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Nutrition CRSP - Grant # USAID DAN-1309-G-SS-1070-00

Mexico Project

Submitted October 31, 1986, for the year 10/1/85-9/30/86

MEXICO ANNUAL REPORT: Table of Contents

October 27, 1986

MEXICO PROJECT: ANNUAL REPORT FOR 1985-86

I. INTRODUCTION

During the year covered by this report great progress has been made . The field research on almost all of the families was completed in December, 1985. From January to May of 1986 a few families remained in the project, almost all of them with young infants on whom we needed to complete data collection in order to meet the N of 100 in this age group. In May the data collection ended, and both families and our field workers reluctantly left the project; the rapport that had been built between the families and our project personnel was truly remarkable.

There are still a substantial number of employees working on the CRSP in Mexico. In September, there were 25 workers in Solis who were responsible for checking questionable values and printouts of captured data against the original questionnaires, entering some small data sets on microcomputers, and microfilming the questionnaires. In Mexico City there is still a sizeable Data Management team, which is very impressive in terms of organization and programming ability. The CRSP has made an enduring contribution to INN in this regard. The other personnel in Mexico are the seven "Jefas de Area" who supervised data collection in the field. These persons are helping to coordinate error checking and are also attempting to work with some of the data in their respective areas of expertise. Data entry has been continuing in Salud Publica, and this process is almost complete.

At the University of Connecticut, the major activity has been in the area of data management. This includes checking and formatting files as they arrive from Mexico, sending data to Berkeley, and preparing analysis files. The majority of data analysis has been conducted at the University of Massachusetts, with frequent communications between the PIs and Edward Stanek. The data management team at Storrs is spending increasing amounts of time on analysis. The PIs have also learned SAS and are running analyses both on the mainframe and microcomputers.

II. DATA MANAGEMENT IN MEXICO

Data management and data entry continues to take place at four locations:

- SOLIS: the fieldsite,
- INN
- PUBLIC HEALTH (Salud Publica)
- IBM Mexico's Scientific Center

V

SOLIS: Data are still being entered at the fieldsite headquarters in Solis using Apple II microcomputers. Data entry at Solis, as during the past year, is restricted to specialized and/or small datasets. Datasets which have been or are being entered at Solis include laboratory data and psychology. Data entered on Apple II's are recorded on floppy diskettes which are then sent to INN for transfer to standard label tape.

The other major data activity taking place at Solis is the checking of paper listings of all entered data against the original questionnaires. Presently, there is a sizeable Solis staff of local people who are either hired to enter data on Apple II microcomputers, or to hand-check the quality of entered data. When Solis detects errors in data entry, they note the corrections on the paper listings which are then sent to INN for correction.

PUBLIC HEALTH: Public Health is still being used to enter a few large datasets, notably the clinic records and diet. The data are entered using a standard two-pass data entry system at the Salud Publica data entry facility. The data are then recorded on a standard label tape which is then usable by IBM Scientific Center's IBM mainframe and INN's HP-2000.

IBM MEXICO'S SCIENTIFIC CENTER: IBM Mexico's Scientific Center continues to provide INN with free use of the Scientific Center's IBM mainframe computer and as well as free access to the services of Scientific Center staff. Currently, CRSP data are transferred to IBM by tape. These data are then used to create paper listings of the entered data, which are then sent to Solis to be checked against the original questionnaires.

INN DIVISION OF COMMUNITY NUTRITION: As a result of the data demands of the CRSP, INN's Division of Community Nutrition has developed an impressive data management/data entry capacity. The Division now has a single "computer room" at INN dedicated entirely to data entry and data management. This room now has

- 5 Printaform microcomputers (IBM-PC compatible microcomputers),

- 1 Apple II microcomputer,

- 2 Hewlett-Packard terminals directly connected to INN's Hewlett-Packard HP-2000 minicomputer.

Three of the Printaform microcomputers can used as terminals linked to the HP-2000. A number of the Printaforms also have hard disks. Also, in the computer room are also a number dot-matrix printers of various manufacturers. Only

3

two of the printers, the Apple II and one Printaform hav been purchased by CRSP monies, the rest have been provide by other INN Division of Community Nutrition projects, or b INN. In contrast, the Division of Community Nutrition ha only a single Printaform microcomputer and an Apple II i the summer of 1985. Moreover, the single Printaform was th only IBM compatible microcomputer at INN: most othe Divisions within INN had purchased Hewlett-Packard HP-15 microcomputers as part of a special deal offered to INN b Hewlett-Packard. The HP-150's have since prove unsatisfactory, and IBM-compatible are now becoming th standard at INN. The Division of Community Nutrition's microcomputer facilities have now become a model an resource for the rest of INN.

Associated with the increase in computing facilities has been the training and retention of staff in tasks related to data entry and data management. The CRSP now has at its disposal 3 very capable programmers, and a large number of staff who produce documentation, correct data, enter data, and provide a number of other services necessary for the entering, processing, managing and transferring of large amounts of data. These highly trained, experienced, and competent staff also provide a potential base for future INN research projects.

The credit for the establishment of this impressive data processing capacity must go to INN staff hired by the CRSP, who when given the "seed" equipment purchased by the CRSP and the massive CRSP demands for data entry and data management, created an admirable in-house system for the processing of data. If future funding can be insured for the existing personnel, the CRSP will have done some of the "institution building" which was part of its mandate.

As result of the establishment of a data processing and data management capacity at INN, data flow from Mexico has been steady during year 5. A schematic of the flow of data is shown in figure 1:

```
                                 UCONN
                                   |
                                   |
                                   |
PUBLIC HEALTH ---------->         IBM  <---------------------+
                                   .                         |
                                   .                         |
                                   .                         |
APPLE II ----------->  PRINTAFORM ---------  HP-2000  ------+
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Figure 1

4

Data flow is accomplished by (a) floppy diskette, (b) tape, (c) microcomputer-to-microcomputer communications through serial ports, and (d) microcomputer-to-mainframe communications via a line server and dedicated line at INN. Soon, there will be communications between an INN Printaform microcomputer and IBM's mainframe computer using a modem and phone line.

III. DATA MANAGEMENT AT THE UNIVERSITY OF CONNECTICUT

Data management at the University of Connecticut has become more complex and demanding as the flow of data from Mexico has increased. Most data management activities in year five have focused on activities related to the documenting, archiving, and processing of the vast amounts of data sent from INN to UConn. Major data management tasks have been: (a) documenting the data that has come up from Mexico; (b) creating tapes with complete documentation for sending to ME, (c) the creation of "raw", unprocessed SAS files for use by data management at UConn, (d) the writing of those programs necessary to create the "derived" variables needed for statistical analyses, and (e) the creation of small "analyses" datasets and documentation for our statistical staff at the Universit. of Massachusetts.

In the Spring of 1986, the decision was made to do statistical analyses at UMass on IBM PC-compatible microcomputers using SAS/PC. The current division of labor is for data management at UConn to create "analysis" datasets for the statisticians at UMass using SAS on UConn's mainframe computer. These analysis files are then down-loaded to floppy diskettes using a dedicated line connecting an IBM PC to the IBM mainframe at 9600 baud. The files on diskette are then catalogued and then mailed or carried to UMass for statistical analyses.

As Connecticut has begun to assemble complete datasets, data management has become increasingly involved in data quality control. Because of Mexico's labor intensive activities in data quality control (e.g. hand-checking entered data against the original forms), the number of errors detected by UConn have tended to be low. Nevertheless, in areas where "raw" data must be used in calculating "derived" variables (e.g. Kcals and RMR), special attention has been paid to the correction of errors. Connecticut presently has error checking routines for anthropometry, RMR, diet, all areas of social data, and psychology. Data management is in the process of shifting much of it's energy into detecting and correcting errors given that (a) Mexico is only beginning to have personnel and equipment necessary to answer queries from Connecticut about specific data questions, and (b) Connecticut has been extremely busy processing the deluge of data arriving from Mexico; as datasets become complete, data management now has more time to dedicate to data quality control. Also, UMass has become involved in developing methods of computer-aided data quality control as have personnel at INN.

In the coming year, the major tasks facing data management will be (a) the continuing creation of analysis datasets for CRSP staff at UMass, INN, and UConn; and (b) the creation of a final set of data with documentation to be archived at ME.

All data received by Connecticut have been forwarded with documentation to ME. Table 1 shows the current status of Mexico project data:

TABLE 1

BASIC FILES DESCRIPTION (ME)	MEXICO AREA	UCONN STATUS	N OF LINES
1. Household Entry, Change, or Exit	Basal Census	Being Updated	5631
	Sample Census	Being Updated	1461
2. Mortality Notification & Diagnosis	Clinical History	Being Entered	
3. Household Food Intake Summary	Diet	3/86-5/86 Scheduled for 10/86	370,897
4. Individual Food Intake Summary	Diet	" "	
5. Suppl. Feeding: Infant	Diet	" "	
6. Anthropometry: Targets	Anthropometry	Complete 1/84-5/86	6689
7. Anthropometry: Non-targets	Household anthropometry	Complete (once on exit from field)	699
8. Metabolic Adaptation	RMR	Complete 1/84-5/86	1874
9. Historical Assessment: Disabilities and Chronic Illness	Clinical History	Being Entered	
10. Reproductive History	Clinical History	Being Entered	
11a. Physical Assessment: Nutrition-related variables	Clinical History	Being Entered	
11b. Physical Assessment:	Physical	Being	

During Pregnancy	Exam	Entered	
12. Pregnancy Outcome	Clinical History	Being Entered	
13. Monthly Conception Survey	Clinical History	Being Entered	
14. Monthly Pregnancy Survey	Clinical History	Being Entered	
15. Lactation and Infant Feeding	Clinical History	Being Entered	
16. Laboratory Assessment	Urine	Complete	9085
	Feces	Complete	?
17. Morbidity/Illness Episodes	Morbidity	Complete	36,570
18. Morbidity Summary	Morbidity	Complete	" "
19. Psychological Function			
19a. Adults	Cognitive	Complete	?
19b. Infants	Brazelton	1/84-11/85	61
	Psych 3mo.	1/84-1/86	87
	Psych 6mo.	1/84-1/86	75
19c. Toddlers	Psych 18mo.	Complete	101
	Psych 24mo.	Complete	118
	Psych 30mo.	1/84-1/86	69
19d. Schoolers	Cognitive	Complete	291
	Classroom	Complete	211
	Playground	Complete	271
20. Household Sanitation	Sanitation	1/85-2/86	?
21. Individual SES	Socioeconomic	1/84-6/85	439
	Sociocultural	1/84-6/85	558
22. Household Demography	Demography	Complete	?
23. Household SES	Socioeconomic	1/84-6/85	439
	Sociocultural	1/84-6/85	588
24. Community Climatic Data	Climatic Data	Being Entered	
25. Childcare and Sanitation	Sanitation	Complete	?
	Activity of L Female	Complete	56,276

	Activity of L Male	Complete	6,675
26. Time Allocation	Activity of L Female	Complete	56,276
	Activity of L Male	Complete	6,675
	Family Activity	Being Entered	
27. Weekly Household Food Use	Same Name	1/84-2/86	54,299
28. Food Prices	Same Name	Being Entered	
29. Diet Substudy	Same Name	Being Entered	
30. Morbidity Substudy	Same Name	Being Entered	
31. Household Productivity	Same Name	Scheduled 10/86	

IV. DATA ANALYSIS AT THE UNIVERSITIES OF CONNECTICUT AND MASS.

As explained above, data analysis is ongoing at both the University of Connecticut and the University of Massachusetts. Appendix I contains a list of the analysis files in use at UMass as of August, 1986. The following sections include a brief description of data analysis activities in each area of the study, together with some analyses that are attached as Appendices.

1. HOUSEHOLD LEVEL DESCRIPTORS.

Creating a Family Characteristics File

A number of the primary "intervening variables" of the study are characteristics of the household in which the key individuals reside. Since these variables will be used repeatedly in multiple regression and other multivariate analyses, we decided to create a file containing these variables, one which could be readily merged with other data sets for analysis purposes. The file contains, at present, three types of descriptive variables on households: socio-economic measures, family composition measures and sanitation measures. The preparation of this file involved

8

developing the descriptive statistics on each of the individual variables comprising the scales, as well as the scales themselves. By substantive area, the variables now ready for use in analysis are as follows:

SOCIO-ECONOMIC STATUS MEASURES
PERSONAL AND HOUSEHOLD/CLEANLINESS MEASURES
FAMILY CHARACTERISTICS

Socio-economic Status Measures

The initial (provisional) set of socio-economic measures was developed in 1984. During the year covered by this report, these variables have been revised, based on an analysis of the inter-relationships among the constituent components of the scales and their stability across time. The variables that have been transferred to the family file are two sets of measures: a household wealth scale (based on material possessions) and a house quality scale (based on characteristics of living quarters). The second set of measures concerns agricultural resources. All the variables for these measures have been range-checked and corrected. (Note: the final, "exit" measures for all households have not yet been completely checked and corrected).

Appendix II contains frequency distributions of the household wealth measures. The differentiation of households, as measured by these scales, appears to be very sensitive, improving their usefulness as "control" variables.

Personal and Household Cleanliness/Environment Measures

A series of analyses were carried out to develop the "sanitation" measures, which are essentially household environment and personal appearance/cleanliness ratings. These measures are based on repeated observations by project personnel carried out over the course of the study. At every visit to the household by a food intake data collector (Nutritionist), psychologist and social data collector, the fieldworker completed a standardized form, based on his/her observations of a series of characteristics and conditions. Over the course of a study year, each household would have a minimum of 12 observations by food intake fieldworkers, as well as several observations by other project personnel. Depending on a number of factors, the families in the longitudinal study had from 15 to 50 observations. To arrive at composite measures, the data were first range checked, then subjected to descriptive analysis, followed by other analyses of data to investigate inter-relationships among the individual raw variables. As a result of this activity five measures have been created and added to the family characteristics file. These variables are: 1) Appearance of the mother; 2) Appearance of preschooler; 3) Appearance of schoolchild; 4) Cleanliness of the external household environment and 5) Cleanliness of the internal household environment. These variables are now ready for use in multivariate analyses.

Appendix II contains the frequency distributions for these five variables, as well as a table showing their inter-correlations. As with the household socio-economic measures, the data collection instrument appears to have yielded sensitive measures that distinquish households within the Solis Valley. The correlations between the socioeconomic and sanitation measures are also shown in this appendix. The levels of association among these variables are of a magnitude that suggests the two sets are measuring different dimensions of household characteristics. At the same time, it is apparent that they are related in important and predictable ways.

Family Demography and Composition

Currently, the Family Characteristics file contains a number of demographic characteristics, which have been transferred from the Basic Census file to the composite household file. These include: total family size, "dependency ratio" (children to adults), family type and marriage type. Together with the SES variables, these may be important intervening variables between food intake and functional outcomes in morbidity and psychological functioning.

Appendix II contains a set of graphs showing the frequency distributions for various aspects of household size. These are shown for the 1984-85 data collection year and the 1985-86 period. There is, of course, considerable overlap between the two samples, as families were not recruited into the study on a calendar year basis. Therefore, the diffferences between the two data sets reflect differences in family composition across time, as well as differences in the sample.

2. ANTHROPOMETRY.

All anthropometric data, including Family Anthropometry, are at Connecticut. Complete error-checking programs have been written and implemented, setting permissible ranges for each anthropometric parameter and ratios of these parameters (e.g. weight-for-height). 88 questionable values were flagged out of a total of 6,774 measurements. These will be checked against original forms in Mexico.

Examples of the growth curves and anthropometric data for each type of child are presented in Appendix III.

The INFANT growth data show that this group have slightly low birthweights on average (3.2 kg, 38th percentile or -0.4 Z-score); weights then recover so that they are almost at the 50th percentile for the first 3 months, but this is followed by a steep decline so that at 6 months weights average 6.5 kg and

10

at 8 months they are 7.2 kg. This latter value represents the 24th percentile or -1.0 Z score. Length patterns are similar but more extreme. At birth length is 49.6 cm (around the NCHS average) but then falls dramatically to below the 25th percentile (-0.9 Z score) between months 1 and 3 and to the 13th percentile (-1.5 Z score) by 8 months. The weight-for-height ratio increases very slightly between birth and 8 months. There is much variability in growth among infants.

TODDLERS grow from 9.6 kg to 11.5 kg, and 79.1 cm to 83.2 cm, between 18 and 30 months of age. Average monthly weights fall between the 16th and 20th percentile, and heights between the 2nd and 15th percentile, between 18 and 30 months. Thus, height is again more compromised than weight by comparison to the NCHS standards. Weight-for-height stays virtually constant between 18 and 30 months.

The growth slopes of SCHOOLERS are not smooth, due to the fact that the age span is over 24 months (less measures at a particular month of age) and measures were made at 3-month intervals. In general the weight at 7 years (20.4 kg) is at a similar percentile to that of toddlers. They grow only 1.5 kg and less than 4 cm in height between years 7 and 8 (compared to 3 kg and 5.3 cm in the NCHS tables). Growth rate slows and only 0.7 kg and 2.2 cm are gained between years 8 and 9. Percentiles do not change much on average across the time period. Weight-for-height is improved for each age compared to that for toddlers; the range of average monthly percentile values for toddlers was 3 - 15, while for schoolers the range is 23 - 51.

3. MORBIDITY.

Data are presented in Appendix IV for "Adjusted Morbidity" i.e. days ill / days visited x 30. This adjustment is made to deal with the fact that illnesses were only recorded if the individual were sick on that day.

INFANT morbidity analyses show that the number of days ill increase steadily from a low of 1.36 per month in the first month of life, to 2.42 at month 4 and a peak of 3.14 days per month at month 6. Of the illness, over one third is Lower Respiratory (LR) but the percentage due to LR falls off with age, and there is an increasing percentage of diarrhea. Diarrhea events are negligible during the first few months and peak at 1.15 days per month (one third of the total illness) at 6 months. Upper Respiratory (UR) illness is a very small percentage of the total between one and eight months.

The number of days that TODDLERS were ill per month ranged between 0.9 and 4 days. About half of the illness is due to diarrhea, and most of the remainder to LR and UR. The average illness rate varies considerable from month-to-month. Dr.

Stanek has demonstrated strong age-related trends in the frequency of illness, with less diarrhea, fever, and total illness as the child ages from 18 to 30 months. The morbidity from diarrhea and from fever appear to be seasonal. There is no strong relationship between the previous month's food intake or weight and the frequency of illness in the current month.

Schoolers have low rates of illness - less than half a day per month on average throughout the period studied. About one third of the illness is UR and LR, and the occurrence of diarrhea is very low.

4. PSYCHOLOGICAL DATA.

During recent months, most of the data preparation activities with psychological data have centered on the materials collected from toddlers and infants. Interviewer and community effects have been investigated, and inter-relations among individual variables (from the Bayley scales and the social-emotional/ mother-child interaction observations) have been examined. Based on the latter analyses, two composite variables of child social-emotional performance have been identified, together with one maternal social interaction ("instructional sociability") measure. The program to create these composite measures from the raw data is currently being written. Parallel analyses of the infant data are planned for the near future.

Analyses of relationships of the toddler psychological data with household characteristics have been undertaken as a preliminary step toward testing the basic CRSP hypotheses. Tables in Appendix V show the frequency distributions of the standard scores for the Bayley examination. The table in this Appendix shows correlations of Bayley measures with household characteristics for the toddlers at 24 months. It is illustrative of the types of relationships we are finding.

5. FOOD INTAKE DATA.

Almost all food intake data are at the University of Connecticut. The data have undergone extensive error-checking at UConn, which required the development of programs to check for errors in food codes, inconsistencies among responses in different sections of the interview form, abnormally high intakes of foods or nutrients, etc. Although the error rate is very low, we feel that identification of these problems is essential since there are so many potential sources of error in each food intake record, and relatively few intake records per individual. We have sent a 75-page book to Berkeley explaining the logic process and programs used to check for diet errors, including examples of the printouts generated. Possible errors have been sent back to INN to be reviewed, and INN have used our programs as a basis for developing their own error-checking routines.

The INN food composition tables have been revised and approximately 85 new food codes and associated nutrient values have been added. Research on the correction factors for water lost during cooking has been summarized and the new correction factors are in use.

A "Daily Summary" diet file has been created to expedite planned analyses. For each individual, for each day of diet measurement, the file consists of the total of all types of nutrients consumed, and totals of kcal and protein consumed in specific foods or groups of foods.

Appendix VI provides a summary of average kcal intakes by month of age in Solis children.

In the case of infants and toddlers, a "Weaning File" has been created containing the data on the age at which breast-feeding terminated completely.

6. SPECIAL ANALYSIS OF INFANT GROWTH PATTERNS

Analysis of growth data reveals that the majority of infants grow fairly well until the age of 3-4 months, then growth rates fall off dramatically compared to the standards. By 6 months of age many infants are well below the 5th percentile in weight- and height-for-age. The variation in growth rates among individuals in this group is much greater than between the ages of 18 and 30 months. (The distribution of the square root of the standard error {standard deviation} of regressions of weight and height against time are included in Appendix III). We are therefore interested in the prompt analysis of these data. For the meeting in November we plan to present analyses of infant growth rates using data from the morbidity, food intake/weaning, household sanitation, SES, and maternal anthropometry files. Preliminary analyses suggest that poor growth in this time period is not strongly related to either illness or household characteristics.

7. RMR

Preliminary analyses of the RMR data were presented at the SCB meeting in February, 1986 and included in the last semi-annual report. We are continuing with these analyses, with emphasis on the relationship between maternal energy intake and changes in RMR in pregnancy and lactation.

8. AUTOREGRESSION MODEL

Ed Stanek has completed the initial runs of the autoregression model proposed by the statisticians. The PIs have proposed changes to this model and several modifications are currently being tested. Results to date have been sent to George McCabe and are included in the statistician's report. Dr. Stanek's summary of the autoregression results as of early September, 1986 are attached as Appendix VII.

V. DATA ANALYSIS IN MEXICO.

Dr. Chavez, with the assistance of Drs. Homero Martinez and Mirna Vara, are planning to present several analyses at the November meeting. These include a comparison of the two methods used to collect morbidity data (the CRSP method tested since the summer of 1985 and the INN method where morbidity data are only collected if the respondent is sick on the day of the interview), analyses done to construct other illness measures, e.g. severity, and possibly some analysis of pregancy outcome. Some of the Jefas de Area are involved in small analyses within their area of expertise, e.g. seasonal dietary changes, analysis of food intake observations vs our recall/weighing method, etc. We hope that these will help to fulfil the thesis requirements of some of these workers, teach them how to collaborate in data analysis and writing, and produce data and publications that are useful to both the CRSP and INN. It is the final, very important stage in the training of these CRSP-trained valauable workers and hopefully a reward for their dedication and sacrifices to the project.

V. PERSONNEL AND BUDGET

During the latter part of the year some changes in personnel and allocation of other resources were made, reflecting the shift in emphasis to a more advanced stage of data management and analysis. At the UConn site one data assistant/programmer position was upgraded from 90% to a regular full-time position and the hours of a second increased from half- to full-time for the summer. Our current plan is to augment the data management/analysis staff at UConn by a half-time position, which will give us two full-time and two part-time personnel for the duration of the project. This will be accomplished by employing a part-time administrative assistant in order to free half of our current administrator's time for data analysis and report writing. (This individual is trained in anthropology and nutrition, has experience in data analysis using the UConn system, and is familiar with the project's methodology and data base).

In addition, statistical support provided through subcontract with the University of Massachusetts School of Public Health (Dr. Edward Stanek) has been increased for the current academic year (beginning in August) with the addition of a full-time Research Associate (Bio-statistics M.S.), as well as an increase in Dr. Stanek's time.

These adjustments have been made in the context of changes in the funds allocated to the Mexico project and substantial fluctuations in the MexicO-U.S. currency exchange rate and inflation in Mexico. Monitoring and fine-tuning the funding situation has required preparation of four full project projections during the year. Our most recent projection, prepared this fall, indicates that the INN-Mexico component will cost approximately $60,000 more than projected in the budget prepared last November and currently authorized. The increase in resources allocated for statistical support and data management/analysis amounts to an additional $20,000 at UMass and $10,000 at UConn. These additional costs have been off-set in part by savings which have been possible in UConn component in Year 5 and by the reallocation of $18,000 to the Mexico Project (in essence returned from the $52,500 reduction in the Mexico Project's original allocation enacted at the SCB-IC meetings in February). The savings were achieved by such measures as reduced PI summer salaries, reduced secretarial salary, lower computer costs at the University of Massachusetts resulting from the purchase of micros, the use of supplemental computer funds at Connecticut, and funding of a Research Assistant with other funds. With the latter amount provided to support expansion of statistical analytical activities, the project will be able to remain within the total allocated, with the UConn data management/analysis staff employed through the end of the project, UMass statistical support ending as of May 30, 1987 and minimal support for data checking, analysis and report preparation in Mexico through June, 1987.

VI. PLANS FOR THE FINAL PROJECT YEAR.

The Mexico CRSP plans to finish analysis of the main hypotheses in the areas of Energy Intake, Morbidity, Anthropometry, Psychology/Behavior and RMR. The PIs have agreed among themselves on the responsibilities and rights of publication, and on the first publications to be submitted. We hope to have made substantial progress on 4 papers by December of this year. Data have been captured in the areas of activity and mother-child observations, and we are optimistic that at least descritpive analyses of these data will also be available by next summer.

As a final note, while AID will receive a report of the analyses conducted on basic hypotheses by the end of Year 6, it is clear that an enormous amount of data analysis and publications will be incomplete at the end of the funding period.

\5

APPENDIX I

Listing of Analysis Files at University of Massachusetts

mexico
madir.rpt on \masas\marpt disk #1
9/04/86

Listing on Files on MASAS\MARPT (report) Directory on LE

NOTE: Under File: MZ -- \masas\marpt
ED -- \edsas\edrpt
SS -- \sssas\ssrpt

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*INFANT *
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Name		File		Description
INFCRI	RPT	MZ1	7-02-86	Report of criteria to set up selection for infants
IDT1	RPT	MZ1	8-12-86	Simple descriptions of infant diet data
IAN1	RPT	MZ1	8-12-86	Simple description of collection dates of infant anthro data
IWT1	RPT	ED	8-01-86	Infant wt outlier checks
IWT2	RPT	ED	7-29-86	Infant wt Desc of regression
IWT3	RPT	MZ1	8-22-86	Descriptive summary of Infant Monthly Data set (5 intervals for first month) for weight MSTUDY = 1 and protocol period
IWT4	RPT	MZ1	8-27-86	Descriptive summary of Infant Monthly Data set (3 intervals for first month) for weight MSTUDY = 1 and protocol period
IWT5	RPT	MZ1	8-29-86	Descriptive summary of Infant Monthly Data set (1 interval for first month) for weight MSTUDY = 1 and protocol period
IHT1	RPT	ED	8-01-86	Infant edit checks on height
IHT3	RPT	MZ1	8-26-86	Descriptive summary of Infant Monthly Data set (5 intervals for first month) for weight MSTUDY = 1 and protocol period
IHT4	RPT	MZ1	8-26-86	Descriptive summary of Infant Monthly Data set (3 intervals for first month) for weight MSTUDY = 1 and protocol period
IHT5	RPT	MZ1	8-29-86	Descriptive summary of Infant Monthly Data set (1 interval for first month) for weight MSTUDY = 1 and protocol period
ISES	RPT	MZ1	8-12-86	Proc means of all variables in ses file

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*****************
* TODDLER       *
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Name		File		Description
MAP	RPT	MZ1	6-13-86	Map of makeup of toddler data file
TODCRI	RPT	MZ1	7-25-86	Report on criteria to set up selection for toddlers
TODPOP	RPT	MZ1	7-02-86	Report of descriptive anaylsis of master file
THT2	RPT	MZ1	7-16-86	Report for setting bounds for ht
THT3	RPT	MZ1	7-17-86	Report for setting bounds for ht mstudy = 1
THT8	RPT	MZ1	8-15-86	Desc summary of toddler monthly data file for height MSTUDY=1 and Protocol period
THT9	RPT	MZ1	8-19-86	Descriptive summary of toddler 3 month data file for height MSTUDY=1 and protocol period
THT1	RPT	MZ1	7-29-87	Description Toddler master file
TWT2	RPT	MZ1	7-29-87	Toddler wt bounds rpt
TWT3	RPT	MZ1	7-29-87	Toddler wt bounds (mstudy=1)
TWT5	RPT	MZ1	7-29-87	Toddler outlier change summary
TWT6	RPT	ED	7-29-86	Toddler wt - Desc of regression
TWT8	RPT	ED	7-31-86	Desc summary of toddler monthly data file for weight MSTUDY=1 and Protocol period
TWT9	RPT	MZ1	8-19-86	Descriptive summary of toddler 3 month data file for weight MSTUDY=1 and protocol period
TWT11	RPT	ED	8-05-86	Perliminary auto regressive models on weight for toddlers
DTCRI1	RPT	MZ2	7-09-86	Steps to set criteria for toddlers diet kcals
TDIET2	RPT	SS	8-12-86	Report on setting bounds for toddler diet file
TDIET3	RPT	SS	8-12-86	Report of toddler diet values to be field checked
TDIET5	RPT	SS	8-23-86	Descriptive summary of toddler monthly file for diet data MSTUDY = 1 and protocol period
TDIET6	RPT	SS	8-25-86	Descriptive summary of toddler 3 monthly file for diet MSTUDY=1 and in protocol period

