The investigator suggested that anything that increased the female's ability to control the relationship might reduce the incidence of premarital sexual activity. Among the needs cited were: increasing the family's ability to supervise the female's courtship behavior and to protect her from sexual exploitation; and increasing the job status of young black males. The investigator noted that "perhaps having middle class income rather than having middle class values is a prerequisite to a life style which conforms to middle class norms, after all."

The data also suggested that black adolescents need more knowledge about contraceptives and outcomes of sexual activity.

The investigator recommended that welfare programs be designed to include the father in training programs, health care, and other services so that he can function better as a father to his child and support his family.

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