```
**********************
*TODDLER  (cont.)    *
**********************
```

Name		File		Description
BIV	RPT	MZ1	7-17-86	Report on bivariate analysis on
PSYCCHK	RPT	MZ1	6-25-86	Psych check of data looking for out of range/univar
INPSY	RPT	MZ1 behavior	6-25-86	Report of toddlers with psych data
TPSY1	RPT	ED	8-04-86	Summary of Bailey Corr on MSTUDY=1
TMETH1	RPT	ED	8-13-86	Report of methods of dealing with missing data in auto regression equation
TREG1	RPT	MZ1	8-21-86	Crossectional analysis of variables used in toddler regression analysis
TREG2	RPT	MZ2	8-29-86	A Simple Descriptive Analysis of Toddler Regression data
REGRESS	RPT	SS	8-20-86	Report on results of initial regression runs for toddler data in the protocol period and MSTUDY=1
BREAST	RPT	SS	8-26-86	Report on diet obs. in toddler diet set which may be confounded by breastfeeding

```
*****************
*SCHOOLER       *
*****************
```

Name		File		Description
SCHCRI	RPT	MZ1	7-02-86	Report of criteria to set up selection for schoolers

```
******************
*LEAD MALE       *
******************
```

Name		File		Description
MALECRI	RPT	MZ1	7-02-86	Report of criteria to set up selection for males

```
*******************
*FEMALES          *
*******************

Name                File                 Description
-----               ----                 -------------------------
FEMCRI    RPT       MZ1       7-02-86    Report of criteria to set up selction
                                         for females
```

20

APPENDIX II

A) Socio-Economic Status Measure

B) Personal and Household Cleanliness

C) Household Size

SOLIS: HOUSEHOLD POSSESSIONS SCALE
(SES Measure I)

```
MIDPOINT
MSL SCORE
                                                          FREQ   CUM.   PER
                                                                 FREQ
            |
    1       |***************************                   67     67     2
            |
   30       |*******************                           47    114     1
            |
   60       |*******************                           47    161     1
            |
   90       |***************                               38    199     1
            |
  120       |********                                      21    220
            |
  150       |*********                                     22    242
            |
  180       |*********                                     22    264
            |
            ----+----+----+----+----+----+---
               10   20   30   40   50   60

                     FREQUENCY
```

HOUSE VALUE SCORE (SES Measure II)

House Score	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
	41	.	.	.
10	1	0.4	1	0.4
11	6	2.3	7	2.6
12	16	6.0	23	8.7
13	20	7.5	43	16.2
14	21	7.9	64	24.2
15	23	8.7	87	32.8
16	21	7.9	108	40.8
17	29	10.9	137	51.7
18	32	12.1	169	63.8
19	25	9.4	194	73.2
20	23	8.7	217	81.9
21	13	4.9	230	86.8
22	14	5.3	244	92.1
23	10	3.8	254	95.8
24	6	2.3	260	98.1
25	1	0.4	261	98.5
26	1	0.4	262	98.9
27	3	1.1	265	100.0

SOLIS: HOUSE VALUE SCALE (SES Measure II)

HOUSE SCORE		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
10	*	1	1	0.38	0.38
11	***	6	7	2.26	2.64
12	********	16	23	6.04	8.68
13	**********	20	43	7.55	16.23
14	***********	21	64	7.92	24.15
15	************	23	87	8.68	32.83
16	***********	21	108	7.92	40.75
17	***************	29	137	10.94	51.70
18	****************	32	169	12.08	63.77
19	*************	25	194	9.43	73.21
20	************	23	217	8.68	81.89
21	*******	13	230	4.91	86.79
22	*******	14	244	5.28	92.08
23	*****	10	254	3.77	95.85
24	***	6	260	2.26	98.11
25	*	1	261	0.38	98.49
26	*	1	262	0.38	98.87
27	**	3	265	1.13	100.00

-----+----+----+-
10 20 30

FREQUENCY

SOLIS: ANIMAL WEALTH SCALE (FREQUENCY DISTRIBUTION)

```
   MIDPOINT
Animal Wealth Score                         FREQ   CUM.   PERCENT    CUM.
                                                   FREQ             PERCENT
                   |
         0         |**********                50     50    18.52     18.52
                   |
        30         |******************** 100    150    37.04     55.56
                   |
        60         |***********               57    207    21.11     76.67
                   |
        90         |*******                   36    243    13.33     90.00
                   |
       120         |***                       17    260     6.30     96.30
                   |
       150         |*                          3    263     1.11     97.41
                   |
       180         |                           1    264     0.37     97.78
                   |
       210         |*                          3    267     1.11     98.89
                   |
       240         |*                          3    270     1.11    100.00
                   |
                   ----+---+---+---+---+
                      20  40  60  80  100

                        FREQUENCY
```

SOLIS: EXTERNAL LIVING AREA CLEANLINESS SCALE

```
MIDPOINT
EXT LIV AREA SCALE                               FREQ  CUM.    PERCENT
                                                       FREQ
               |
    960        |*                                   2      2      0.87
               |
   1080        |***                                 7      9      3.04
               |
   1200        |********                           19     28      8.26
               |
   1320        |**************                     34     62     14.78
               |
   1440        |**********************             55    117     23.91
               |
   1560        |*********************              53    170     23.04
               |
   1680        |****************                   39    209     16.96
               |
   1800        |********                           21    230      9.13
               |
              ----+---+---+---+---+--
                 10  20  30  40  50

                    FREQUENCY
```

SOLIS: INTERNAL LIVING AREA CLEANLINESS SCALE

```
MIDPOINT
INT LIV AREA SCALE                            FREQ  CUM.   PERCENT
                                                    FREQ
               |
     560       |***                             5      5     2.17
               |
     640       |*****                           9     14     3.91
               |
     720       |*******                        13     27     5.65
               |
     800       |**********************         43     70    18.70
               |
     880       |***********************        46    116    20.00
               |
     960       |*********************          41    157    17.83
               |
    1040       |******************             36    193    15.65
               |
    1120       |*******************            37    230    16.09
               |
               -----+----+----+----+---
                   10   20   30   40

                     FREQUENCY
```

SOLIS: APPEARANCE OF MOTHER (CLEANLINESS) SCORE

```
Mother Appearance                                  FREQ.   CUM.   PERCENT    CUM.
                                                           FREQ.          PERCENT

    125    |                                         0       2      0.00      0.87
           |
    150    |*******                                 13      15      5.65      6.52
           |
    175    |*************                           26      41     11.30     17.83
           |
    200    |***************************             53      94     23.04     40.87
           |
    225    |***********************                 46     140     20.00     60.87
           |
    250    |*******************                     37     177     16.09     76.96
           |
    275    |***************************             53     230     23.04    100.00
           |
           -----+----+----+----+----+--
               10   20   30   40   50

                     FREQUENCY
```

SOLIS: APPEARANCE (CLEANLINESS) SCORE OF SCHOOL AGE CHILD

```
 MIDPOINT
SCHOOL AGE APPEAR SCORE                              FREQ   CUM.    PERCENT     CUM.
                                                            FREQ               PERCENT
                 |
      100        |*****                                10     10      4.63       4.63
                 |
      125        |*********                            17     27      7.87      12.50
                 |
      150        |******************                   36     63     16.67      29.17
                 |
      175        |*****************                    33     96     15.28      44.44
                 |
      200        |*************************            49    145     22.69      67.13
                 |
      225        |**************                       28    173     12.96      80.09
                 |
      250        |*************                        25    198     11.57      91.67
                 |
      275        |*********                            18    216      8.33     100.00
                 |
                 -----+----+----+----+----+
                     10   20   30   40   50

                         FREQUENCY
```

SOLIS: APPEARANCE (CLEANLINESS) SCORE OF PRESCHO

```
MIDPOINT
YOUNG CHILD APPEAR SCORE                          FREQ  CUM.   PE
                                                        FREQ
                 |
      100        |****                              7      7    3
                 |
      125        |*************                    26     33   11
                 |
      150        |**********************           44     77   19
                 |
      175        |******************               36    113   16
                 |
      200        |*************************        49    162   21
                 |
      225        |*************                    25    187   11
                 |
      250        |************                     23    210   10
                 |
      275        |********                         15    225    6
                 |
                 -----+----+----+----+----+
                     10   20   30   40   50

                          FREQUENCY
```

SOLIS: CORRELATIONS OF ENVIRONMENT/CLEANLINESS MEASURES

	Sanitation			
	External Env.	Internal Env.	Mother Appear.	Schooler Appear.
External Liv. Area Scale	1.00000 0.0000 230	0.82638 0.0001 230	0.65382 0.0001 230	0.58134 0.0001 216
Internal Liv. Area Scale	0.82638 0.0001 230	1.00000 0.0000 230	0.79262 0.0001 230	0.69258 0.0001 216
Mother Appearance Score	0.65382 0.0001 230	0.79262 0.0001 230	1.00000 0.0000 230	0.73768 0.0001 216
Schooler Appearance Score	0.58134 0.0001 216	0.69258 0.0001 216	0.73768 0.0001 216	1.00000 0.0000 216
Toddler Appearance Score	0.63180 0.0001 225	0.73122 0.0001 225	0.81361 0.0001 225	0.71290 0.0001 212

SOLIS: SELECTED CORRELATIONS OF SES AND SANITATION MEASURES*

	Sanitation				
	Ext. Env.	Int. Env.	Mother Appear.	Schooler Appear.	Toddler Appear.
Socio-Econ. Measures:					
Material Possessions	-	.19	.31	.28	.26
House Val.	-	.24	.23	.34	.22
Animal Wealth	-	-	.15	-	.15

*$p < .02$

SOLIS: HOUSEHOLD SIZE

```
HOUSEHOLD SIZE                                        FREQ  CUM.   PERCENT   CUM.
                                                            FREQ             PERCENT
           |
    3      |****                                        7     7      2.29      2.29
    4      |***********                                22    29      7.19      9.48
    5      |**********                                 19    48      6.21     15.69
    6      |****************                           32    80     10.46     26.14
    7      |************************                   48   128     15.69     41.83
    8      |*********************                      41   169     13.40     55.23
    9      |***********************                    46   215     15.03     70.26
   10      |******************                         35   250     11.44     81.70
   11      |************                               23   273      7.52     89.22
   12      |*******                                    14   287      4.58     93.79
   13      |*****                                       9   296      2.94     96.73
   14      |***                                         5   301      1.63     98.37
   15      |*                                           1   302      0.33     98.69
   16      |*                                           2   304      0.65     99.35
   18      |*                                           1   305      0.33     99.67
   19      |*                                           1   306      0.33    100.00
           -----+----+----+----+----
               10   20   30   40

                FREQUENCY
```

SOLIS: HOUSEHOLD SIZE (NUMBER OF ADULT WOMEN)

I. 1984-85

```
Number  of Females 17+                          FREQ  CUM.   PERCENT    CUM.
                                                      FREQ             PERCENT
              |
              |
              |
       1      |*********************  208     209      68.87     69.21
              |
       2      |*******                 66     275      21.85     91.06
              |
       3      |**                      21     296       6.95     98.01
              |
       4      |*                        5     301       1.66     99.67
              |
       5      |                         1     302       0.33    100.00
              |
              -----+----+----+----+-
                  50  100  150  200

                     FREQUENCY
```

II. 1985-86

```
Number of Females 17+                           FREQ  CUM.   PERCENT    CUM.
                                                      FREQ             PERCENT
            |
            |
       1    |**************************  191     192      63.25     63.58
            |
       2    |**********                   73     265      24.17     87.75
            |
       3    |****                         28     293       9.27     97.02
            |
       4    |*                             6     299       1.99     99.01
            |
       5    |                              3     302       0.99    100.00
            |
            ----+---+---+---+---+---+-
               30  60  90  120 150 180

                  FREQUENCY
```

SOLIS: HOUSEHOLD COMPOSITION (NUMBER OF ADULT MEN)

I. 1984-85

```
Number of Males  17+                                   FREQ  CUM.   PERCENT    CUM.
                                                              FREQ             PERCENT
                |
    0           |                                         1      1     0.33      0.33
    1           |**************************             196    197    64.90     65.23
    2           |********                                62    259    20.53     85.76
    3           |****                                    30    289     9.93     95.70
    4           |*                                        8    297     2.65     98.34
    5           |*                                        4    301     1.32     99.67
    6           |                                         1    302     0.33    100.00
                |
                ----+---+---+---+---+---+--
                   30  60  90 120 150 180

                        FREQUENCY
```

II. 1985-86

```
Number of MALES 17+                                    FREQ  CUM.   PERCENT    CUM.
                                                              FREQ             PERCENT
                |
    0           |                                         1      1     0.33      0.33
    1           |*************************              188    189    62.25     62.58
    2           |*********                               64    253    21.19     83.77
    3           |****                                    32    285    10.60     94.37
    4           |**                                      12    297     3.97     98.34
    5           |*                                        4    301     1.32     99.67
    6           |                                         1    302     0.33    100.00
                |
                ----+---+---+---+---+---+-
                   30  60  90 120 150 180
```

SOLIS: HOUSEHOLD SIZE (NUMBER OF CHILDREN UNDER 6)

I. 1984-85

Number of Children		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0	******	28	28	9.27	9.27
1	*****************	84	112	27.81	37.09
2	************************	122	234	40.40	77.48
3	************	61	295	20.20	97.68
4	*	6	301	1.99	99.67
5		1	302	0.33	100.00

```
----+----+----+----+----+----+
   20   40   60   80  100  120
```

FREQUENCY

II. 1985-86

Number of Children		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0	*******	34	34	11.26	11.26
1	****************	78	112	25.83	37.09
2	**************************	129	241	42.72	79.80
3	**********	48	289	15.89	95.70
4	**	12	301	3.97	99.67
5		1	302	0.33	100.00

```
----+----+----+----+----+----+--
   20   40   60   80  100  120
```

FREQUENCY

SOLIS: HOUSEHOLD SIZE (NUMBER OF GIRLS 6- 16)

I. 1984-85

```
Number of Girls
                                            FREQ  CUM.   PERCENT    CUM.
                                                  FREQ            PERCENT
              |
       0      |********************         98    98     32.45     32.45
              |
       1      |***************              76   174     25.17     57.62
              |
       2      |*************                66   240     21.85     79.47
              |
       3      |*******                      35   275     11.59     91.06
              |
       4      |****                         19   294      6.29     97.35
              |
       5      |*                             6   300      1.99     99.34
              |
       6      |                              1   301      0.33     99.67
              |
       8      |                              1   302      0.33    100.00
              |
              ----+---+---+---+---+
                 20  40  60  80  100

                     FREQUENCY
```

SOLIS: HOUSEHOLD COMPOSITION (NUMBER OF GIRLS 6-16)

(1985-86)

Number of Girls		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0	******************	89	89	29.47	29.47
1	****************	79	168	26.16	55.63
2	************	62	230	20.53	76.16
3	*********	44	274	14.57	90.73
4	****	21	295	6.95	97.68
5	*	4	299	1.32	99.01
6	*	3	302	0.99	100.00

```
----+---+---+---+--
   20  40  60  80
```

FREQUENCY

SOLIS: HOUSEHOLD SIZE (NUMBER OF BOYS 6 - 16)

I. 1984-85

Number of Boys		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0	******************	91	91	30.13	30.13
1	****************	78	169	25.83	55.96
2	**************	68	237	22.52	78.48
3	*********	46	283	15.23	93.71
4	***	17	300	5.63	99.34
5		2	302	0.66	100.00

```
----+---+---+---+--
   20  40  60  80
```

FREQUENCY

SOLIS: HOUSEHOLD COMPOSITION (NUMBER OF BOYS 6-16)

(1985-86)

```
Number of Boys                                FREQ  CUM.   PERCENT    CUM.
                                                    FREQ            PERCENT
                 |
       0         |*****************            83    83     27.48     27.48
                 |
       1         |***************              76   159     25.17     52.65
                 |
       2         |**************               71   230     23.51     76.16
                 |
       3         |**********                   50   280     16.56     92.72
                 |
       4         |****                         21   301      6.95     99.67
                 |
       6         |                              1   302      0.33    100.00
                 |
                 ----+---+---+---+-
                    20  40  60  80

                      FREQUENCY
```

APPENDIX III

ANTHROPOMETRY

A) Infant Growth Data

B) Preschooler Growth Data

C) Schooler Growth Data

MEAN ANTHROPOMETRIC MEASURES OF INFANTS BY MON... OF AGE

13:22 THURSDAY, OCTOBER 30, 1986

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
					AGEMONTH=.					
WEIGHT	WEIGHT	4	3.22500000	0.79320027	2.40000000	4.30000000	0.39660013	12.900000	0.6291667	24.595
HEIGHT	HEIGHT	4	49.80000000	3.76297754	45.00000000	54.19999999	1.88148877	199.200000	14.1600000	7.556
HW		4	0.00128220	0.00012797	0.00118518	0.00146371	0.00006398	0.005129	0.0000000	9.980
W_AGEZ		0	.	.	.	.	.	.	.	.
H_AGEZ		0	.	.	.	.	.	.	.	.
W_HZ		0	.	.	.	.	.	.	.	.
W_AGEPER		0	.	.	.	.	.	.	.	.
H_AGEPER		0	.	.	.	.	.	.	.	.
W_HPER		0	.	.	.	.	.	.	.	.
					AGEMONTH=0-1					
WEIGHT	WEIGHT	91	3.16043956	0.42475591	2.10000000	4.30000000	0.04452652	287.60000	0.18042	13.440
HEIGHT	HEIGHT	77	49.56883116	2.20598825	44.00000000	55.19999999	0.25139569	3816.80000	4.86638	4.450
HW		77	0.00126611	0.00015878	0.00099242	0.00186735	0.00001809	0.09749	0.00000	12.541
W_AGEZ		90	-0.37314402	0.86597846	-2.85083008	1.82788086	0.09128214	-33.58296	0.74992	-232.076
H_AGEZ		76	-0.43697262	1.00034854	-2.83496094	2.08691406	0.11474785	-33.20992	1.00070	-228.927
W_HZ		76	2.81736454	5.10050391	-1.95092773	9.98999023	0.58506792	214.11971	26.01514	181.038
W_AGEPER		90	38.63571693	25.12521284	0.21798706	96.62109375	2.64842998	3477.21452	631.27632	65.031
H_AGEPER		76	38.38678380	26.71832006	0.22898865	98.15625000	3.06480150	2917.39557	713.86863	69.603
W_HPER		76	51.59090705	39.47059963	2.55395508	99.89843750	4.52758829	3920.90894	1557.92824	76.507
					AGEMONTH=1-2					
WEIGHT	WEIGHT	86	4.20930232	0.68007403	3.10000000	7.70000000	0.07333427	362.00000	0.462501	16.156
HEIGHT	HEIGHT	86	52.42093021	2.23154477	46.00000000	58.29999995	0.24063366	4508.20000	4.979792	4.257
HW		86	0.00152610	0.00017501	0.00114864	0.00236166	0.00001887	0.13124	0.000000	11.468
W_AGEZ		85	-0.14350712	1.01346545	-2.37890625	4.88696289	0.10992576	-12.19810	1.027112	-706.213
H_AGEZ		85	-0.98779898	0.86795888	-3.30981445	1.08398438	0.09414336	-83.96291	0.753353	-87.868
W_HZ		85	1.14897160	2.16011175	-1.54394531	9.98999023	0.23429701	97.66259	4.666083	188.004
W_AGEPER		85	43.54776073	25.37470855	0.86898804	99.79687500	2.75227357	3701.55966	643.875834	58.269
H_AGEPER		85	22.66765068	19.99359778	0.04699993	86.08593750	2.16861016	1926.75031	399.743952	88.203
W_HPER		85	72.04653895	21.11067591	6.12500000	99.89843750	2.28977429	6123.95581	445.660637	29.301
					AGEMONTH=2-3					
WEIGHT	WEIGHT	94	5.02659574	0.73750167	3.70000000	7.70000000	0.07606749	472.50000	0.543909	14.672
HEIGHT	HEIGHT	94	55.77765956	2.24155065	51.00000000	61.50000000	0.23119830	5243.10000	5.024549	4.019
HW		94	0.00161172	0.00018436	0.00118971	0.00243789	0.00001901	0.15150	0.000000	11.439
W_AGEZ		93	-0.12116455	0.87136714	-1.87890625	3.47583008	0.09035656	-11.26830	0.759281	-719.160
H_AGEZ		93	-0.95699829	0.85345158	-3.27490234	1.79882813	0.08849831	-89.00084	0.728380	-89.180
W_HZ		93	0.83167720	0.97321153	-2.26684570	5.13891602	0.10091733	77.34598	0.947141	117.018
W_AGEPER		93	45.11735551	25.00805207	3.00878906	99.79687500	2.59321420	4195.91406	625.402668	55.429
H_AGEPER		93	22.84586267	21.36934018	0.05299950	96.40234375	2.21589735	2124.66523	456.648700	93.537
W_HPER		93	73.39347331	21.48977017	1.16992188	99.79687500	2.22838536	6825.59302	461.810222	29.280
					AGEMONTH=3-4					
WEIGHT	WEIGHT	99	5.65050505	0.82404846	3.50000000	7.50000000	0.08281999	559.40000	0.679056	14.584
HEIGHT	HEIGHT	99	58.32727271	2.60837811	51.09999996	65.19999999	0.26215186	5774.40000	6.803636	4.472
HW		98	0.00166089	0.00017034	0.00123662	0.00208080	0.00001721	0.16277	0.000000	10.256
W_AGEZ		99	-0.23072568	0.87658781	-2.93994141	1.83593750	0.08810039	-22.84184	0.768406	-379.926
H_AGEZ		99	-1.00883511	0.87267371	-3.42382813	0.91999817	0.08770701	-99.87468	0.761559	-86.503
W_HZ		98	0.74780367	0.93153047	-1.52099609	3.06591797	0.09409879	73.28476	0.867749	124.569
W_AGEPER		99	43.37298430	25.52158891	0.16398621	96.67968750	2.56501620	4293.92545	651.351500	58.842
H_AGEPER		99	22.38471454	20.27050040	0.03099918	82.12500000	2.03726194	2216.08674	410.893187	90.555
W_HPER		98	70.40998436	24.27644239	6.41577148	99.79687500	2.45229101	6900.17847	589.345655	34.479

42

MEAN ANTHROPOMETRIC MEASURES OF INFANTS BY Mo...h OF AGE

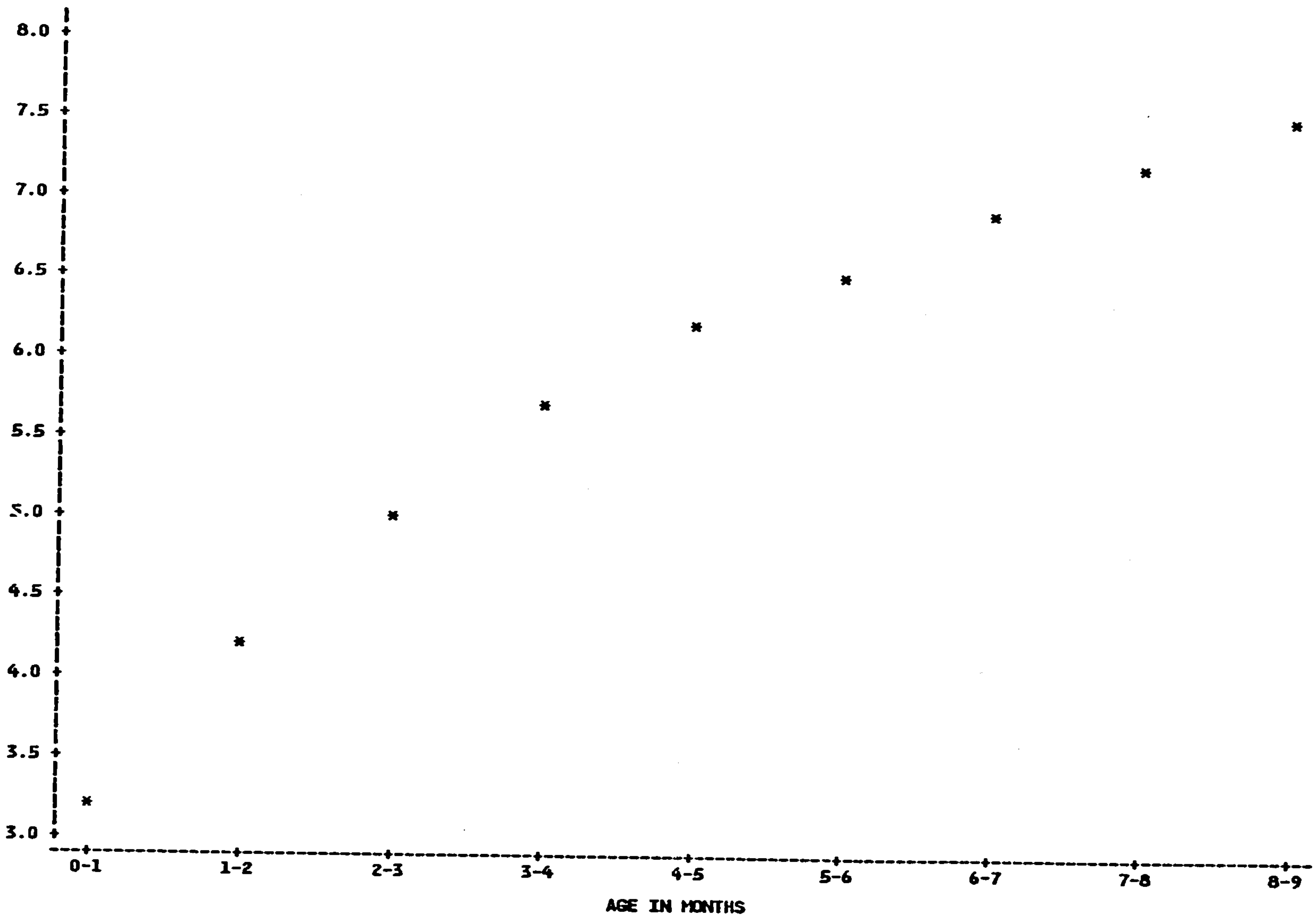
13:22 THURSDAY, OCTOBER 30, 1986

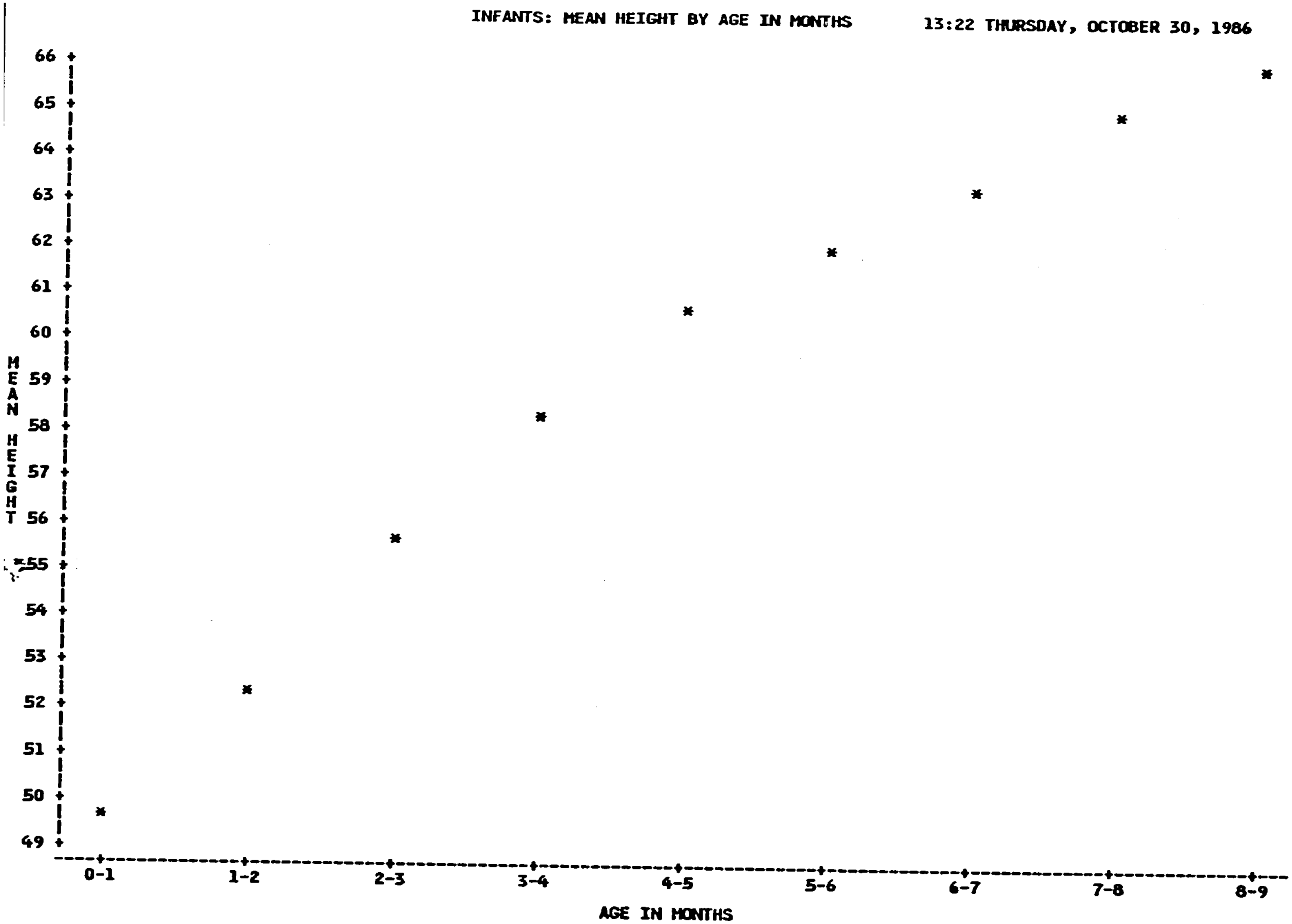
VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
AGEMONTH=4-5										
WEIGHT	WEIGHT	82	6.17439024	0.96171285	3.70000000	8.40000000	0.10620342	506.30000	0.924892	15.576
HEIGHT	HEIGHT	82	60.50365851	2.83524750	54.79999995	69.19999999	0.31310071	4961.30000	8.038628	4.686
HW		82	0.00168226	0.00020842	0.00118359	0.00247139	0.00002302	0.13795	0.000000	12.390
W_AGEZ		82	-0.38045198	0.98173975	-3.08178711	2.09594727	0.10841502	-31.19706	0.963813	-258.046
H_AGEZ		82	-1.09803977	0.96341636	-3.07299805	1.92797852	0.10639154	-90.03926	0.928171	-87.740
W_HZ		82	0.59223731	1.17316241	-2.75488281	5.06079102	0.12955412	48.56346	1.376310	198.090
W_AGEPER		82	39.21896493	27.58660565	0.10299683	98.19531250	3.04643096	3215.95512	761.020811	70.340
H_AGEPER		82	21.03569124	23.06748248	0.10598755	97.30078125	2.54737729	1724.92668	532.108748	109.659
W_HPER		82	65.88729989	27.75994973	0.29399109	99.79687500	3.06557361	5402.75859	770.614809	42.132
AGEMONTH=5-6										
WEIGHT	WEIGHT	78	6.49487179	0.96845002	4.70000000	9.00000000	0.10965537	506.60000	0.937895	14.911
HEIGHT	HEIGHT	78	62.16410255	2.79554257	55.79999995	68.00000000	0.31653287	4848.80000	7.815058	4.497
HW		78	0.00167814	0.00020521	0.00125432	0.00218529	0.00002324	0.13089	0.000000	12.228
W_AGEZ		78	-0.70209569	0.97780901	-2.66699219	1.79785156	0.11071507	-54.76346	0.956110	-139.270
H_AGEZ		78	-1.26977325	0.95322131	-3.37988281	1.18676758	0.10793106	-99.04231	0.908631	-75.070
W_HZ		78	0.35683217	1.18950431	-2.64379883	3.46777344	0.13468484	27.83291	1.414921	333.351
W_AGEPER		78	30.86357821	26.76489310	0.38198853	96.38671875	3.03052738	2407.35910	716.359503	86.720
H_AGEPER		78	18.01883086	20.28484526	0.03599930	88.23046875	2.296806	1405.46881	411.474947	112.576
W_HPER		78	58.53966131	30.39862569	0.40998840	99.79687500	3.44196657	4566.09358	924.076444	51.928
AGEMONTH=6-7										
WEIGHT	WEIGHT	70	6.93714286	1.01954401	5.00000000	9.60000000	0.12185882	485.60000	1.039470	14.697
HEIGHT	HEIGHT	70	63.24857141	2.38003427	58.00000000	68.00000000	0.28446851	4427.40000	5.664563	3.763
HW		70	0.00172856	0.00019145	0.00132674	0.00220096	0.00002288	0.12100	0.000000	11.076
W_AGEZ		70	-0.75468948	1.06987996	-2.80175781	2.63598633	0.12787511	-52.82826	1.144643	-141.764
H_AGEZ		70	-1.49294213	0.82694081	-3.43481445	0.21199036	0.09883833	-104.50595	0.683831	-55.390
W_HZ		70	0.53844190	1.05352775	-1.76391602	2.99096680	0.12592065	37.69093	1.109921	195.662
W_AGEPER		70	29.99470324	26.64532567	0.25399780	99.57812500	3.18472555	2099.62923	709.973380	88.833
H_AGEPER		70	12.48520357	13.93426250	0.02999973	58.40625000	1.66546293	873.96425	194.163674	111.606
W_HPER		70	64.27278181	28.17386800	3.88793945	99.79687500	3.36742131	4499.09473	793.766838	43.835
AGEMONTH=7-8										
WEIGHT	WEIGHT	68	7.18676470	1.01037963	5.30000000	9.60000000	0.12252653	488.70000	1.020867	14.059
HEIGHT	HEIGHT	68	64.84411762	2.59984973	58.50000000	70.79999995	0.31527809	4409.40000	6.759219	4.009
HW		68	0.00170384	0.00017275	0.00129390	0.00212103	0.00002095	0.11586	0.000000	10.139
W_AGEZ		68	-1.00308898	1.02466793	-3.12597656	1.61083984	0.12425924	-68 21005	1.049944	-102.151
H_AGEZ		68	-1.50353355	0.86349725	-3.61181641	0.38299561	0.10471442	-102.24028	0.745627	-57.431
W_HZ		68	0.23282829	0.99110185	-2.18286133	2.76391602	0.12018875	15.83232	0.982283	425.679
W_AGEPER		68	24.06501164	24.90215480	0.08799744	94.64062500	3.01982984	1636.42079	620.117313	103.479
H_AGEPER		68	12.72112288	15.28188182	0.01499939	64.89843750	1.85320038	865.03636	233.535912	120.130
W_HPER		68	55.59271958	27.41294897	1.45092773	99.71484375	3.32430836	3780.30493	751.469771	49.310
AGEMONTH=8-9										
WEIGHT	WEIGHT	50	7.47200000	1.04276712	4.60000000	9.30000000	0.14746954	373.60000	1.087363	13.956
HEIGHT	HEIGHT	50	66.11999998	2.57935287	57.79999995	71.00000000	0.36477558	3306.00000	6.653061	3.901
HW		50	0.00170305	0.00017495	0.00134838	0.00205839	0.00002474	0.08515	0.000000	10.273
W_AGEZ		50	-1.10465061	1.03760742	-3.79589844	0.65499878	0.14673985	-55.23253	1.076629	-93.931
H_AGEZ		50	-1.52044973	0.87220944	-4.12597656	0.22698975	0.12334904	-76.02249	0.760749	-57.365
W_HZ		50	0.12996893	0.99281505	-2.19091797	2.44384766	0.14040525	6.49845	0.985682	763.886
W_AGEPER		50	22.64887604	21.00949405	0.00699997	74.36718750	2.97119114	1132.44380	441.398840	92.762
H_AGEPER		50	12.20778893	13.85936479	0.00199997	58.98046875	1.96001016	610.38945	192.081992	113.529
W_HPER		50	53.66572266	29.00355921	1.42382813	99.26953125	4.10172268	2683.28613	841.206667	[illegible]

43

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
AGEMONTH=10										
WEIGHT	WEIGHT	2	8.05000000	2.75771645	6.10000000	10.00000000	1.9500000	16.100000	7.60500	34.257
HEIGHT	HEIGHT	2	65.75000000	7.42462120	60.50000000	71.00000000	5.2500000	131.500000	55.12500	11.292
HW		2	0.00182512	0.00022426	0.00166655	0.00198370	0.0001586	0.003650	0.00000	12.288
W_AGEZ		2	-0.95693970	2.48467068	-2.71386719	0.79998779	1.7569275	-1.913879	6.17359	-259.648
H_AGEZ		2	-2.18993378	2.40548586	-3.89086914	-0.48899841	1.7009354	-4.379868	5.78636	-109.843
W_HZ		2	0.99796295	0.55151006	0.60798645	1.38793945	0.3899765	1.995926	0.30416	55.264
W_AGEPER		2	39.57224274	55.49410401	0.33198547	78.81250000	39.2402573	79.144485	3079.59558	140.235
H_AGEPER		2	15.62945271	22.09631411	0.00499916	31.25390625	15.6244535	31.258905	488.24710	141.376
W_HPER		2	82.29101563	13.35492690	72.84765625	91.73437500	9.4433594	164.582031	178.35407	16.229
AGEMONTH=12										
WEIGHT	WEIGHT	1	7.30000000	.	7.30000000	7.30000000	.	7.3000000	.	.
HEIGHT	HEIGHT	1	69.79999995	.	69.79999995	69.79999995	.	69.8000000	.	.
HW		1	0.00149834	.	0.00149834	0.00149834	.	0.0014983	.	.
W_AGEZ		1	-2.02490234	.	-2.02490234	-2.02490234	.	-2.0249023	.	.
H_AGEZ		1	-1.39379883	.	-1.39379883	-1.39379883	.	-1.3937988	.	.
W_HZ		1	-1.28979492	.	-1.28979492	-1.28979492	.	-1.2897949	.	.
W_AGEPER		1	2.14086914	.	2.14086914	2.14086914	.	2.1408691	.	.
H_AGEPER		1	8.16479492	.	8.16479492	8.16479492	.	8.1647949	.	.
W_HPER		1	9.84887695	.	9.84887695	9.84887695	.	9.8488770	.	.

INFANTS: MEAN HEIGHT BY AGE IN MONTHS 13:22 THURSDAY, OCTOBER 30, 1986

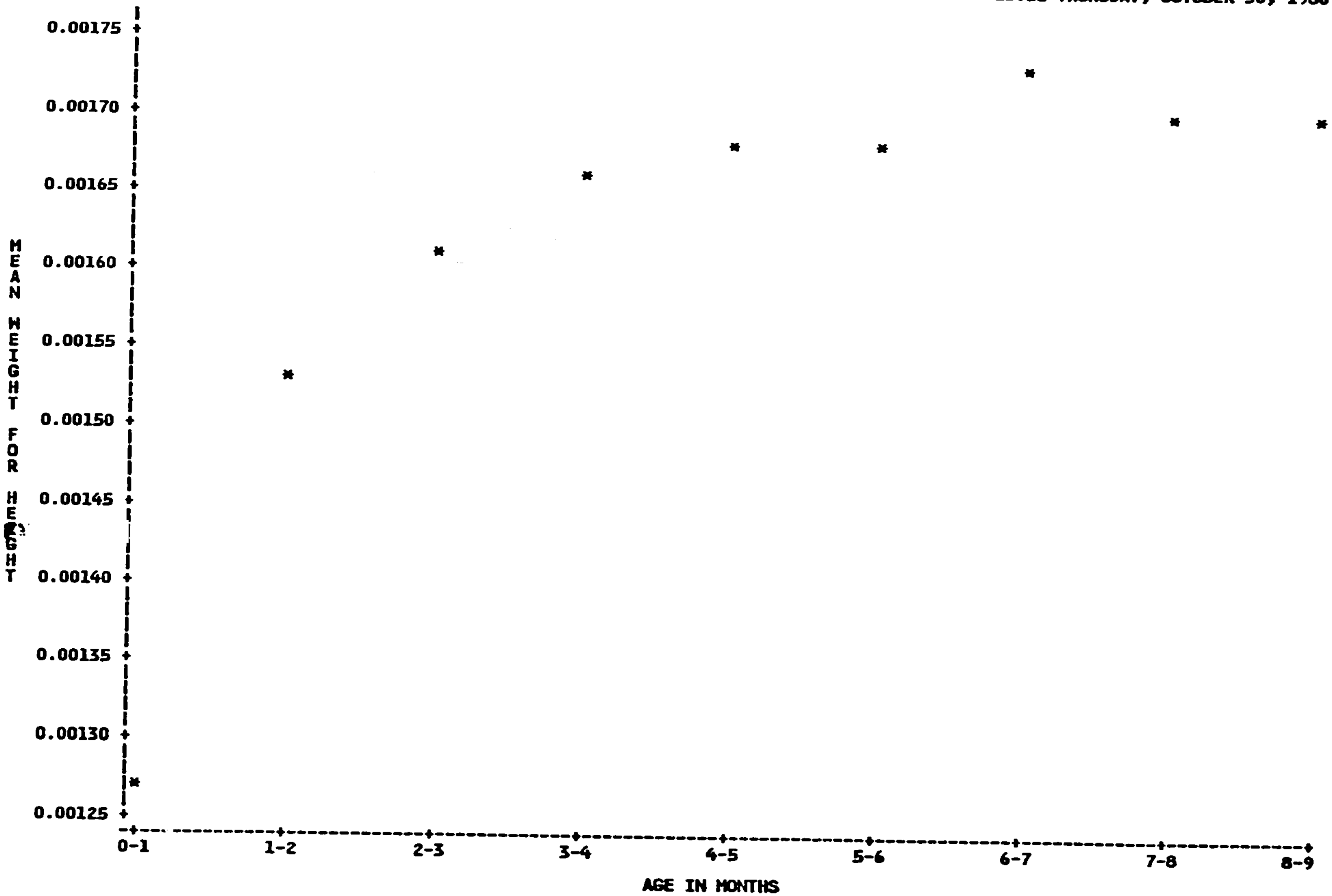



INFANTS: MEAN HEIGHT BY AGE IN MONTHS
13:22 THURSDAY, OCTOBER 30, 1986
MEAN HEIGHT
66
65
64
63
62
61
60
59
58
57
56
55
54
53
52
51
50
49
0-1
1-2
2-3
3-4
4-5
5-6
6-7
7-8
8-9
AGE IN MONTHS

5/6

INFANTS: MEAN WEIGHT-FOR-HEIGHT BY AGE IN MONTHS

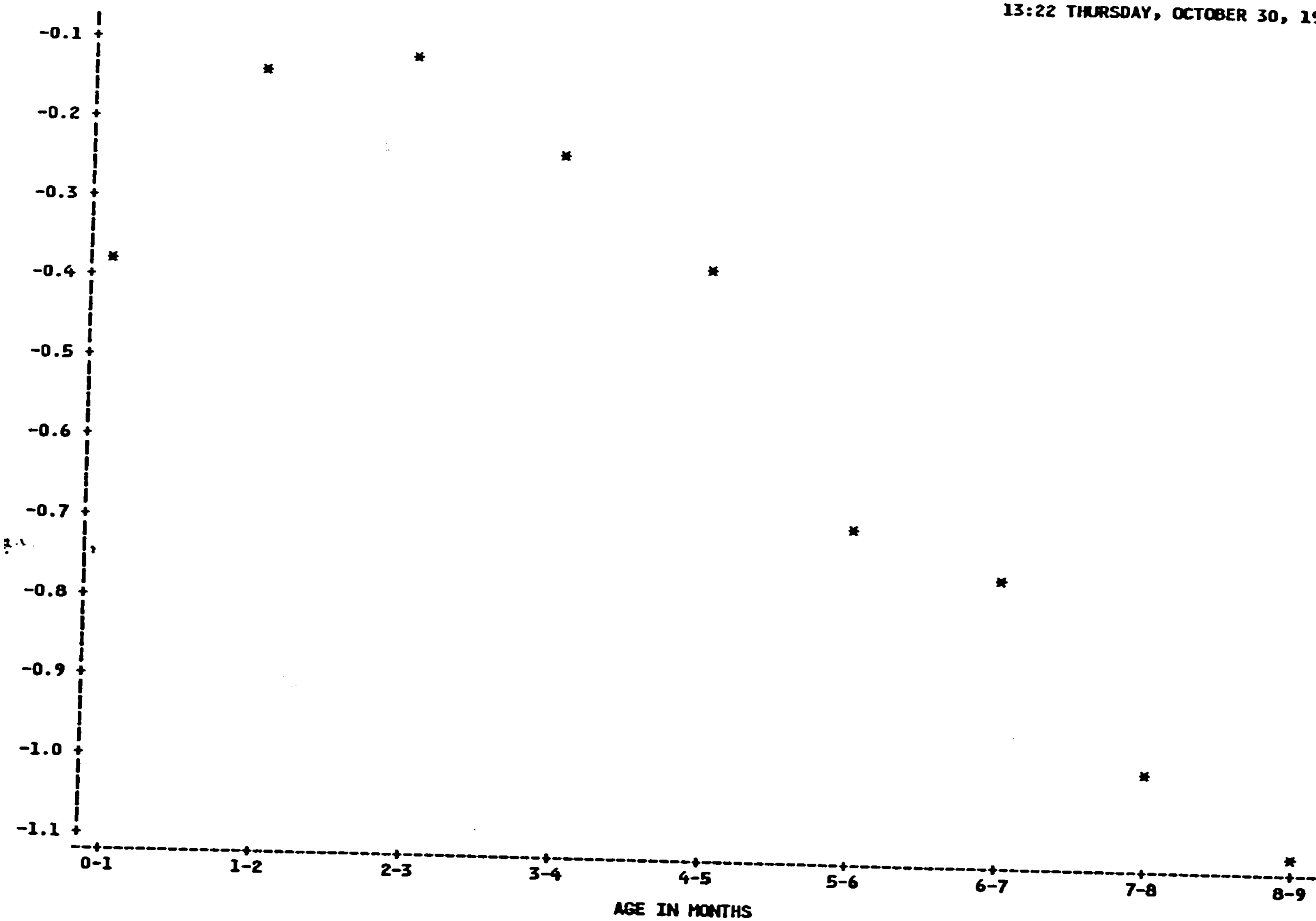
13:22 THURSDAY, OCTOBER 30, 1986



5

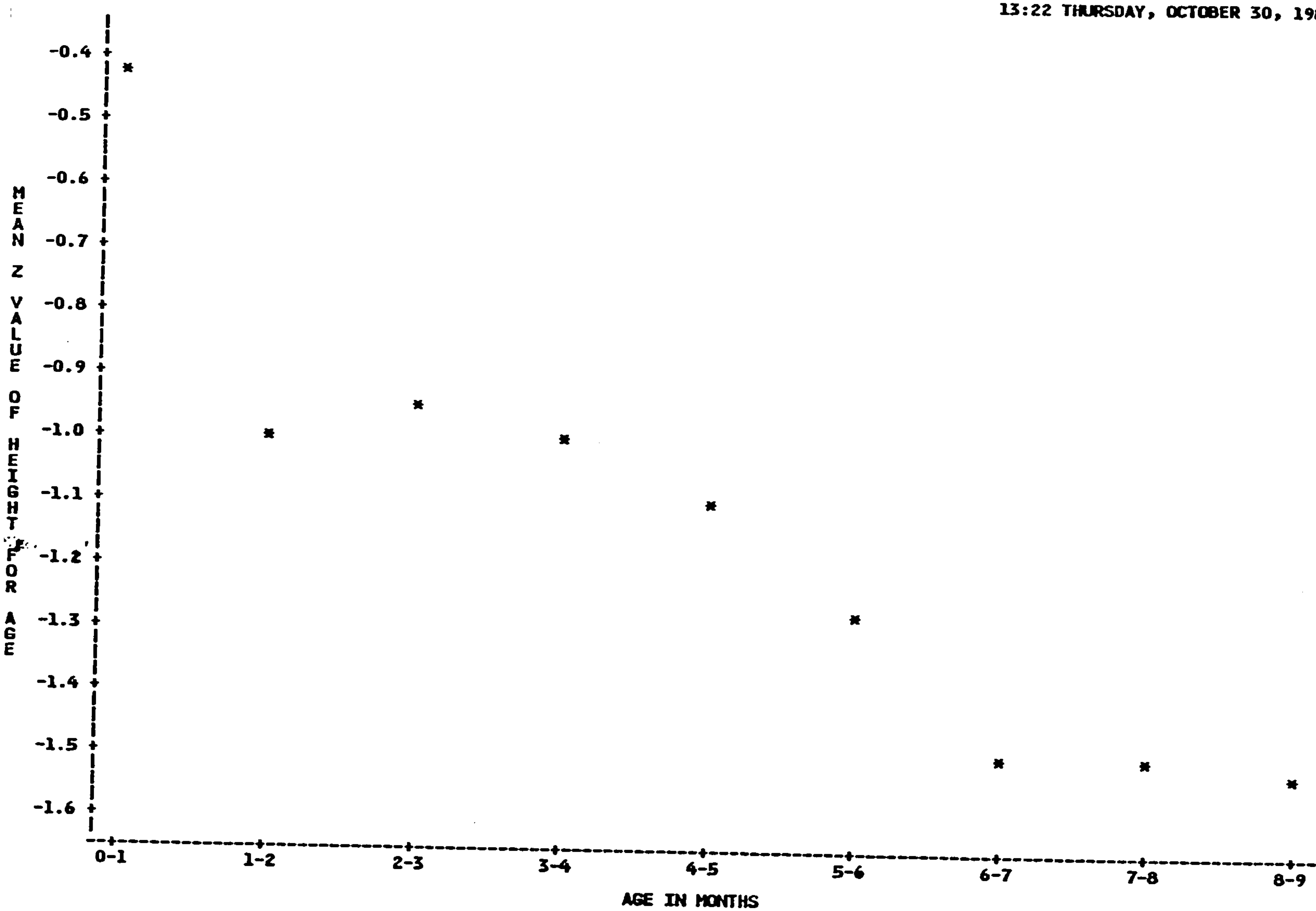
INFANTS: MEAN WEIGHT-FOR-AGE Z SCORE BY AGE IN MONTHS

13:22 THURSDAY, OCTOBER 30, 1986



INFANTS: MEAN HEIGHT-FOR-AGE Z SCORE BY AGE IN MONTHS

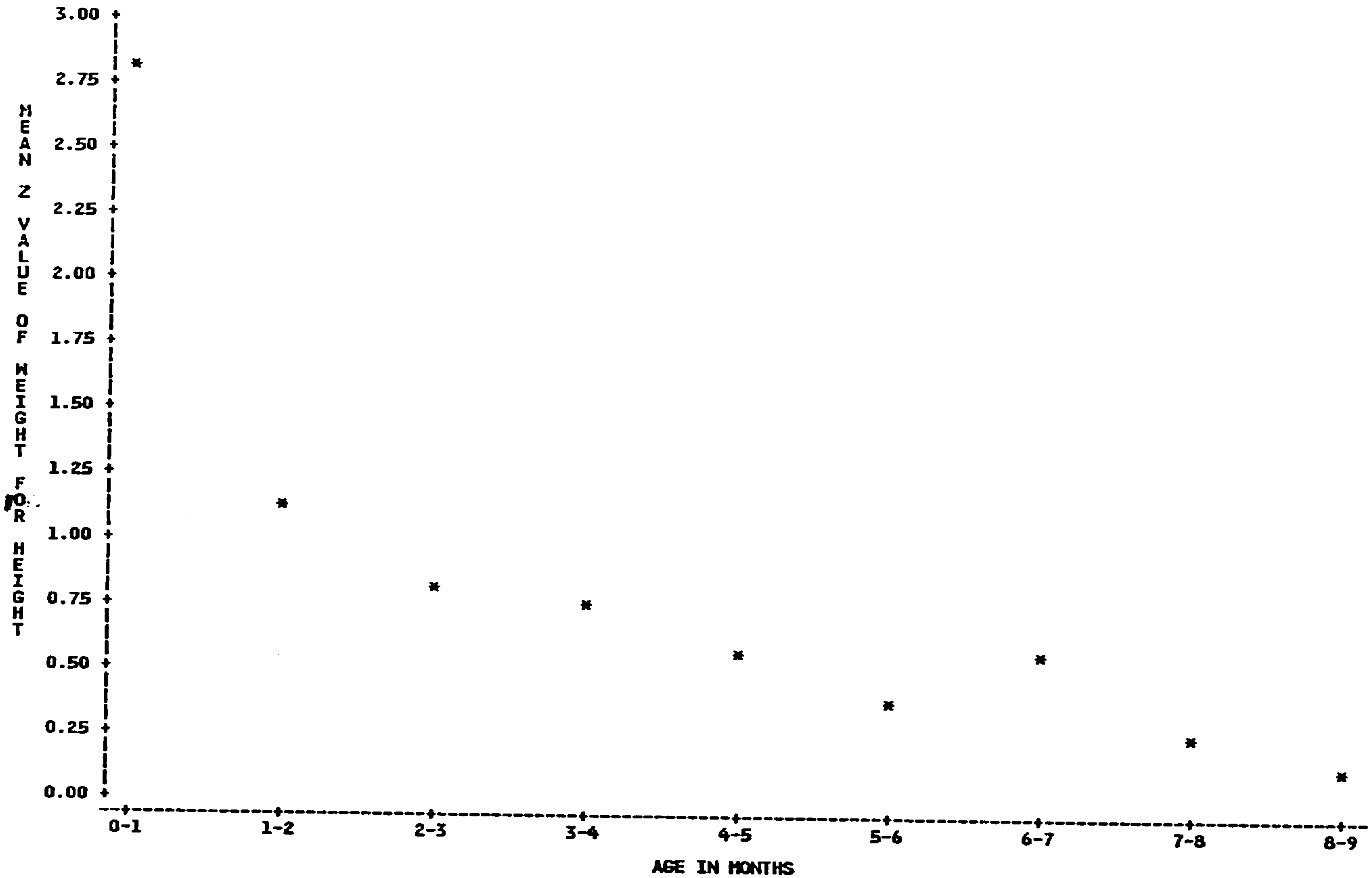
13:22 THURSDAY, OCTOBER 30, 1986

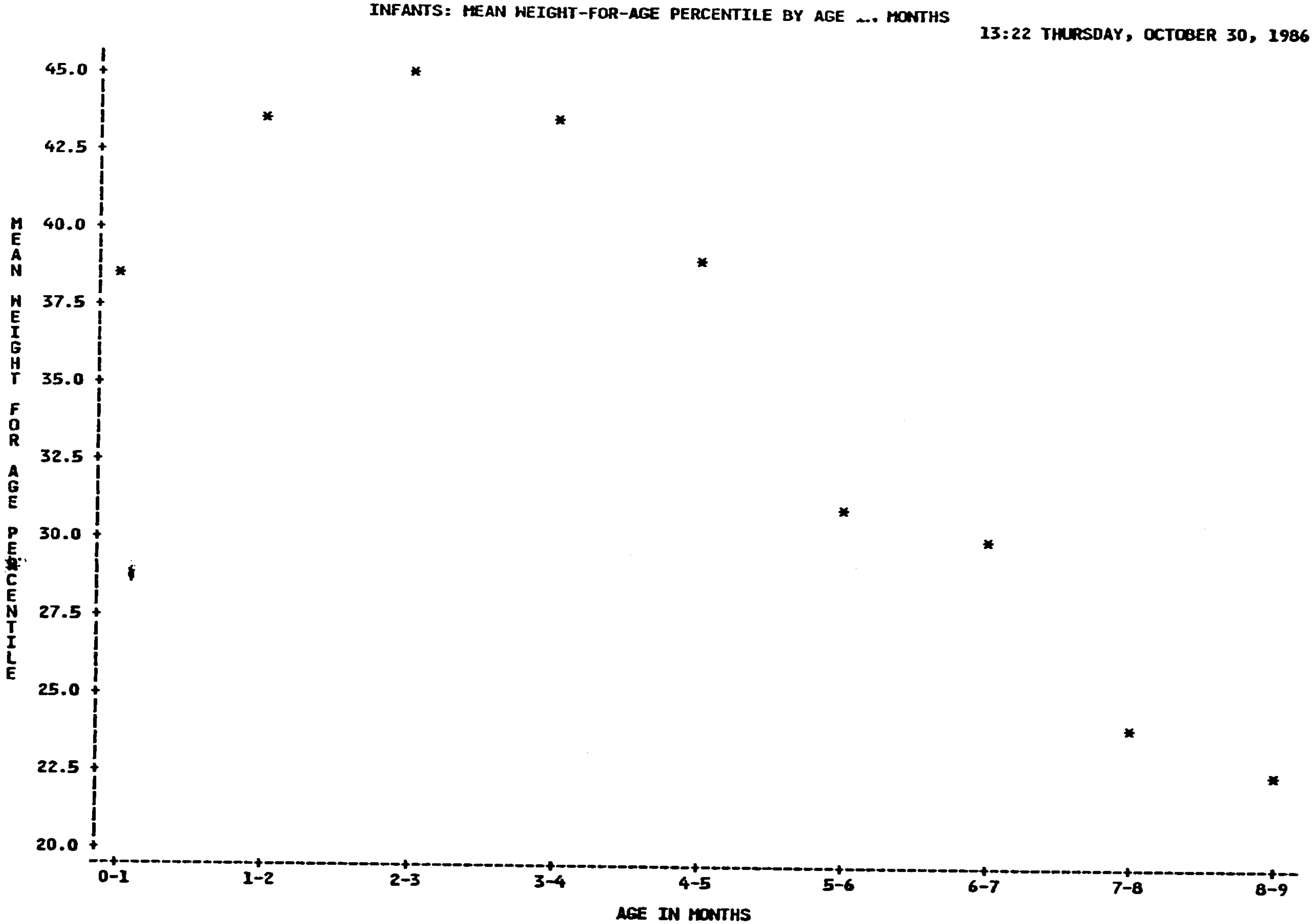


49

INFANTS: MEAN WEIGHT-FOR-HEIGHT Z SCORE BY AGE .. MONTHS

13:22 THURSDAY, OCTOBER 30, 1986

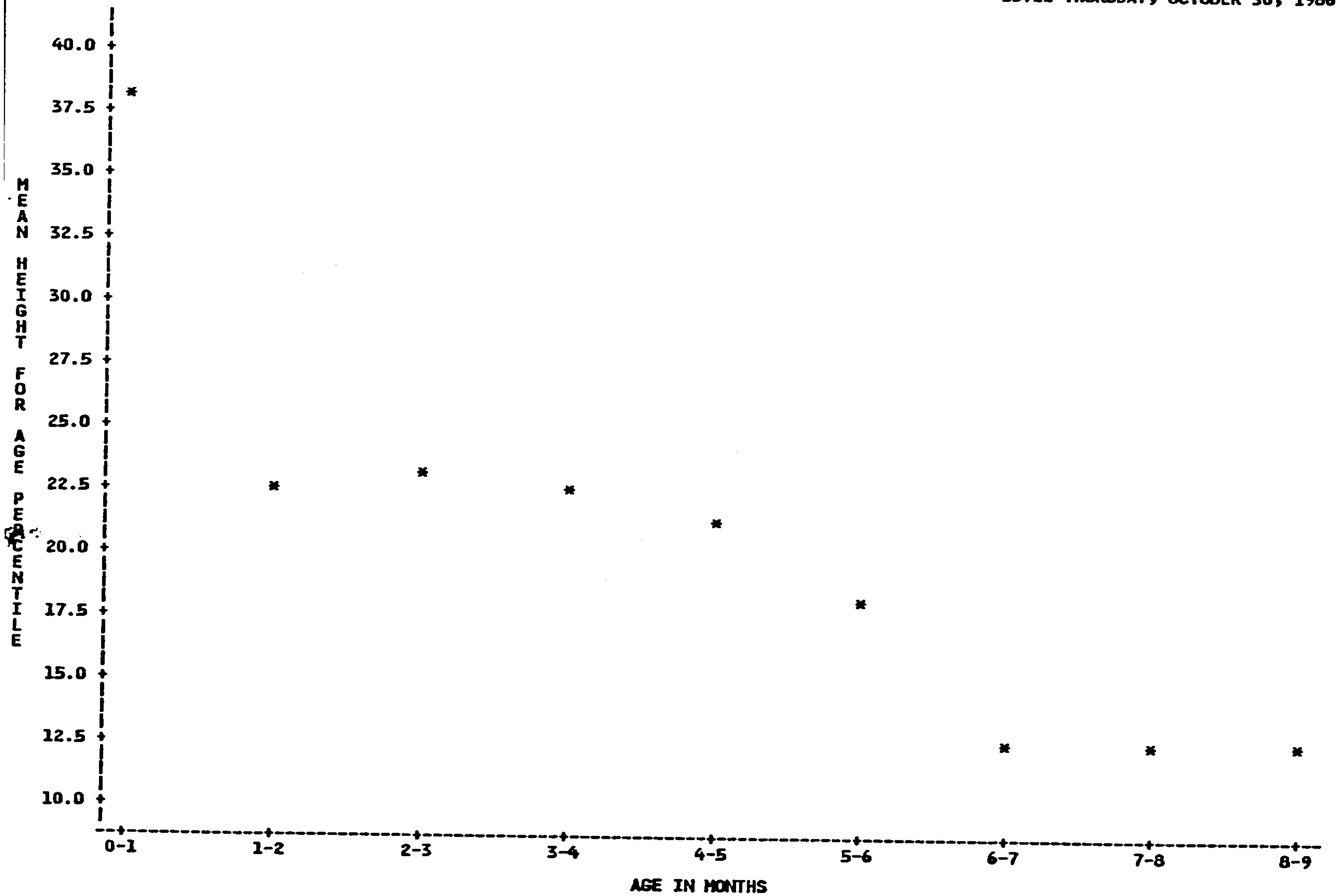



INFANTS: MEAN WEIGHT-FOR-AGE PERCENTILE BY AGE ... MONTHS
13:22 THURSDAY, OCTOBER 30, 1986
MEAN WEIGHT FOR AGE PERCENTILE
45.0
42.5
40.0
37.5
35.0
32.5
30.0
27.5
25.0
22.5
20.0
0-1
1-2
2-3
3-4
4-5
5-6
6-7
7-8
8-9
AGE IN MONTHS

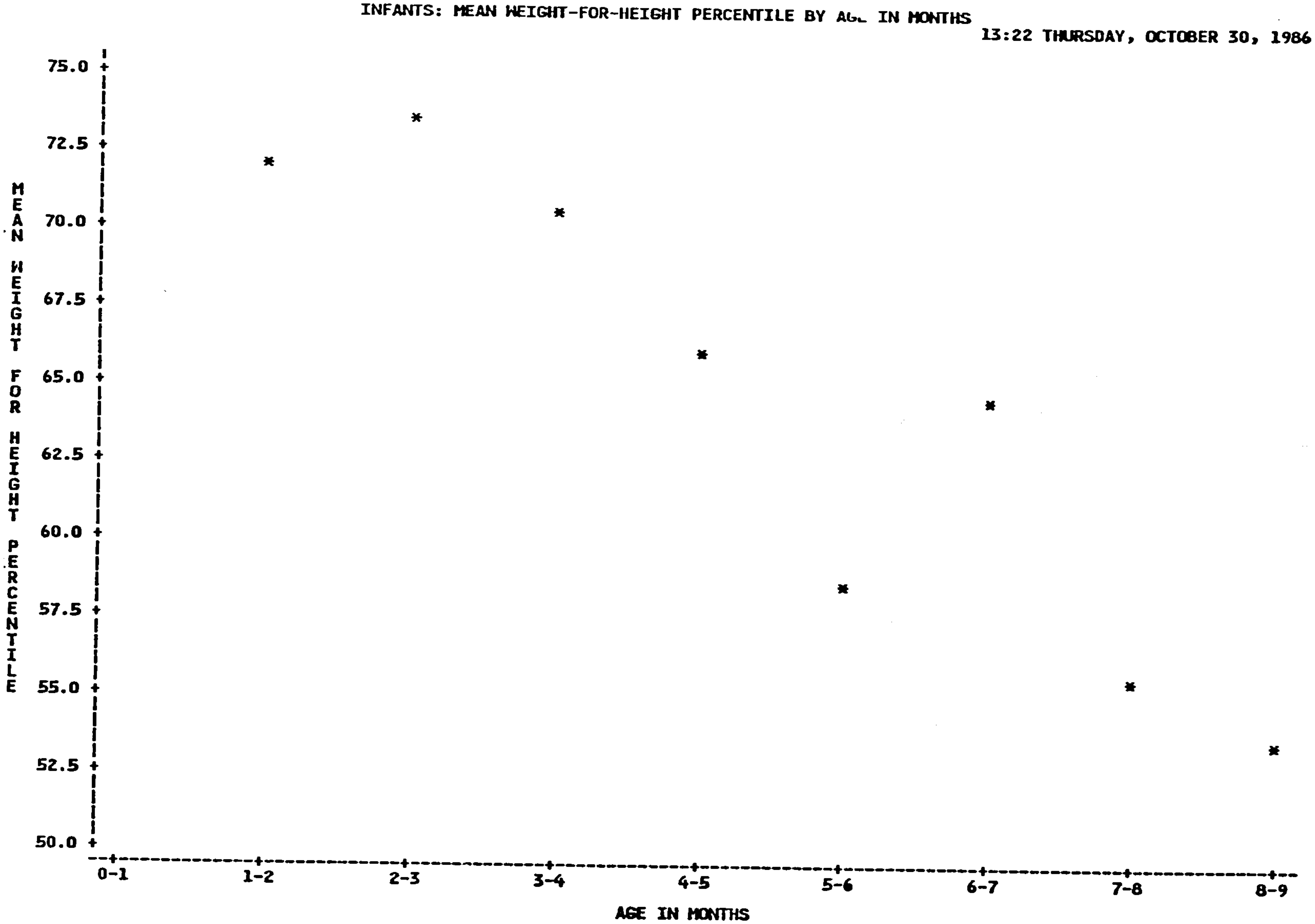
9

INFANTS: MEAN HEIGHT-FOR-AGE PERCENTILE BY AGE ... MONTHS

13:22 THURSDAY, OCTOBER 30, 1986



53


INFANTS: MEAN WEIGHT-FOR-HEIGHT PERCENTILE BY AGE IN MONTHS
13:22 THURSDAY, OCTOBER 30, 1986
MEAN WEIGHT FOR HEIGHT PERCENTILE
75.0
72.5
70.0
67.5
65.0
62.5
60.0
57.5
55.0
52.5
50.0
0-1
1-2
2-3
3-4
4-5
5-6
6-7
7-8
8-9
AGE IN MONTHS

INFANT HEIGHT: SD OF 12-MONTH GROWTH

FREQUENCY BAR CHART

MIDPOINT SD		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0.50	|	0	0	0.00	0.00
0.55	|	0	0	0.00	0.00
0.60	|**	1	1	0.97	0.97
0.65	|**	1	2	0.97	1.94
0.70	|**	1	3	0.97	2.91
0.75	|	0	3	0.00	2.91
0.80	|******	3	6	2.91	5.83
0.85	|**********	5	11	4.85	10.68
0.90	|********	4	15	3.88	14.56
0.95	|**********	5	20	4.85	19.42
1.00	|****************	8	28	7.77	27.18
1.05	|********************	10	38	9.71	36.89
1.10	|************************	12	50	11.65	48.54
1.15	|********************	10	60	9.71	58.25
1.20	|********************	10	70	9.71	67.96
1.25	|************************	12	82	11.65	79.61
1.30	|**************	7	89	6.80	86.41
1.35	|**	1	90	0.97	87.38
1.40	|****	2	92	1.94	89.32
1.45	|**********	5	97	4.85	94.17
1.50	|**	1	98	0.97	95.15
1.55	|**	1	99	0.97	96.12
1.60	|	0	99	0.00	96.12
1.65	|**	1	100	0.97	97.09
1.70	|	0	100	0.00	97.09
1.75	|**	1	101	0.97	98.06
1.80	|**	1	102	0.97	99.03
1.85	|	0	102	0.00	99.03
1.90	|**	1	103	0.97	100.00
1.95	|	0	103	0.00	100.00

```
----+----+----+----+----+----+
    2    4    6    8   10   12
```

FREQUENCY

Values calculated as; square root of MSE of linear regression of height against age.

INFANT WEIGHT: SD OF 12-MONTH GROWTH

FREQUENCY BAR CHART

```
MIDPOINT
   SD                                             FREQ   CUM.   PERCENT    CUM.
                                                         FREQ            PERCENT
          |
  0.12    |*                                        1      1     0.96      0.96
  0.16    |                                         0      1     0.00      0.96
  0.20    |                                         0      1     0.00      0.96
  0.24    |*                                        1      2     0.96      1.92
  0.28    |*                                        1      3     0.96      2.88
  0.32    |                                         0      3     0.00      2.88
  0.36    |                                         0      3     0.00      2.88
  0.40    |                                         0      3     0.00      2.88
  0.44    |*******                                  5      8     4.81      7.69
  0.48    |********                                 6     14     5.77     13.46
  0.52    |*****************                       13     27    12.50     25.96
  0.56    |***************                         11     38    10.58     36.54
  0.60    |********************                    15     53    14.42     50.96
  0.64    |*****************                       13     66    12.50     63.46
  0.68    |***********                              8     74     7.69     71.15
  0.72    |*******                                  5     79     4.81     75.96
  0.76    |*************                           10     89     9.62     85.58
  0.80    |*****                                    4     93     3.85     89.42
  0.84    |*******                                  5     98     4.81     94.23
  0.88    |*                                        1     99     0.96     95.19
  0.92    |*                                        1    100     0.96     96.15
  0.96    |*                                        1    101     0.96     97.12
  1.00    |***                                      2    103     1.92     99.04
  1.04    |*                                        1    104     0.96    100.00
          ----+----+----+----+----+
              3    6    9   12   15

                 FREQUENCY
```

Values calculated as; square root of MSE of linear regression of weight against age.

55

ktanlst1.rpt on \masas\marpt disk #2
10/21/86

Listing of Actual Anthropometry Values

Below are descriptive listings of weight , height and weight/height by age in months. There are 140 toddlers in the monthly anthropometry file. Below each listing is a definition of the variables in the file.

Mean Height by Age in Months

MONTH	AVEHT	SDHT	MINHT	MAXHT	NHT
18	75.0155	3.72216	65.50	83.9	42
19	76.8571	2.98843	68.80	83.4	28
20	76.3320	2.58404	71.50	82.8	25
21	76.8000	4.17122	69.20	85.6	44
22	78.0943	3.93954	71.80	89.4	35
23	78.5189	3.08030	72.10	85.1	37
24	80.2402	3.91585	72.00	87.6	41
25	80.1421	3.32701	73.50	85.6	38
26	80.6147	2.83123	74.00	85.6	34
27	81.2913	3.56812	73.90	90.2	46
28	83.0719	3.65886	76.50	91.1	32
29	83.1678	3.58303	76.95	91.8	59

Variable Definitions

MONTH -- age in months of toddlers
AVEHT -- average height over all toddlers by month (in cm)
SDHT -- standard deviation of height over all toddlers by month
MINHT -- minimum height value by month
MAXHT -- maximum height value by month
NHT -- number of toddlers with height observations in given month

Mean Weight by Age in Months

MONTH	AVEWT	SDWT	MINWT	MAXWT	NWT
18	9.5573	1.11014	6.90	12.70	50
19	9.9317	1.26437	7.50	13.20	60
20	9.9727	1.08014	7.80	14.00	66
21	10.0019	1.24945	7.50	14.00	79
22	10.3432	1.19040	7.50	13.40	81
23	10.4973	1.14679	8.00	13.80	93
24	10.7677	1.16345	8.40	14.60	93
25	10.7089	1.19573	8.00	14.55	96
26	10.9958	1.17879	8.20	14.00	103
27	11.1721	1.08942	8.60	13.80	101
28	11.2511	1.35042	8.20	14.50	93
29	11.5062	1.20553	9.05	14.55	104

Variable Definitions

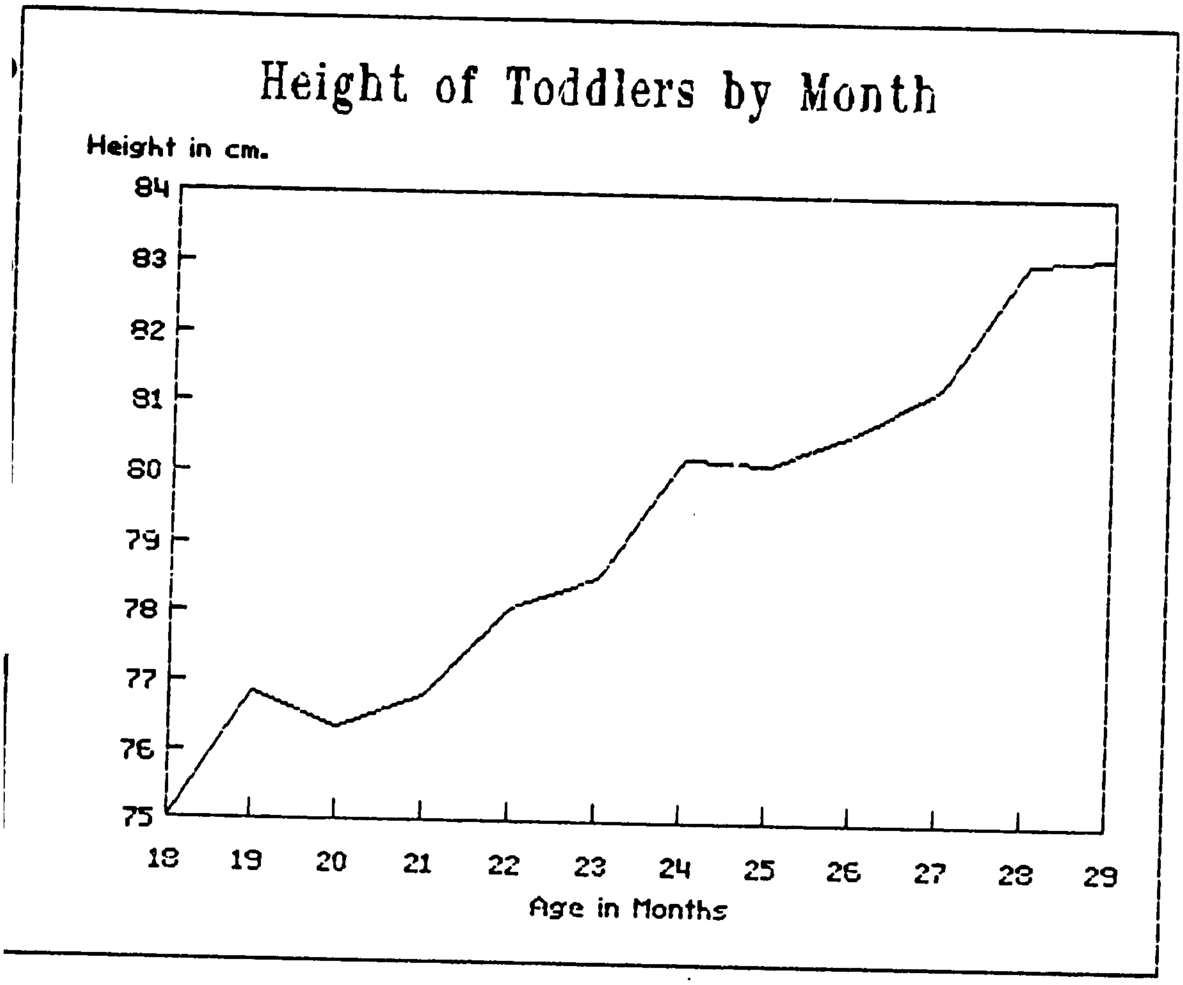
MONTH -- age in months
AVEWT -- average weight over all toddlers by month (in kgs)
SDWT -- standard deviation of weight over all toddlers by month
MINWT -- minimum weight value by month
MAXWT -- maximum weight value by month
NWT -- number of toddlers with weight value in given month

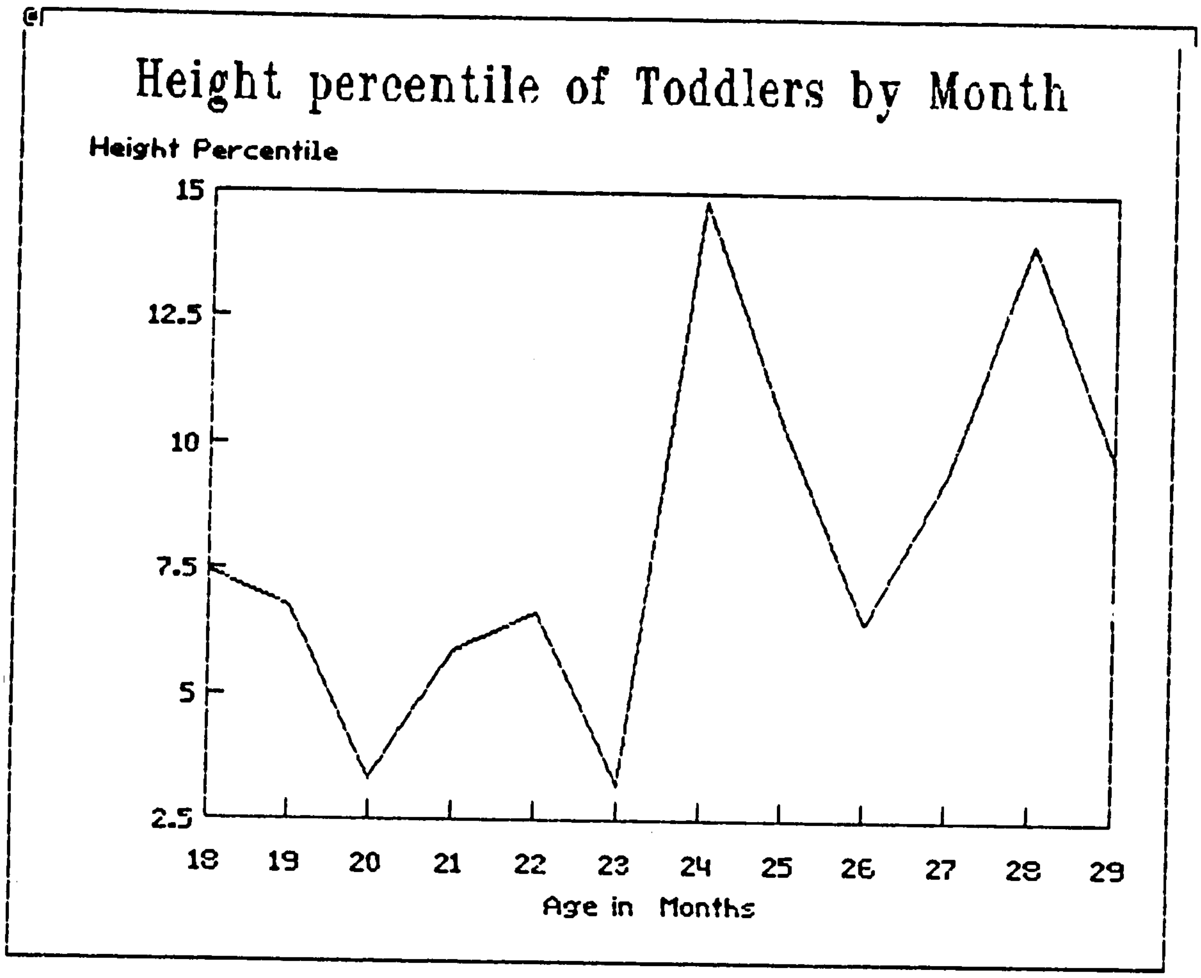
Mean Weight/Height by Age in Months

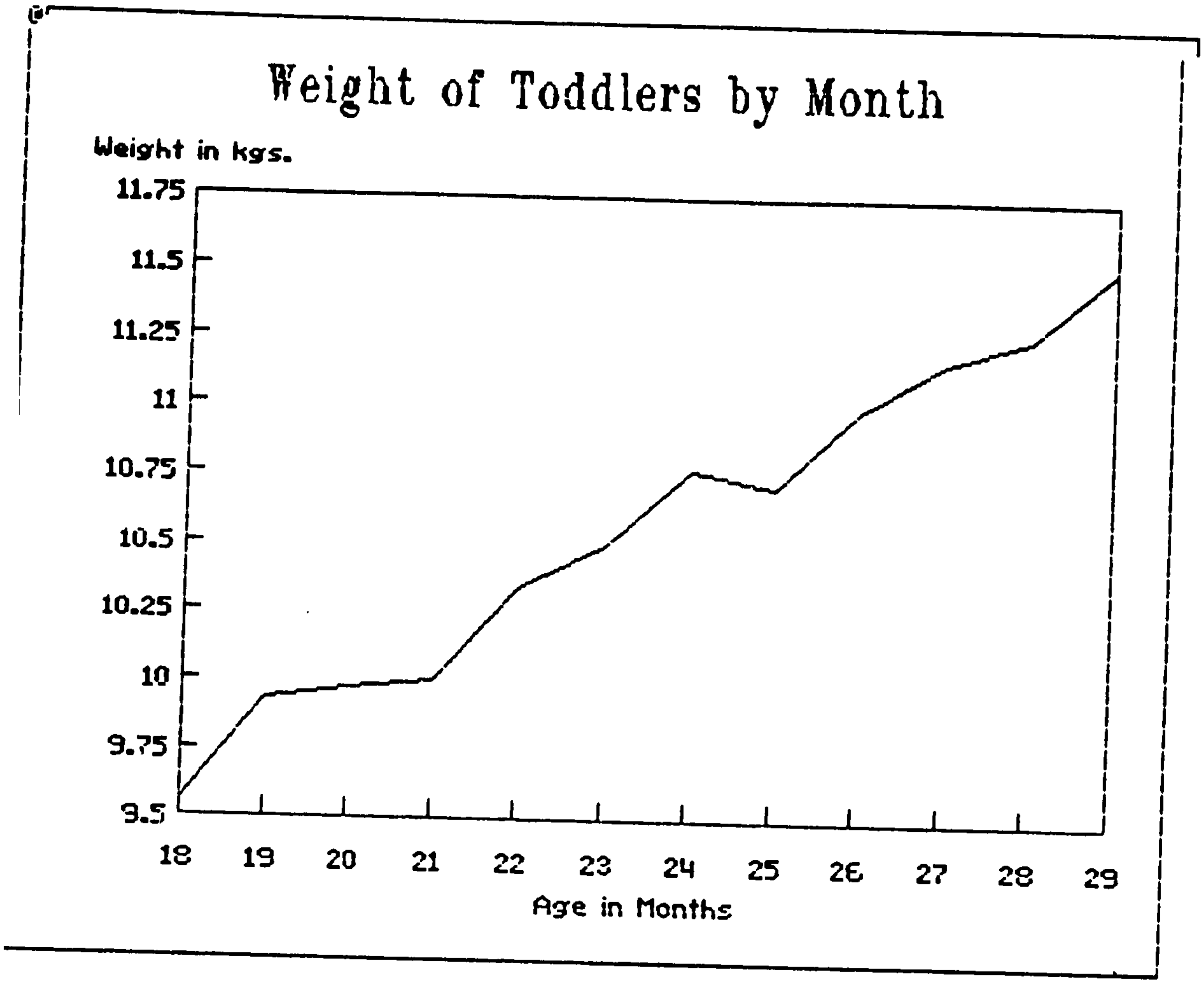
MONTH	AVEWTHT	SDWTHT	MINWTHT	MAXWTHT	NWTHT
18	0.00167320	0.000125028	0.0013990	0.001989	42
19	0.00166536	0.000178963	0.0013460	0.002264	28
20	0.00164024	0.000086133	0.0014730	0.001839	25
21	0.00164432	0.000111421	0.0014350	0.001891	44
22	0.00166080	0.000099904	0.0014820	0.001887	35
23	0.00163195	0.000102291	0.0013660	0.001912	37
24	0.00163030	0.000115997	0.0013220	0.001904	41
25	0.00165029	0.000108135	0.0014880	0.001979	38
26	0.00163533	0.000090421	0.0015090	0.001889	33
27	0.00164222	0.000104259	0.0014680	0.001882	46
28	0.00166591	0.000122796	0.0014320	0.001890	32
29	0.00164580	0.000111952	0.0013775	0.001923	59

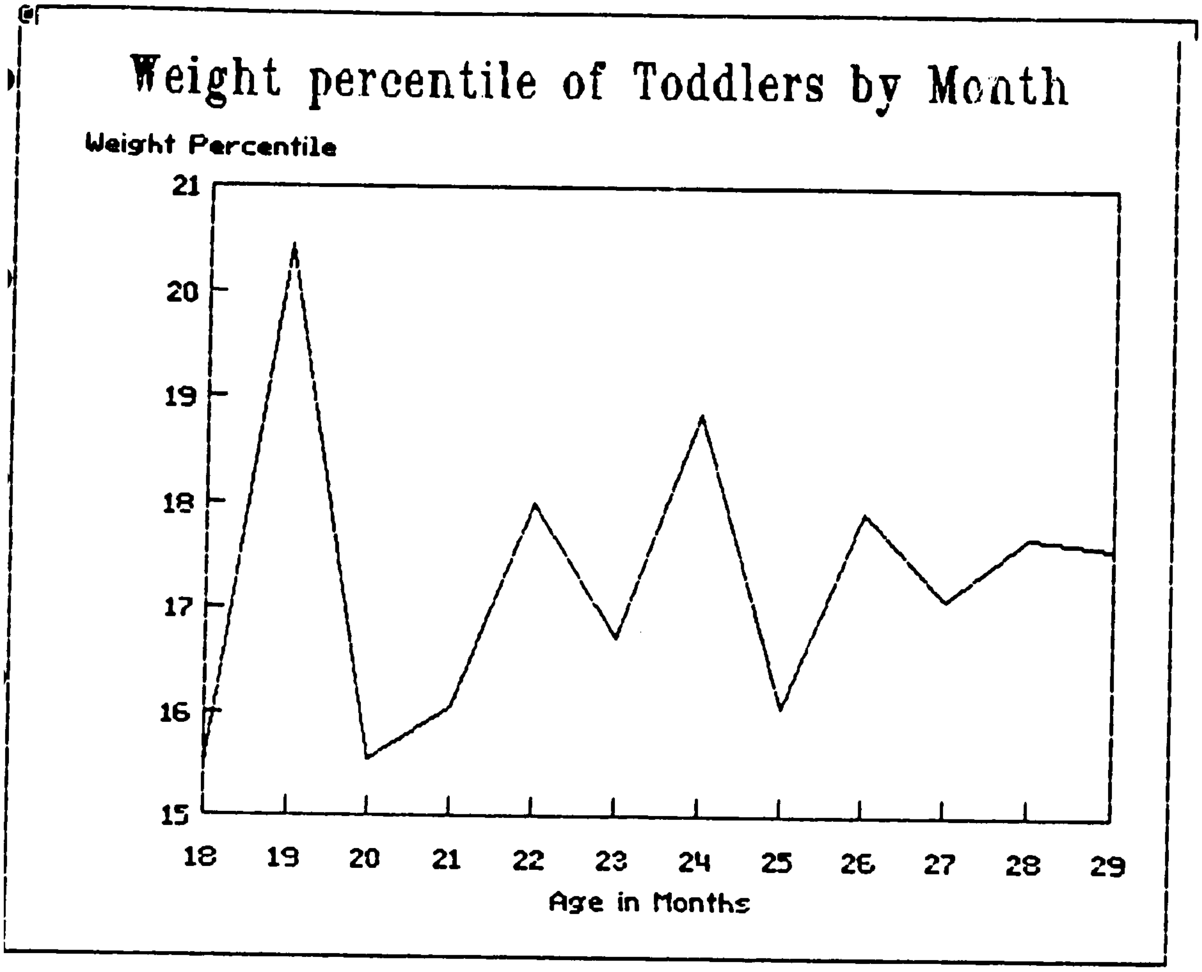
Variable Definitions

MONTH -- age in months
AVEWTHT -- average weight/height over all toddlers by month
SDWTHT -- standard deviation of weight/height over all toddlers by month
MINWTHT -- minimum weight/height value by month
MAXWTHT -- maximum weight/height value by month
NWTHT -- number of toddlers with weight/height value in given month

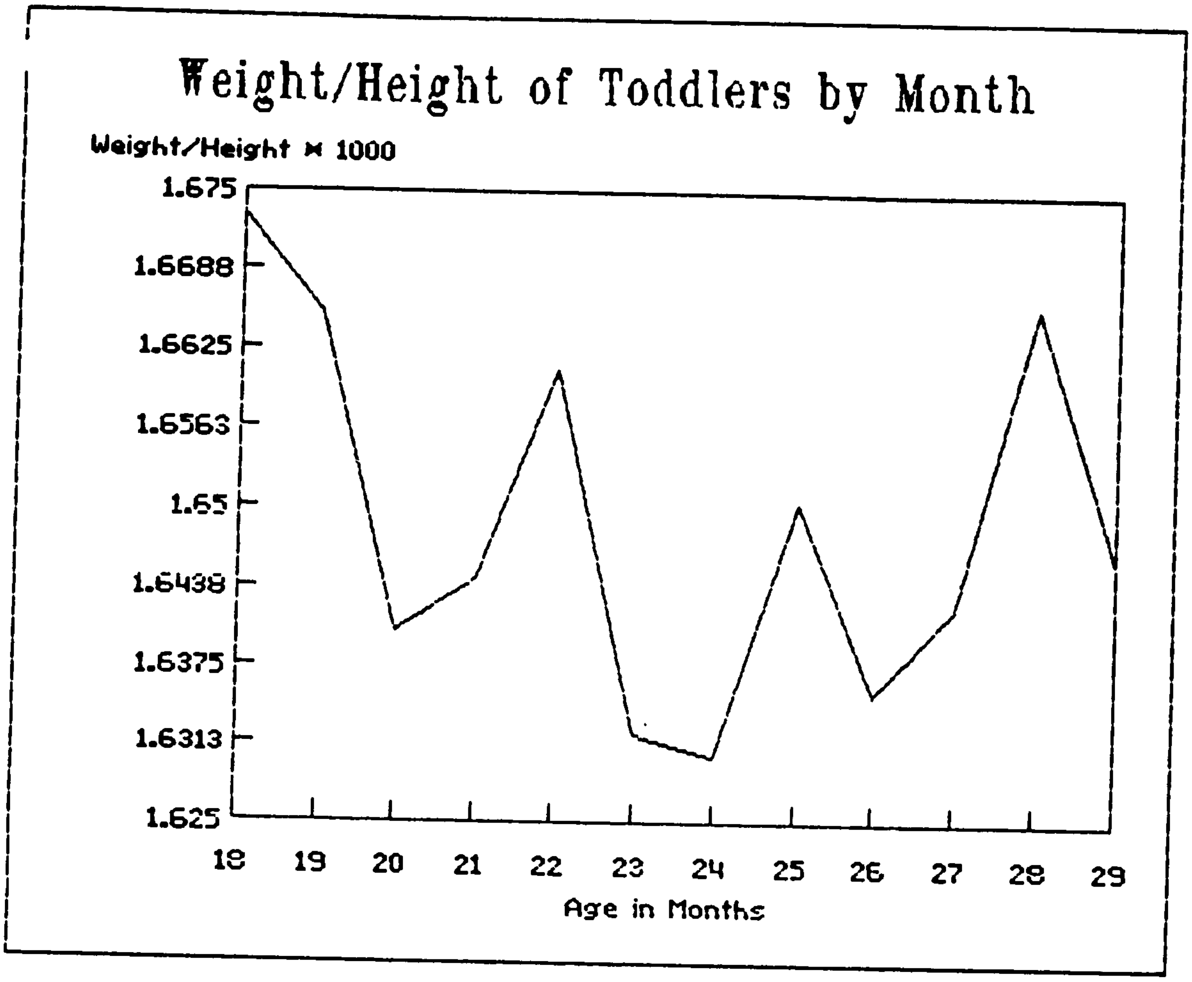

Height of Toddlers by Month
Height in cm.
84
83
82
81
80
79
78
77
76
75
18
19
20
21
22
23
24
25
26
27
28
29
Age in Months


Height percentile of Toddlers by Month
Height Percentile
15
12.5
10
7.5
5
2.5
18
19
20
21
22
23
24
25
26
27
28
29
Age in Months

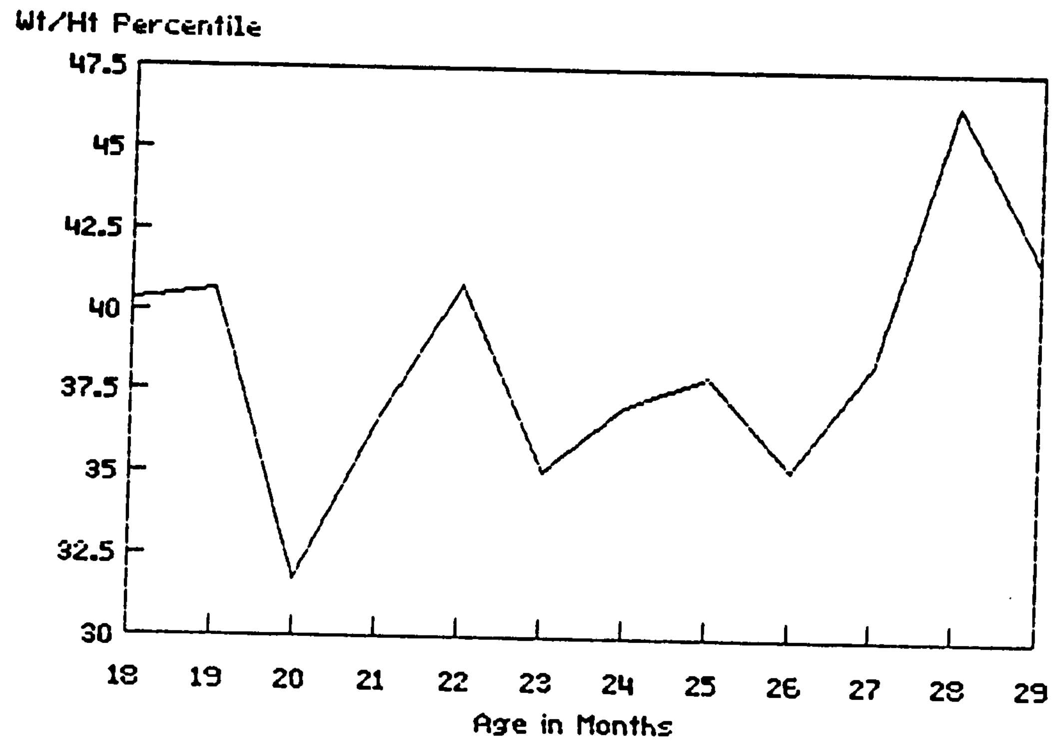

Weight of Toddlers by Month
Weight in kgs.
11.75
11.5
11.25
11
10.75
10.5
10.25
10
9.75
9.5
18
19
20
21
22
23
24
25
26
27
28
29
Age in Months

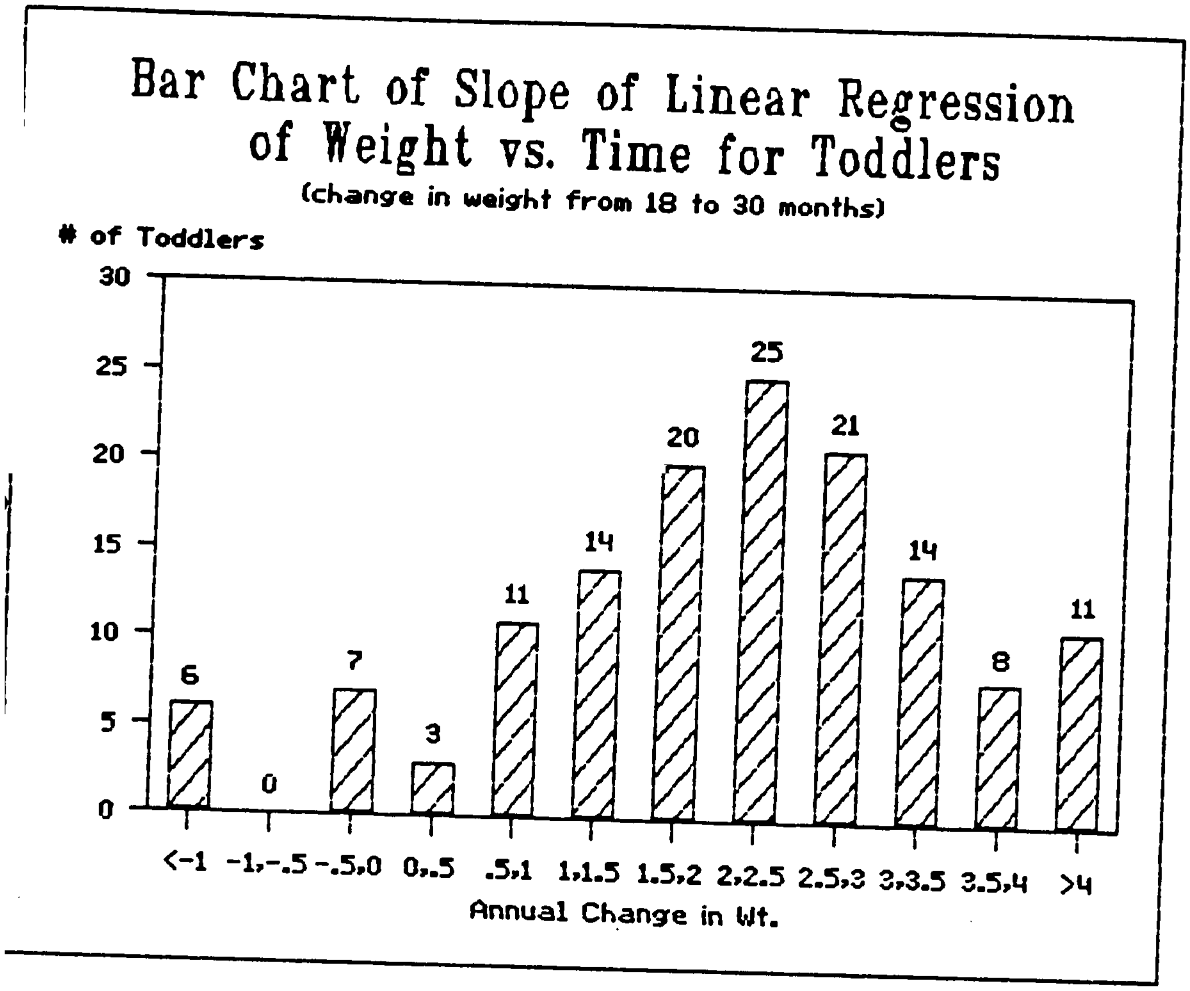


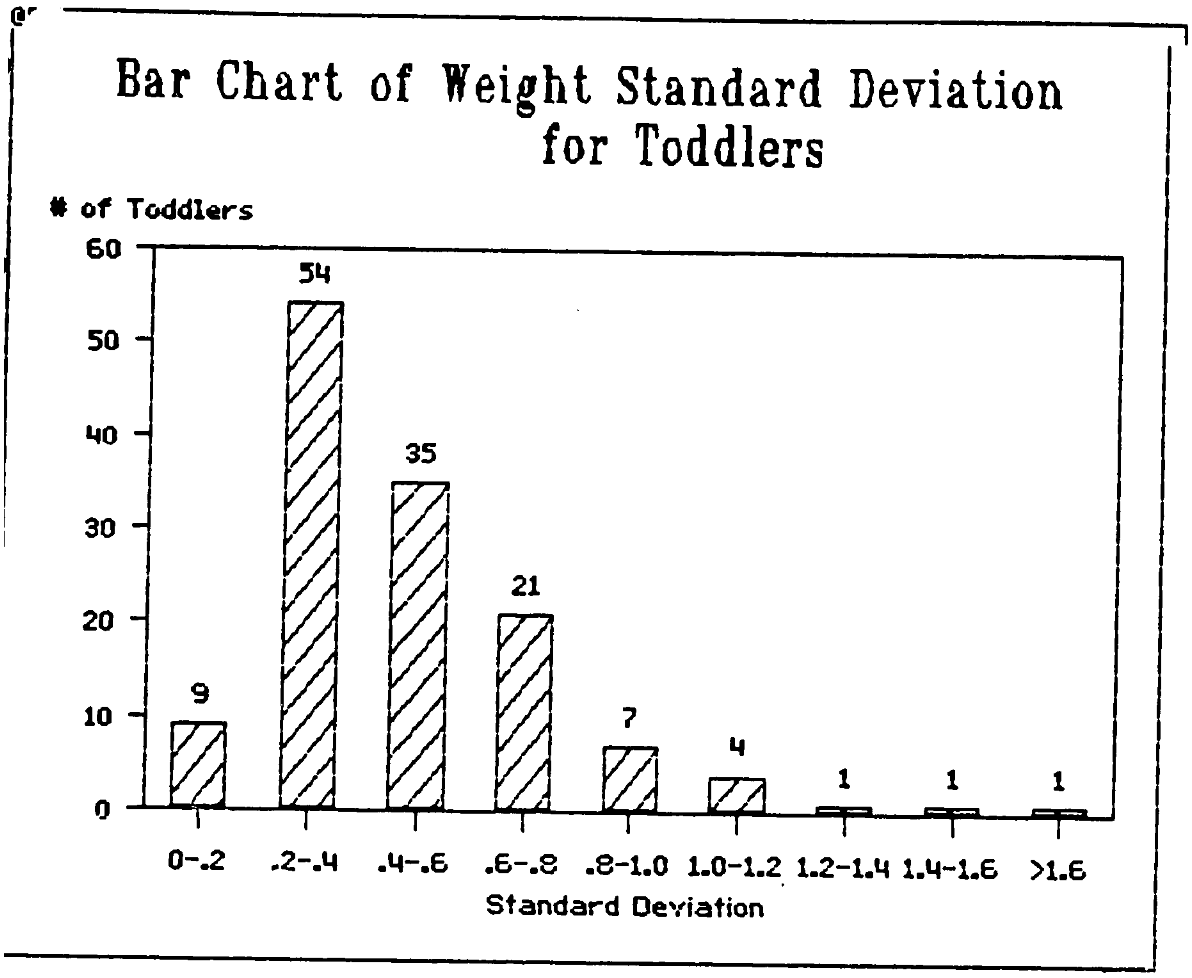
Weight percentile of Toddlers by Month
Weight Percentile
21
20
19
18
17
16
15
18
19
20
21
22
23
24
25
26
27
28
29
Age in Months


Weight/Height of Toddlers by Month
Weight/Height x 1000
1.675
1.6688
1.6625
1.6563
1.65
1.6438
1.6375
1.6313
1.625
18
19
20
21
22
23
24
25
26
27
28
29
Age in Months

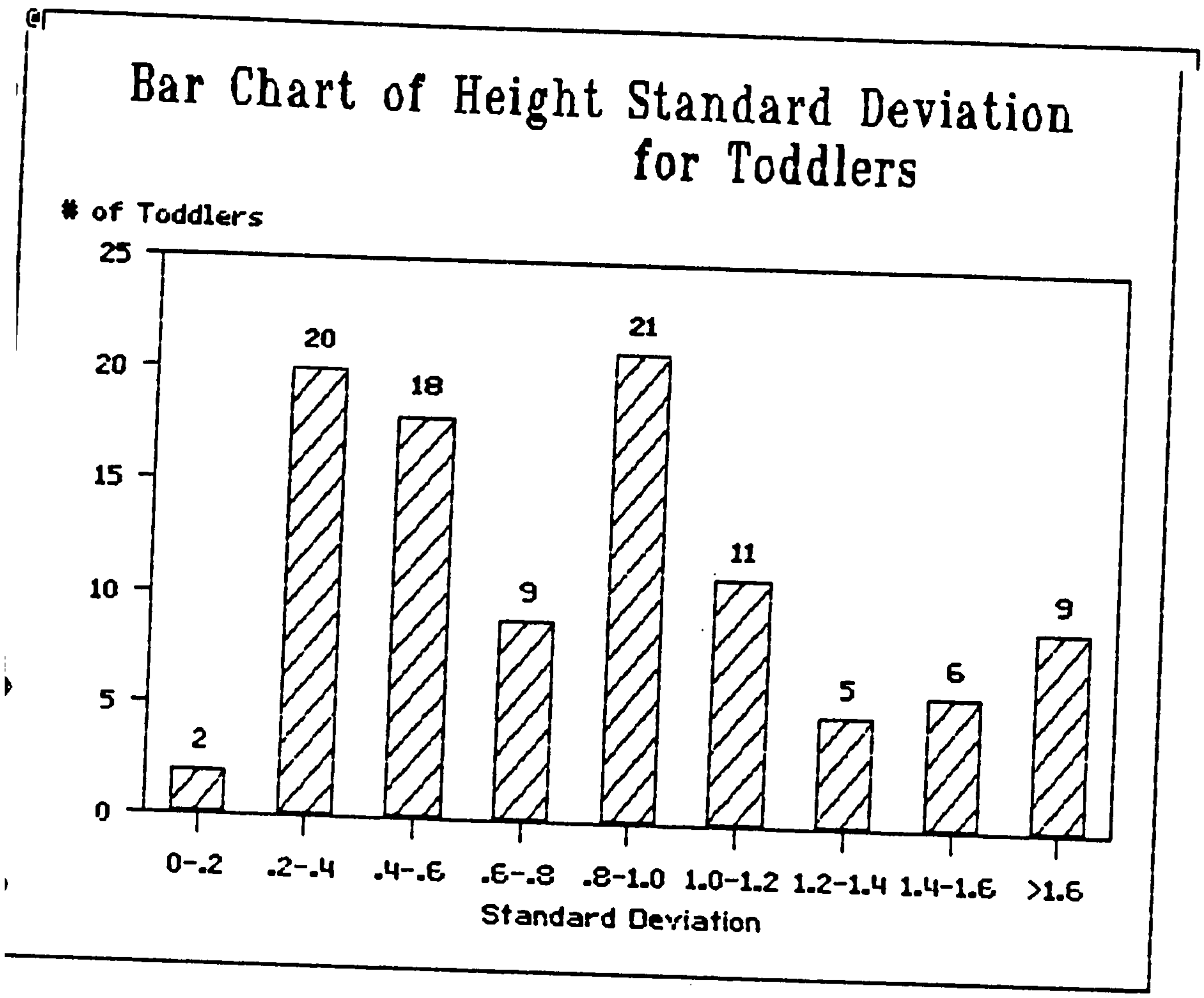
Weight/Height Percentile of Toddlers by Month




Bar Chart of Slope of Linear Regression of Weight vs. Time for Toddlers
(change in weight from 18 to 30 months)
# of Toddlers
30
25
20
15
10
5
0
6
0
7
3
11
14
20
25
21
14
8
11
<-1
-1,-.5
-.5,0
0,.5
.5,1
1,1.5
1.5,2
2,2.5
2.5,3
3,3.5
3.5,4
>4
Annual Change in Wt.

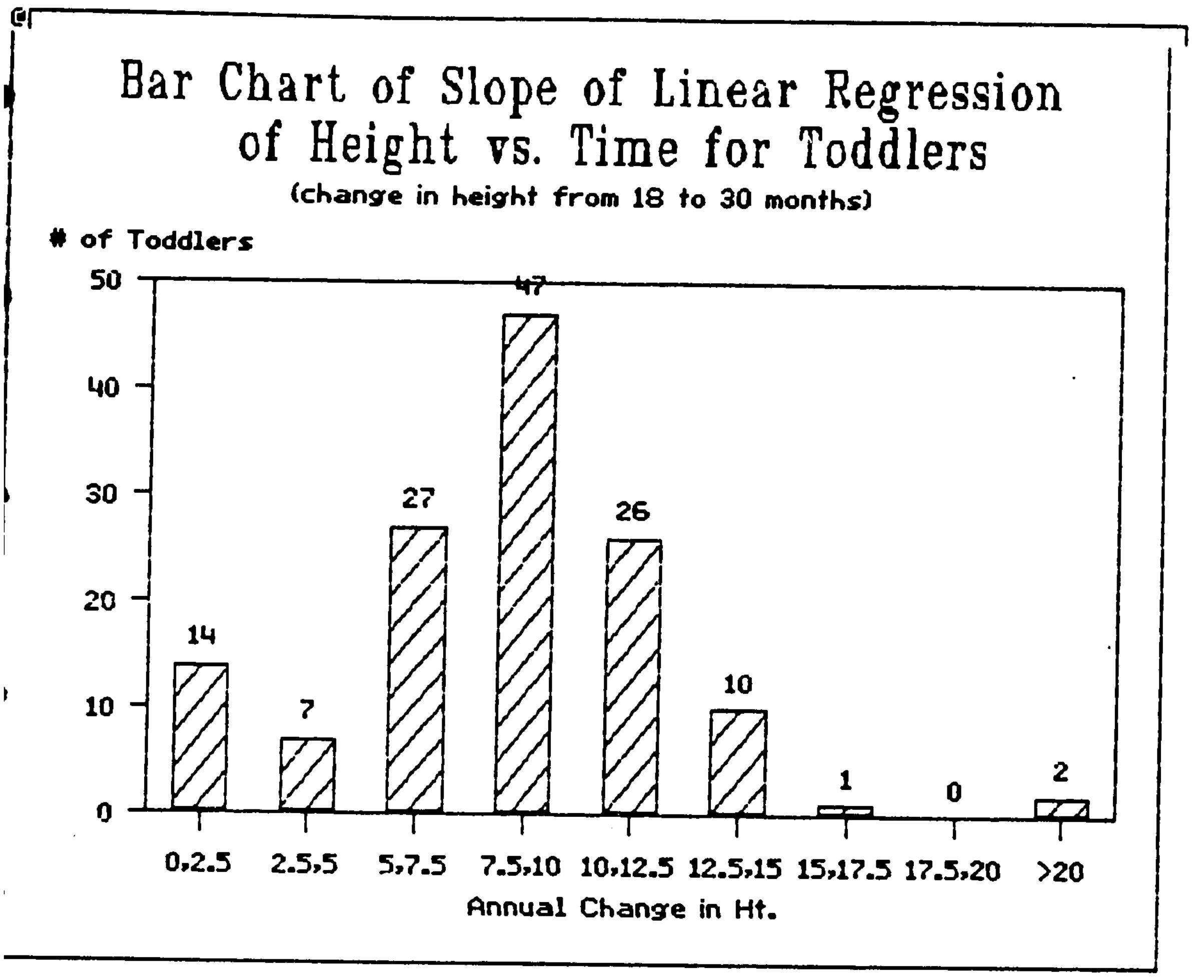

Bar Chart of Weight Standard Deviation
for Toddlers
# of Toddlers
60
50
40
30
20
10
0
9
54
35
21
7
4
1
1
1
0-.2
.2-.4
.4-.6
.6-.8
.8-1.0
1.0-1.2
1.2-1.4
1.4-1.6
>1.6
Standard Deviation

65



Bar Chart of Height Standard Deviation for Toddlers
# of Toddlers
25
20
15
10
5
0
2
20
18
9
21
11
5
6
9
0-.2
.2-.4
.4-.6
.6-.8
.8-1.0
1.0-1.2
1.2-1.4
1.4-1.6
>1.6
Standard Deviation

66


Bar Chart of Slope of Linear Regression of Height vs. Time for Toddlers
(change in height from 18 to 30 months)
# of Toddlers
50
40
30
20
10
0
14
7
27
47
26
10
1
0
2
0,2.5
2.5,5
5,7.5
7.5,10
10,12.5
12.5,15
15,17.5
17.5,20
>20
Annual Change in Ht.

67

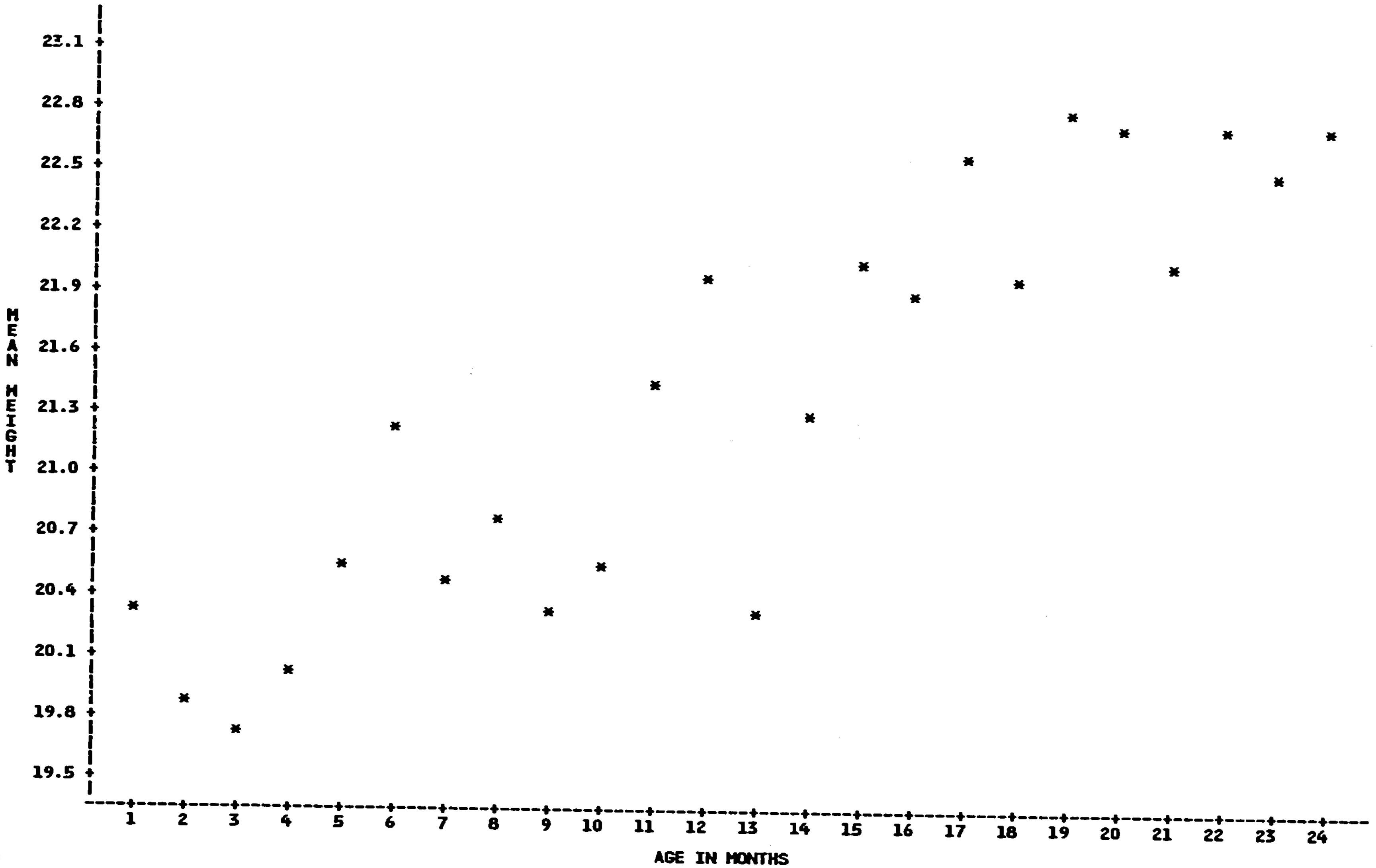
Schoolers with 1/month

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
AGEM=.										
WEIGHT	WEIGHT	67	22.22686564	2.95499485	15.9000000	35.1000000	0.36101008	1489.199998	8.73199457	13.295
HEIGHT	HEIGHT	65	120.88153844	6.19268450	105.4000000	134.0000000	0.76810798	7857.299998	38.34934137	5.123
HW		65	0.00151322	0.00011268	0.0011775	0.0019547	0.00001398	0.098359	0.00000001	7.447
AGEM=1										
WEIGHT	WEIGHT	11	20.35909089	2.47980021	17.1000000	26.4000000	0.74768790	223.950000	6.14940909	12.180
HEIGHT	HEIGHT	9	115.49999997	4.95883050	107.7000000	124.2000000	1.65294350	1039.500000	24.58999995	4.293
HW		9	0.00152093	0.00015536	0.0012577	0.0017461	0.00005179	0.013688	0.00000002	10.215
AGEM=2										
WEIGHT	WEIGHT	15	19.90666664	2.07311590	17.4000000	24.2000000	0.53527622	298.600000	4.29780952	10.414
HEIGHT	HEIGHT	10	111.90999998	5.39679947	105.9000000	122.7000000	1.70661784	1119.100000	29.12544449	4.822
HW		10	0.00156369	0.00011824	0.0014122	0.0018190	0.00003739	0.015637	0.00000001	7.562
AGEM=3										
WEIGHT	WEIGHT	18	19.71666665	1.83631664	16.5000000	23.7000000	0.43282398	354.900000	3.37205882	9.314
HEIGHT	HEIGHT	13	115.77692306	4.41911639	108.5000000	122.2000000	1.22564236	1505.100000	19.52858965	3.817
HW		13	0.00148641	0.00010416	0.0012924	0.0016734	0.00002889	0.019323	0.00000001	7.008
AGEM=4										
WEIGHT	WEIGHT	16	19.99374998	1.83647081	16.4000000	23.2000000	0.45911770	319.900000	3.37262502	9.185
HEIGHT	HEIGHT	9	113.41111109	5.80698812	106.7000000	125.3000000	1.93566271	1020.700000	33.72111101	5.120
HW		9	0.00151602	0.00012520	0.0012993	0.0016952	0.00004173	0.013644	0.00000002	8.258
AGEM=5										
WEIGHT	WEIGHT	19	20.52105260	2.26141032	16.4000000	24.8000000	0.51880311	389.899999	5.11397662	11.020
HEIGHT	HEIGHT	13	115.12307690	5.76760405	108.5000000	125.2000000	1.59964555	1496.600000	33.26525649	5.010
HW		13	0.00150742	0.00007018	0.0013931	0.0016304	0.00001946	0.019596	0.00000000	4.656
AGEM=6										
WEIGHT	WEIGHT	29	21.21724136	2.51055898	16.9000000	27.6000000	0.46619910	615.299999	6.30290639	11.833
HEIGHT	HEIGHT	21	118.21428569	4.99382476	108.2000000	126.8000000	1.08974190	2482.499999	24.93828569	4.224
HW		21	0.00153491	0.00009805	0.0012640	0.0017166	0.00002140	0.032233	0.00000001	6.388
AGEM=7										
WEIGHT	WEIGHT	31	20.45483869	1.86437455	16.5000000	24.7000000	0.33485155	634.099999	3.47589247	9.115
HEIGHT	HEIGHT	22	115.15909089	4.80254487	108.1000000	126.7000000	1.02390601	2533.500000	23.06443725	4.170
HW		22	0.00170427	0.00094967	0.0013331	0.0059404	0.00020247	0.037494	0.00000090	55.723
AGEM=8										
WEIGHT	WEIGHT	31	20.76774191	3.23206715	12.1000000	28.2000000	0.58049640	643.799999	10.44625804	15.563
HEIGHT	HEIGHT	19	116.91052629	6.77732287	100.4000000	129.6000000	1.55482450	2221.300000	45.93210526	5.797
HW		19	0.00151427	0.00012247	0.0012003	0.0017211	0.00002810	0.028771	0.00000001	8.088
AGEM=9										
WEIGHT	WEIGHT	33	20.30606058	2.45432519	16.3000000	27.3000000	0.42724318	670.099999	6.02371211	12.087
HEIGHT	HEIGHT	25	116.14399998	6.36010220	102.0000000	130.5000000	1.27202044	2903.599999	40.45090002	5.476
HW		25	0.00151354	0.00013905	0.0011845	0.0018845	0.00002781	0.037839	0.00000002	9.187

5
2

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
AGEM=10										
WEIGHT	WEIGHT	33	20.57272725	3.03719369	12.1000000	29.0000000	0.52870756	678.899999	9.22454548	14.763
HEIGHT	HEIGHT	24	115.28749998	5.53293008	100.7000000	123.8000000	1.12940462	2766.899999	30.61331525	4.799
HW		24	0.00151504	0.00010631	0.0011932	0.0016630	0.00002170	0.036361	0.00000001	7.017
AGEM=11										
WEIGHT	WEIGHT	44	21.44999998	2.97114025	16.5000000	29.4000000	0.44791625	943.799999	8.82767441	13.851
HEIGHT	HEIGHT	35	117.58571427	5.18102549	103.5000000	128.2000000	0.87575315	4115.499999	26.84302518	4.406
HW		35	0.00153005	0.00011365	0.0013568	0.0019076	0.00001921	0.053552	0.00000001	7.428
AGEM=12										
WEIGHT	WEIGHT	41	21.99999998	2.83372546	16.4000000	30.4000000	0.44255357	901.999999	8.03000000	12.881
HEIGHT	HEIGHT	39	119.24102562	5.58186527	110.2000000	132.6000000	0.89381378	4650.399999	31.15721992	4.681
HW		39	0.00154741	0.00011515	0.0013004	0.0018266	0.00001844	0.060349	0.00000001	7.442
AGEM=13										
WEIGHT	WEIGHT	45	20.28888886	2.60185443	11.8000000	25.7000000	0.38786156	912.999999	6.76964647	12.824
HEIGHT	HEIGHT	34	115.19705880	5.40888637	100.3000000	124.6000000	0.92761636	3916.699999	29.25605171	4.695
HW		34	0.00149888	0.00012376	0.0011729	0.0018333	0.00002123	0.050962	0.00000002	8.257
AGEM=14										
WEIGHT	WEIGHT	44	21.30909089	1.98609330	18.0000000	25.4000000	0.29941483	937.599999	3.94456661	9.320
HEIGHT	HEIGHT	37	118.88648647	4.41444360	112.1000000	128.8000000	0.72573006	4398.799999	19.48731231	3.713
HW		37	0.00151226	0.00009085	0.0013120	0.0017340	0.00001494	0.055954	0.00000001	6.008
AGEM=15										
WEIGHT	WEIGHT	47	22.01914891	2.87633812	13.9000000	31.3000000	0.41955704	1034.899999	8.27332100	13.063
HEIGHT	HEIGHT	31	118.56129029	5.65152943	101.5000000	132.0000000	1.01504465	3675.399999	31.93978494	4.767
HW		31	0.00152208	0.00010845	0.0013204	0.0017964	0.00001948	0.047184	0.00000001	7.125
AGEM=16										
WEIGHT	WEIGHT	48	21.87916665	3.00212395	16.7000000	30.5000000	0.43331927	1050.199999	9.01274824	13.721
HEIGHT	HEIGHT	37	119.87027025	5.88250064	108.1000000	134.5000000	0.96707715	4435.199999	34.60381383	4.907
HW		37	0.00150999	0.00011074	0.0013263	0.0018075	0.00001821	0.055870	0.00000001	7.334
AGEM=17										
WEIGHT	WEIGHT	42	22.56476188	3.06593498	18.1000000	31.7000000	0.47308404	947.719999	9.39995728	13.587
HEIGHT	HEIGHT	32	120.90312498	5.82339466	110.3000000	132.3000000	1.02944046	3868.899999	33.91192540	4.817
HW		32	0.00155815	0.00014408	0.0013278	0.0020554	0.00002547	0.049861	0.00000002	9.247
AGEM=18										
WEIGHT	WEIGHT	39	21.95384613	2.41375948	17.8000000	30.1000000	0.38651085	856.199999	5.82623482	10.995
HEIGHT	HEIGHT	28	120.95714284	5.20060030	113.0000000	136.2000000	0.98282108	3386.799999	27.04624345	4.300
HW		28	0.00150329	0.00006953	0.0013857	0.0016226	0.00001314	0.042092	0.00000000	4.625
AGEM=19										
WEIGHT	WEIGHT	51	22.77450978	3.11697566	14.0000000	31.4000000	0.43646389	1161.499999	9.71553723	13.686
HEIGHT	HEIGHT	33	121.02424240	6.23468275	103.3000000	136.4000000	1.08531896	3993.799999	38.87126896	5.152
HW		33	0.00152465	0.00011687	0.0013120	0.0017810	0.00002034	0.050314	0.00000001	7.665

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
AGEM=20										
WEIGHT	WEIGHT	30	22.72666664	2.74715318	17.8000000	32.3000000	0.50155925	681.799999	7.54685057	12.088
HEIGHT	HEIGHT	16	120.4812499[illegible]	4.03455389	113.3000000	128.0000000	1.00863847	1927.700000	16.27762507	3.349
WH		16	0.00151885	0.00009167	0.0013866	0.0017024	0.00002292	0.024302	0.00000001	6.035
AGEM=21										
WEIGHT	WEIGHT	28	22.05357141	2.85715245	17.2000000	31.7000000	0.53995106	617.499999	8.16332013	12.956
HEIGHT	HEIGHT	26	120.97692305	4.68395625	113.9000000	131.7000000	0.91859940	3145.399999	21.93944617	3.872
WH		26	0.00147059	0.00015294	0.0010071	0.0018276	0.00002999	0.038235	0.00000002	10.400
AGEM=22										
WEIGHT	WEIGHT	25	22.74799998	2.44882965	18.9000000	27.1000000	0.48976593	568.699999	5.99676665	10.765
HEIGHT	HEIGHT	19	122.81578945	4.78565718	116.1000000	132.4000000	1.09790505	2333.500000	22.90251463	3.897
WH		19	0.00152760	0.00007709	0.0014351	0.0016634	0.00001769	0.029024	0.00000001	5.046
AGEM=23										
WEIGHT	WEIGHT	28	22.46785711	2.17512087	18.4000000	26.5000000	0.41105921	629.099999	4.73115079	9.681
HEIGHT	HEIGHT	23	121.54347824	4.30103857	113.5000000	128.7000000	0.89682854	2795.500000	18.49893279	3.539
WH		23	0.00150734	0.00008467	0.0013540	0.0016675	0.00001766	0.034669	0.00000001	5.617
AGEM=24										
WEIGHT	WEIGHT	20	22.69999998	3.42467825	18.3000000	32.5000000	0.76578134	454.000000	11.72842109	15.087
HEIGHT	HEIGHT	14	121.81428569	5.75898723	114.4000000	132.6000000	1.53915408	1705.400000	33.16593395	4.728
WH		14	0.00153153	0.00012891	0.0013770	0.0018484	0.00003445	0.021441	0.00000002	8.417

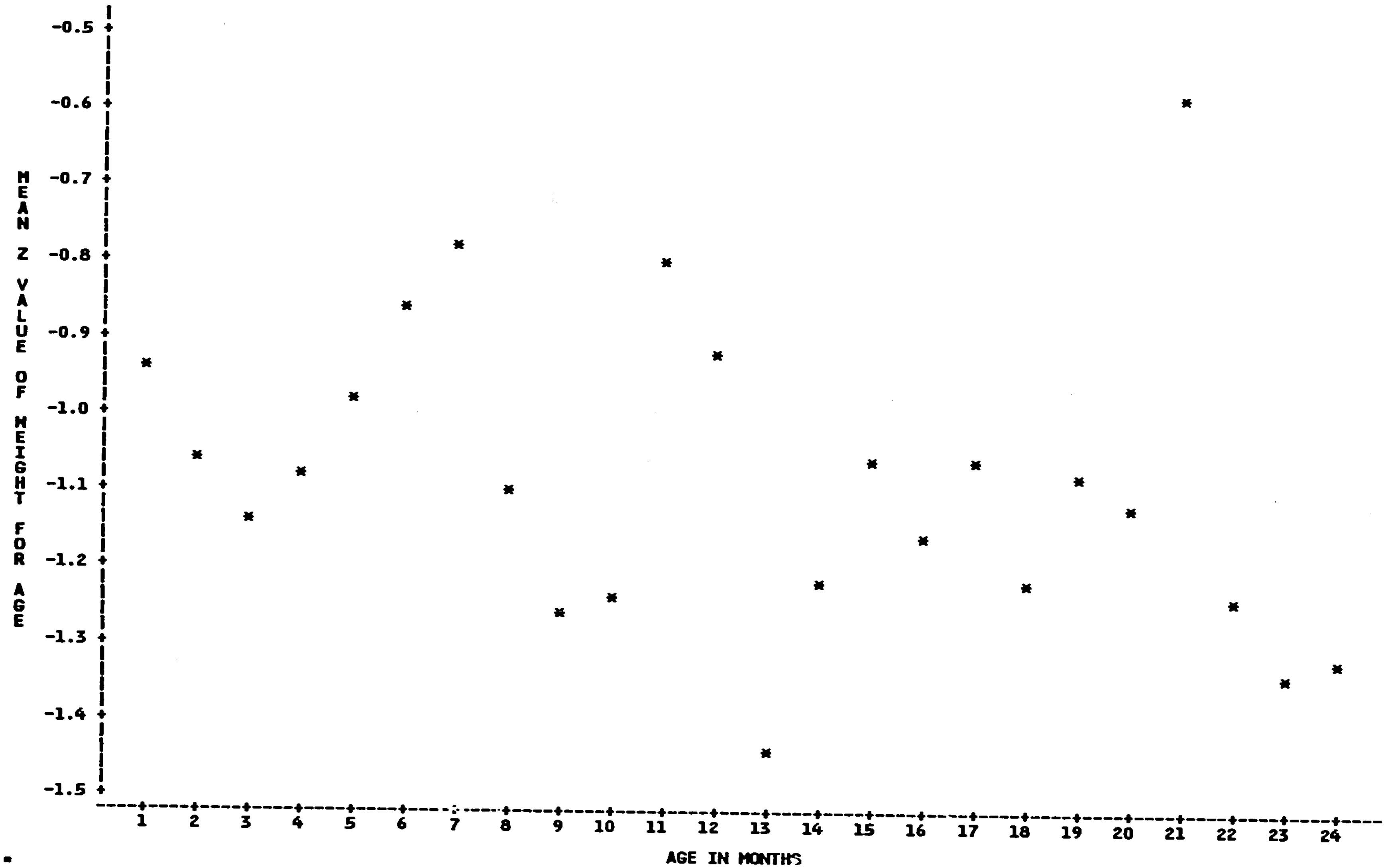


NOTE: 1 OBS HAD MISSING VALUES

SCHOOLERS: MEAN HEIGHT-FOR-AGE Z SCORE BY AGE IN MONTHS

PLOT OF M_H_AGEZ*AGEM SYMBOL USED IS *

11:03 TUESDAY, OCTOBER 28, 1986



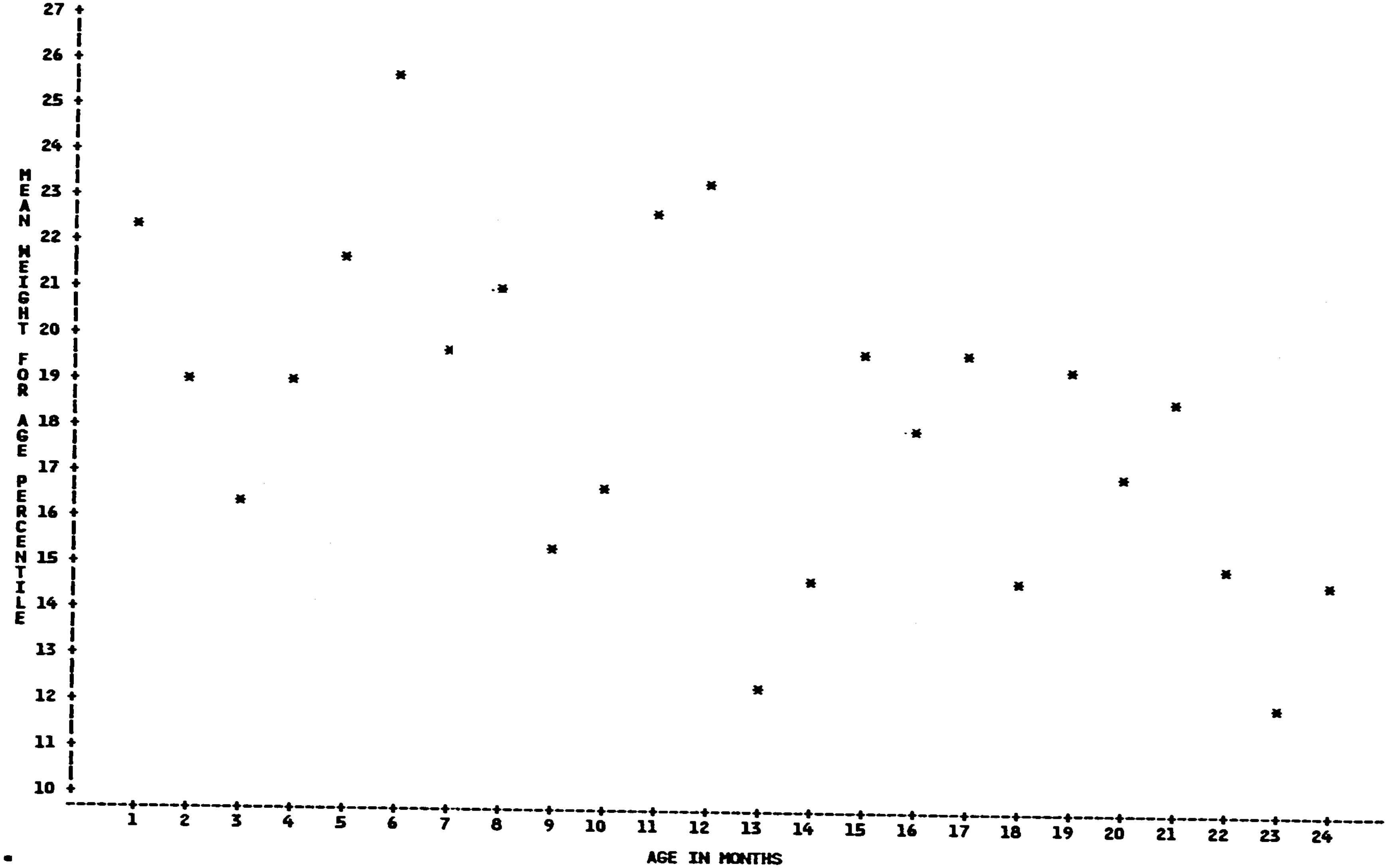
NOTE: 1 OBS HAD MISSING VALUES

2

SCHOOLERS: MEAN HEIGHT-FOR-AGE PERCENTILE BY AGE IN MONTHS

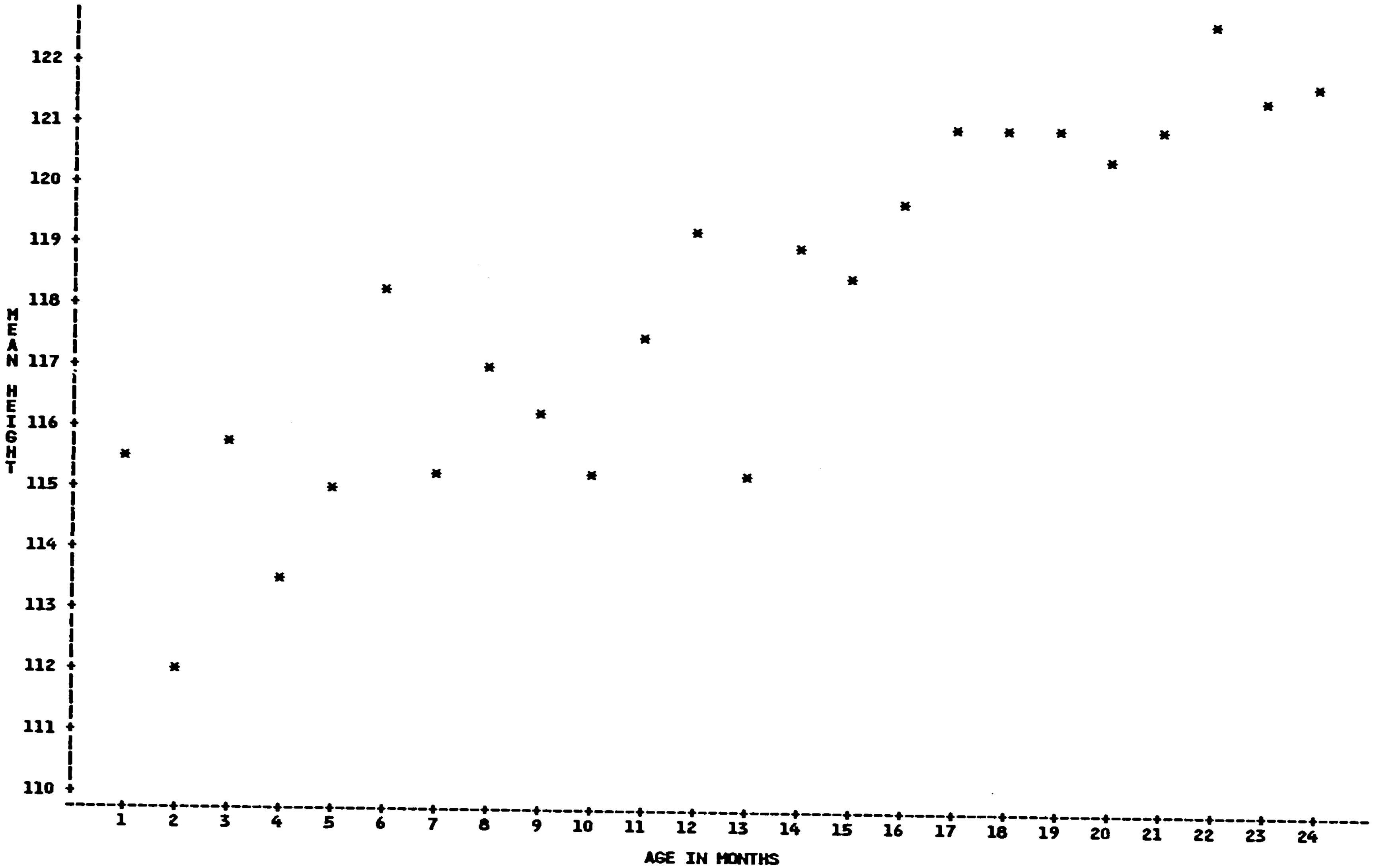
PLOT OF M_M_AGEP*AGEM   SYMBOL USED IS *

11:03 TUESDAY, OCTOBER 28, 1986



NOTE: 1 OBS HAD MISSING VALUES

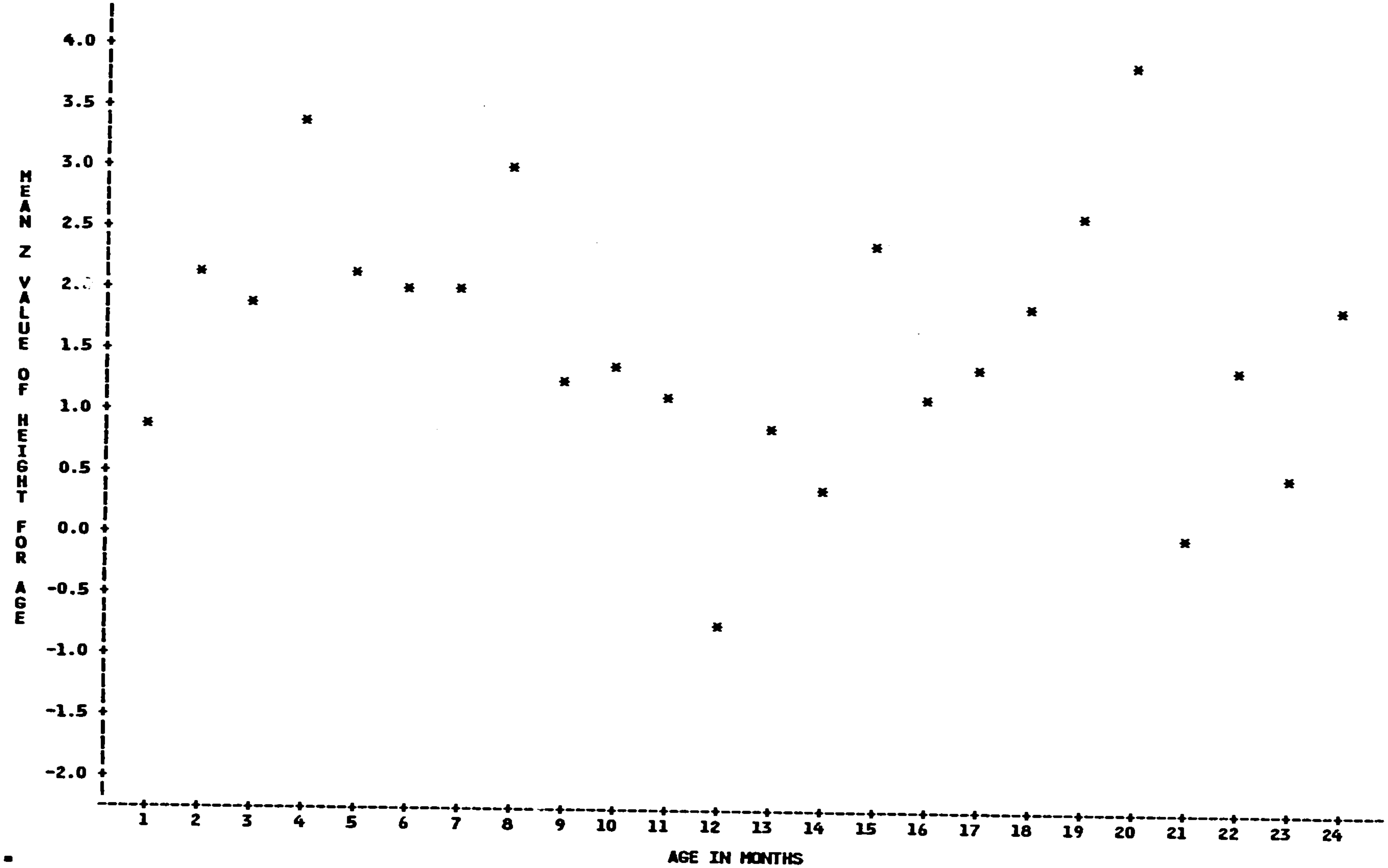
SCHOOLERS: MEAN HEIGHT BY AGE IN MONTHS 10:49 TUESDAY, OCTOBER 28, 1986 2



NOTE: 1 OBS HAD MISSING VALUES

SCHOOLERS: MEAN HEIGHT-FOR-AGE Z SCORE BY AGE IN MONTHS

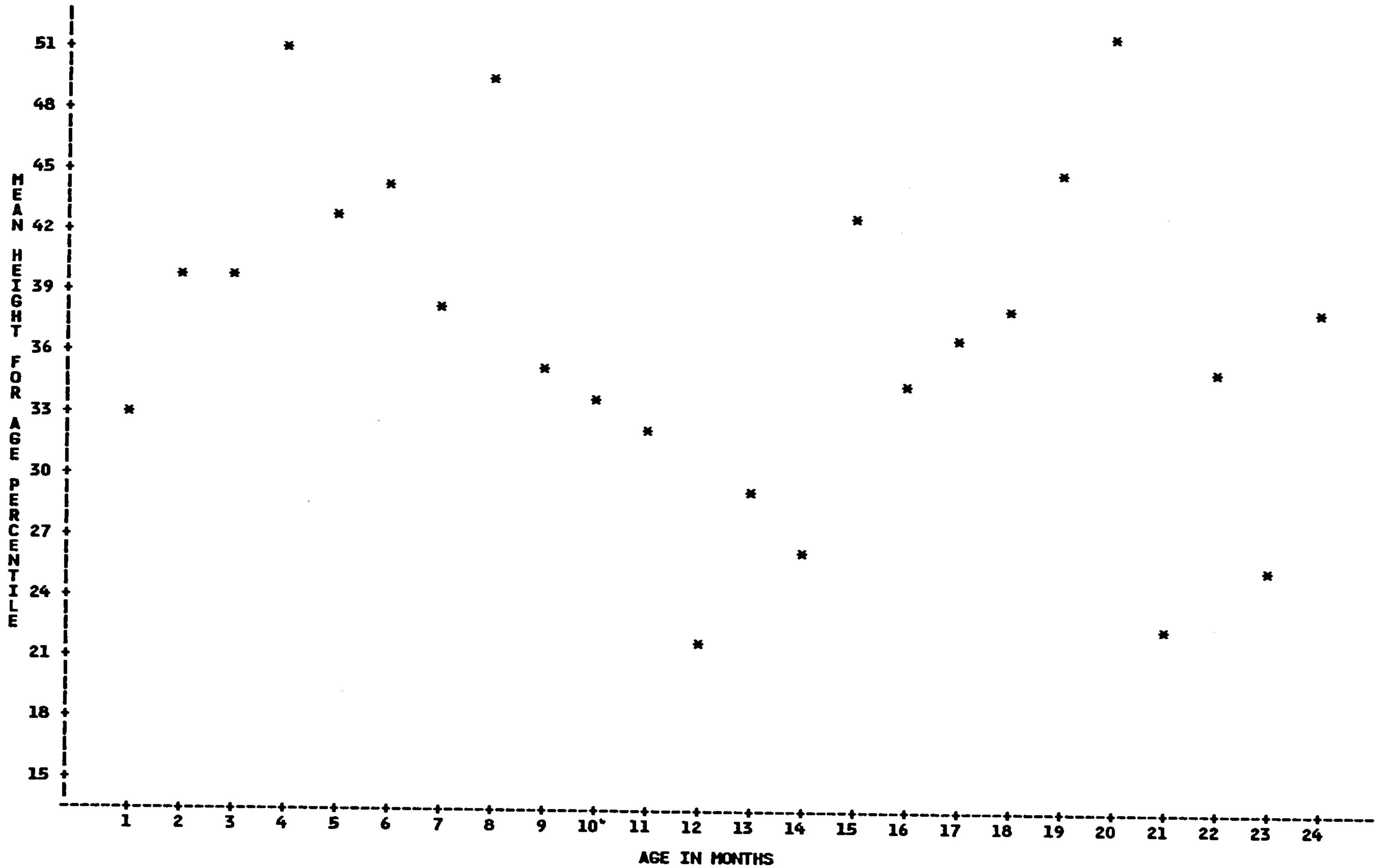
PLOT OF M_H_AGEZ*AGEM   SYMBOL USED IS *



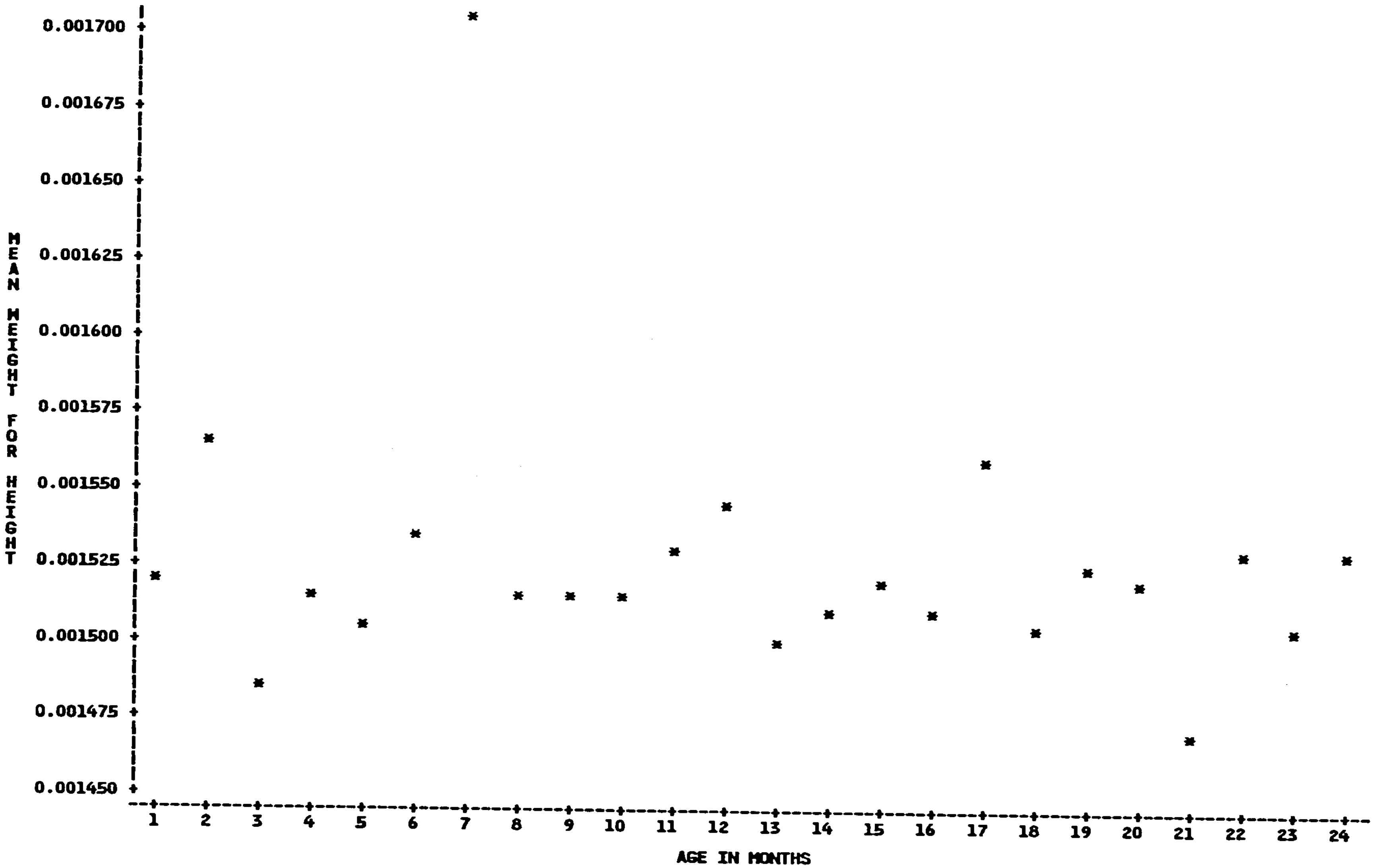
NOTE: 1 OBS HAD MISSING VALUES

SCHOOLERS: MEAN HEIGHT-FOR-AGE PERCENTILE BY AGE IN MONTHS

PLOT OF M_H_AGEP*AGEM   SYMBOL USED IS *



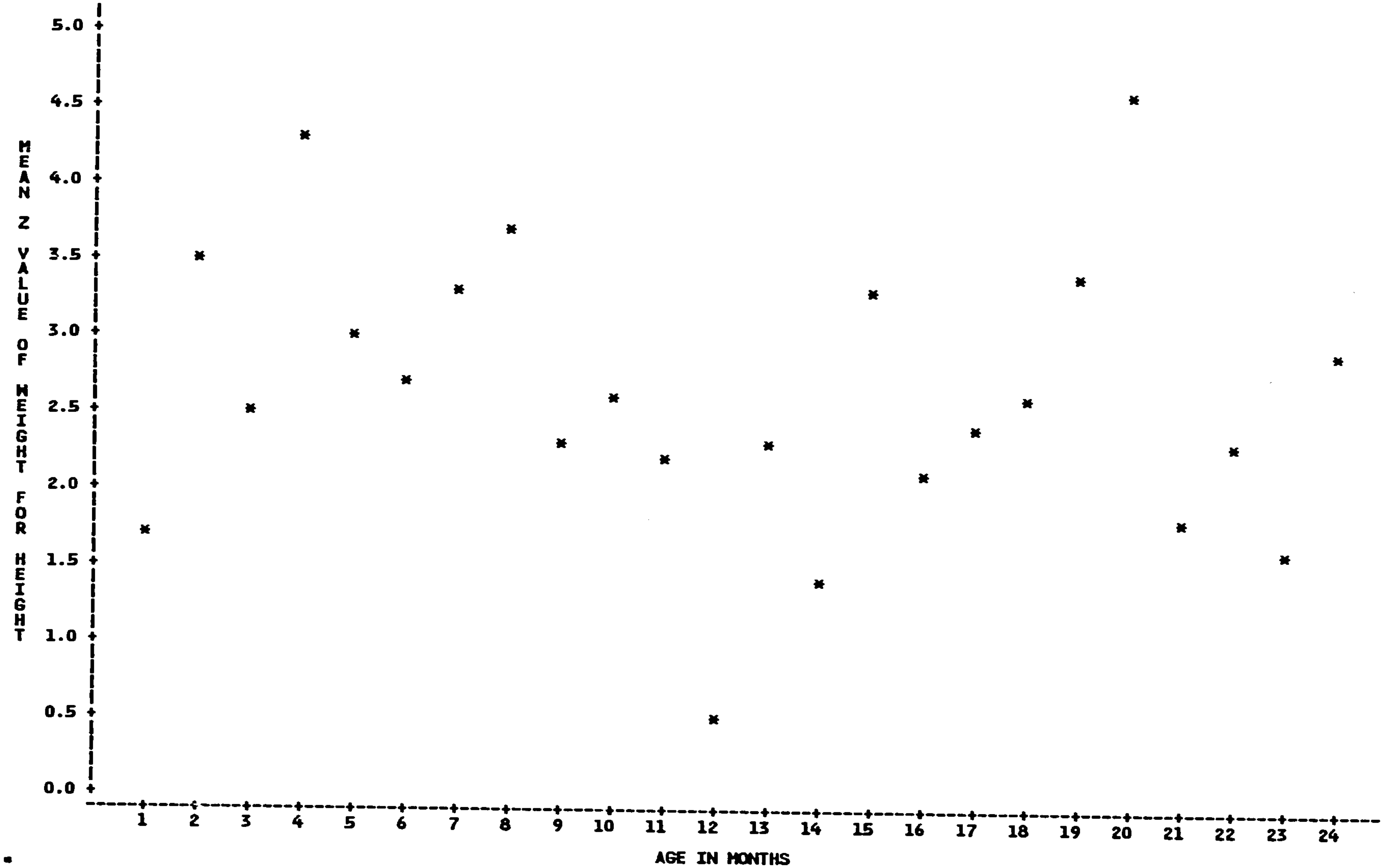
NOTE: 1 OBS HAD MISSING VALUES



NOTE: 1 OBS HAD MISSING VALUES

SCHOOLERS: MEAN WEIGHT-FOR-HEIGHT Z SCORE BY AGE IN MONTHS

PLOT OF M_M_HZ*AGEM   SYMBOL USED IS *   11:03 TUESDAY, OCTOBER 28, 1986



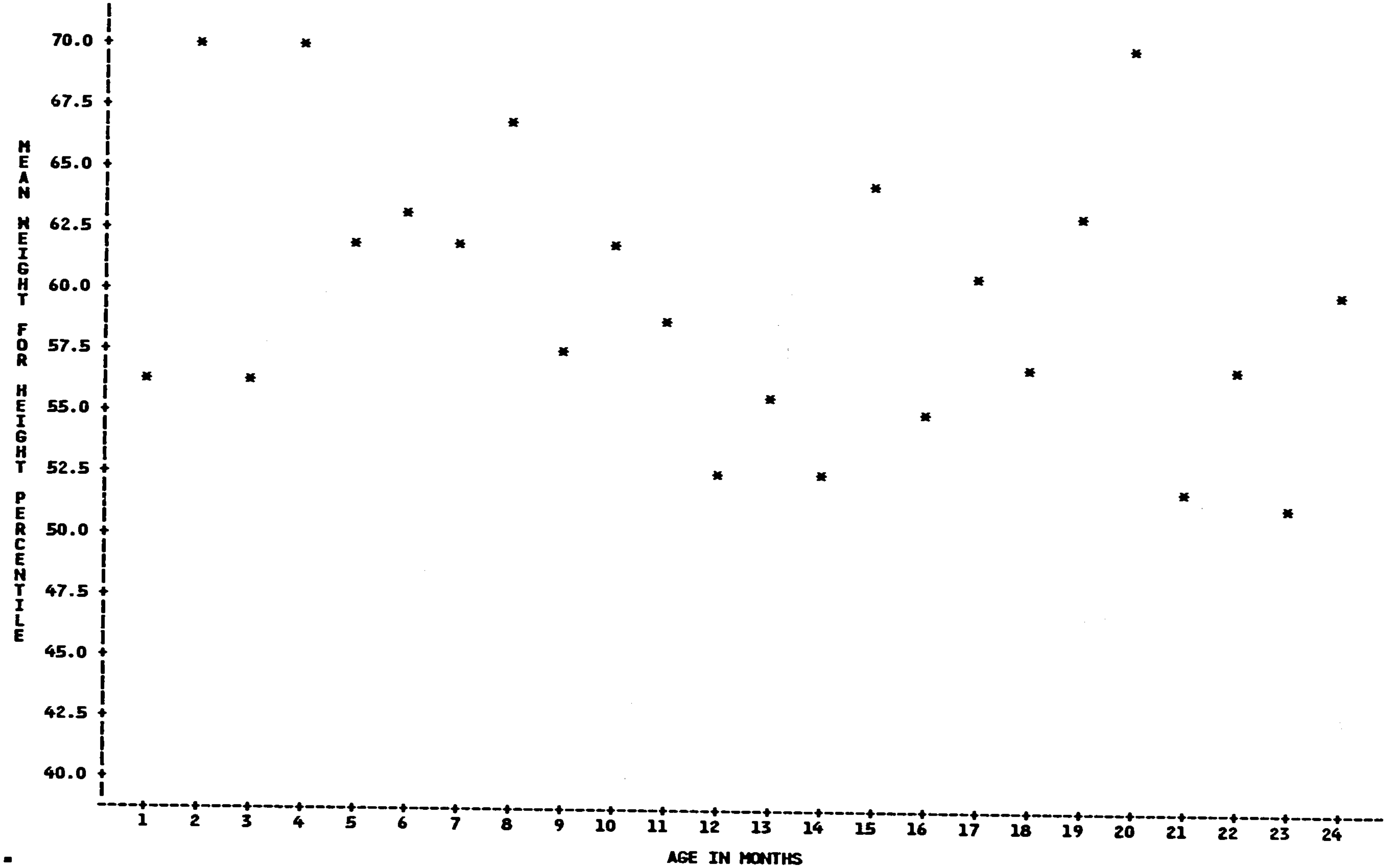
NOTE: 1 OBS HAD MISSING VALUES

78

SCHOOLERS: MEAN HEIGHT-FOR-HEIGHT PERCENTILE BY AGE IN MONTHS

11:03 TUESDAY, OCTOBER 28, 1986

PLOT OF M_H_HP*AGEM   SYMBOL USED IS *



NOTE: 1 OBS HAD MISSING VALUES

APPENDIX IV

MORBIDITY

A) Infants

B) Toddlers

C) Schoolers

INFANTS: ESTIMATED MORBIDITY DAYS/MONTH B.   NTH OF AGE

14:54 THURSDAY, OCTOBER 30, 1986

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
				MONTH OF AGE=0-1						
ILLDAYS	DAYS ILL/MONTH	103	1.36463057	3.75033818	0	17.1428571	0.36953180	140.556949	14.0650365	274.824
DIADAYS	DIAR DAYS	103	0.08321775	0.84456795	0	8.5714286	0.08321775	8.571429	0.7132950	1014.889
FEVDAYS	FEVER DAYS	103	0.00000000	0.00000000	0	0.0000000	0.00000000	0.000000	0.0000000	.
URDAYS	UP RESP DAYS	103	0.15113109	1.19386559	0	11.4285714	0.11763507	15.566502	1.4253151	789.954
LRDAYS	LOW RESP DAYS	103	0.50043719	2.49668215	0	15.7142857	0.24600540	51.545031	6.2334217	498.900
NILL	ILL EPISODES	103	0.21728939	0.56562472	0	2.8571429	0.05573266	22.380807	0.3199313	260.309
NDIA	DIAR EPISODES	103	0.01386963	0.14076133	0	1.4285714	0.01386963	1.428571	0.0198138	1014.889
NFEV	FEVER EPISODES	103	0.00000000	0.00000000	0	0.0000000	0.00000000	0.000000	0.0000000	.
NUR	UP RESP EPISODES	103	0.02391315	0.17298055	0	1.4285714	0.01704428	2.463054	0.0299223	723.370
NLR	LOW RESP EPISODES	103	0.06871997	0.30737380	0	1.6666667	0.03028644	7.078157	0.0944787	447.285
				MONTH OF AGE=1-2						
ILLDAYS	DAYS ILL/MONTH	114	1.52660767	4.10947351	0	19.6551724	0.38488746	174.033274	16.8877726	269.190
DIADAYS	DIAR DAYS	114	0.26817043	1.49118660	0	11.0000000	0.13966242	30.571429	2.2236375	556.059
FEVDAYS	FEVER DAYS	114	0.00000000	0.00000000	0	0.0000000	0.00000000	0.000000	0.0000000	.
URDAYS	UP RESP DAYS	114	0.12145749	1.29681112	0	13.8461538	0.12145749	13.846154	1.6817191	1067.708
LRDAYS	LOW RESP DAYS	114	0.65565443	2.56746058	0	16.1538462	0.24046472	74.744605	6.5918538	391.587
NILL	ILL EPISODES	114	0.23978983	0.55646006	0	2.3076923	0.05211726	27.336041	0.3096478	232.062
NDIA	DIAR EPISODES	114	0.03884712	0.20757298	0	1.4285714	0.01944099	4.428571	0.0430865	534.333
NFEV	FEVER EPISODES	114	0.00000000	0.00000000	0	0.0000000	0.00000000	0.000000	0.0000000	.
NUR	UP RESP EPISODES	114	0.02024291	0.21613519	0	2.3076923	0.02024291	2.307692	0.0467144	1067.708
NLR	LOW RESP EPISODES	114	0.13528936	0.44328580	0	2.3076923	0.04151752	15.422986	0.1965023	327.658
				MONTH OF AGE=2-3						
ILLDAYS	DAYS ILL/MONTH	113	1.79114683	4.06645075	0	17.0000000	0.38253951	202.399592	16.5360217	227.031
DIADAYS	DIAR DAYS	113	0.41814159	2.70549261	0	21.2500000	0.25451134	47.250000	7.3196903	647.028
FEVDAYS	FEVER DAYS	113	0.24778761	1.10624020	0	7.0000000	0.10406632	28.000000	1.2237674	446.447
URDAYS	UP RESP DAYS	113	0.09734513	0.75551073	0	7.0000000	0.07107247	11.000000	0.5707965	776.116
LRDAYS	LOW RESP DAYS	113	0.43682399	1.96676618	0	13.0000000	0.18501780	49.361111	3.8681692	450.242
NILL	ILL EPISODES	113	0.27859828	0.57532955	0	2.3076923	0.05412245	31.481605	0.3310041	206.509
NDIA	DIAR EPISODES	113	0.05752212	0.35198552	0	2.5000000	0.03311201	6.500000	0.1238938	611.913
NFEV	FEVER EPISODES	113	0.06194690	0.27656005	0	2.0000000	0.02601658	7.000000	0.0764855	446.447
NUR	UP RESP EPISODES	113	0.01769912	0.13244277	0	1.0000000	0.01245917	2.000000	0.0175411	748.302
NLR	LOW RESP EPISODES	113	0.07952311	0.32781187	0	2.0000000	0.03083795	8.986111	0.1074606	412.222
				MONTH OF AGE=3-4						
ILLDAYS	DAYS ILL/MONTH	113	2.42838206	4.62565472	0	25.5000000	0.43514499	274.407172	21.3966816	190.483
DIADAYS	DIAR DAYS	113	0.45069532	2.74125763	0	25.5000000	0.25787583	50.928571	7.5144934	608.229
FEVDAYS	FEVER DAYS	113	0.06573957	0.57904220	0	6.0000000	0.05447171	7.428571	0.3352899	880.812
URDAYS	UP RESP DAYS	113	0.09734513	0.73149311	0	6.0000000	0.06881308	11.000000	0.5350822	751.443
LRDAYS	LOW RESP DAYS	113	0.49094169	1.67620684	0	9.0000000	0.15768428	55.476412	2.8096694	341.427
NILL	ILL EPISODES	113	0.42537322	0.70910998	0	3.0000000	0.06670746	48.067174	0.5028370	166.703
NDIA	DIAR EPISODES	113	0.08027813	0.42698823	0	3.0000000	0.04016767	9.071429	0.1823189	531.886
NFEV	FEVER EPISODES	113	0.02326169	0.17473631	0	1.4285714	0.01643781	2.628571	0.0305328	751.176
NUR	UP RESP EPISODES	113	0.01946903	0.14629862	0	1.2000000	0.01376262	2.200000	0.0214033	751.443
NLR	LOW RESP EPISODES	113	0.12382213	0.39431479	0	2.0000000	0.03709402	13.991900	0.1554842	318.453

INFANTS: ESTIMATED MORBIDITY DAYS/MONTH BY .TH OF AGE

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
MONTH OF AGE=4-5										
ILLDAYS	DAYS ILL/MONTH	113	2.45719519	4.62366745	0	22.0000000	0.43495805	277.663057	21.3783006	188.169
DIAOAYS	DIAR DAYS	113	1.09523810	4.04288345	0	30.0000000	0.38032248	123.761905	16.3449066	369.133
FEVDAYS	FEVER DAYS	113	0.22648026	1.04761230	0	6.9230769	0.09855108	25.592269	1.0974915	462.562
URDAYS	UP RESP DAYS	113	0.08628319	0.63717596	0	6.2500000	0.05994047	9.750000	0.4059932	738.471
LRDAYS	LOW RESP DAYS	113	0.88398620	2.73304505	0	15.0000000	0.25710325	99.890440	7.4695352	309.173
NILL	ILL EPISODES	113	0.50528802	0.87058167	0	4.2857143	0.08189743	57.097546	0.7579124	172.294
NDIA	DIAR EPISODES	113	0.20626141	0.67019631	0	4.2857143	0.06304677	23.307540	0.4491631	324.926
NFEV	FEVER EPISODES	113	0.08435787	0.38298498	0	2.5000000	0.03602820	9.532440	0.1466775	454.000
NUR	UP RESP EPISODES	113	0.03097345	0.18937380	0	1.2500000	0.01781479	3.500000	0.0358624	611.407
NLR	LOW RESP EPISODES	113	0.12301943	0.34663342	0	1.3636364	0.03260853	13.901195	0.1201547	281.771
MONTH OF AGE=5-6										
ILLDAYS	DAYS ILL/MONTH	113	3.14306606	5.79708114	0	28.3333333	0.54534352	355.166464	33.6061497	184.440
DIADAYS	DIAR DAYS	113	1.15423742	3.11998480	0	16.3636364	0.29350348	130.428829	9.7343052	270.307
FEVDAYS	FEVER DAYS	113	0.21491783	1.01395581	0	6.0000000	0.09538494	24.285714	1.0281064	471.788
URDAYS	UP RESP DAYS	113	0.09654063	1.02624095	0	10.9090909	0.09654063	10.909091	1.0531705	1063.015
LRDAYS	LOW RESP DAYS	113	0.51969780	2.10836438	0	13.0000000	0.19833824	58.725851	4.4452004	405.690
NILL	ILL EPISODES	113	0.52727656	0.85177834	0	3.2142857	0.08012857	59.582251	0.7255263	161.543
NDIA	DIAR EPISODES	113	0.24443659	0.59081160	0	2.3076923	0.05557888	27.621335	0.3490583	241.703
NFEV	FEVER EPISODES	113	0.05077960	0.24338313	0	1.6666667	0.02289556	5.738095	0.0592353	479.293
NUR	UP RESP EPISODES	113	0.01206758	0.12828012	0	1.3636364	0.01206758	1.363636	0.0164558	1063.015
NLR	LOW RESP EPISODES	113	0.07885185	0.28979091	0	1.4285714	0.02726124	8.910259	0.0839788	367.513
MONTH OF AGE=6-7										
ILLDAYS	DAYS ILL/MONTH	109	2.80813753	5.25088614	0	22.5000000	0.50294368	306.086991	27.5718052	186.988
DIADAYS	DIAR DAYS	109	0.83268795	3.77840621	0	30.0000000	0.36190568	90.762987	14.2763535	453.760
FEVDAYS	FEVER DAYS	109	0.29284986	1.94060376	0	17.7777778	0.18587613	31.920635	3.7659429	662.662
URDAYS	UP RESP DAYS	109	0.12640163	0.93666219	0	7.7777778	0.08971597	13.777778	0.8773361	741.021
LRDAYS	LOW RESP DAYS	109	0.45167816	2.47412844	0	22.5000000	0.23697852	49.232919	6.1213115	547.764
NILL	ILL EPISODES	109	0.53848425	1.02622400	0	7.5000000	0.09829443	58.694784	1.0531357	190.576
NDIA	DIAR EPISODES	109	0.15058158	0.57491064	0	4.2857143	0.05506645	16.413392	0.3305222	381.793
NFEV	FEVER EPISODES	109	0.03247415	0.19627164	0	1.4285714	0.01879941	3.539683	0.0385226	604.393
NUR	UP RESP EPISODES	109	0.01936799	0.14251965	0	1.1111111	0.01365091	2.111111	0.0203119	735.851
NLR	LOW RESP EPISODES	109	0.14564932	0.80232117	0	7.5000000	0.07684843	15.875776	0.6437193	550.858
MONTH OF AGE=7-8										
ILLDAYS	DAYS ILL/MONTH	104	2.40347972	4.21218586	0	15.0000000	0.41303881	249.961890	17.7425097	175.254
DIADAYS	DIAR DAYS	104	0.58293249	2.17403431	0	11.5384615	0.21318160	60.624979	4.7264252	372.948
FEVDAYS	FEVER DAYS	104	0.14138036	0.91895126	0	8.1818182	0.09011059	14.703557	0.8444714	649.985
URDAYS	UP RESP DAYS	104	0.12387612	0.80167839	0	6.0000000	0.07861108	12.883117	0.6426890	647.162
LRDAYS	LOW RESP DAYS	104	0.35026266	1.91974404	0	13.0434783	0.18824639	36.427317	3.6854172	548.087
NILL	ILL EPISODES	104	0.41830797	0.67039656	0	2.7272727	0.06573779	43.504029	0.4494316	160.264
NDIA	DIAR EPISODES	104	0.09991476	0.36582046	0	2.3076923	0.03587165	10.391135	0.1338246	366.133
NFEV	FEVER EPISODES	104	0.03819550	0.22274600	0	1.3636364	0.02184204	3.972332	0.0496153	583.173
NUR	UP RESP EPISODES	104	0.03646354	0.21501960	0	1.4285714	0.02108441	3.792208	0.0462334	589.684
NLR	LOW RESP EPISODES	104	0.04702122	0.23729912	0	1.3636364	0.02326909	4.890206	0.0563109	504.664

INFANTS: ESTIMATED MORBIDITY DAYS/MONTH BY [illegible]H OF AGE

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
				MONTH OF AGE=8-9						
ILLDAYS	DAYS ILL/MONTH	93	3.18411451	6.14389220	0	30.0000000	0.63709194	296.122650	37.7474114	192.954
DIADAYS	DIAR DAYS	93	0.92219416	3.66110295	0	30.0000000	0.37963869	85.764057	13.4036748	396.999
FEVDAYS	FEVER DAYS	93	0.31084373	1.59703994	0	10.4347826	0.16560533	28.908467	2.5505366	513.776
URDAYS	UP RESP DAYS	93	0.05529954	0.38032365	0	3.0000000	0.03943773	5.142857	0.1446461	687.752
LRDAYS	LOW RESP DAYS	93	0.68484694	2.54645215	0	13.6363636	0.26405479	63.690765	6.4844185	371.828
NILL	ILL EPISODES	93	0.56566565	0.96755735	0	4.2857143	0.10033102	52.606905	0.9361672	171.048
NDIA	DIAR EPISODES	93	0.16914108	0.57650539	0	4.2857143	0.05978082	15.730121	0.3323585	340.843
NFEV	FEVER EPISODES	93	0.05250855	0.25405373	0	1.5789474	0.02634414	4.883295	0.0645433	483.833
NUR	UP RESP EPISODES	93	0.02227343	0.15114855	0	1.0714286	0.01567337	2.071429	0.0228459	678.605
NLR	LOW RESP EPISODES	93	0.11047199	0.37776024	0	2.1428571	0.03917191	10.273896	0.1427028	341.951
				MONTH OF AGE=9-10						
ILLDAYS	DAYS ILL/MONTH	39	2.49650606	5.80747973	0	30.0000000	0.92994101	97.3637363	33.7268208	232.624
DIADAYS	DIAR DAYS	39	0.91208791	2.78202288	0	11.4285714	0.44548019	35.5714286	7.7396513	305.017
FEVDAYS	FEVER DAYS	39	1.04959143	4.94824771	0	30.0000000	0.79235377	40.9340659	24.4851554	471.445
URDAYS	UP RESP DAYS	39	0.76923077	4.80384461	0	30.0000000	0.76923077	30.0000000	23.0769231	624.500
LRDAYS	LOW RESP DAYS	39	0.93040293	4.83574142	0	30.0000000	0.77433835	36.2857143	23.3843951	519.747
NILL	ILL EPISODES	39	0.67968442	2.43400325	0	15.0000000	0.38975245	26.5076923	5.9243718	358.108
NDIA	DIAR EPISODES	39	0.16300366	0.54569616	0	2.8571429	0.08738132	6.3571429	0.2977843	334.775
NFEV	FEVER EPISODES	39	0.45083122	2.40856735	0	15.0000000	0.38567944	17.5824176	5.8011967	534.250
NUR	UP RESP EPISODES	39	0.38461538	2.40192231	0	15.0000000	0.38461538	15.0000000	5.7692308	624.500
NLR	LOW RESP EPISODES	39	0.44688645	2.40751140	0	15.0000000	0.38551036	17.4285714	5.7961112	538.730
				MONTH OF AGE=10-11						
ILLDAYS	DAYS ILL/MONTH	22	2.61723652	5.18202047	0	18.0000000	1.10481048	57.5792034	26.8533362	197.996
DIADAYS	DIAR DAYS	22	1.18181818	4.12468023	0	18.0000000	0.87938478	26.0000000	17.0129870	349.011
FEVDAYS	FEVER DAYS	22	0.77075099	3.61514258	0	16.9565217	0.77075099	16.9565217	13.0692559	469.042
URDAYS	UP RESP DAYS	22	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.0000000	.
LRDAYS	LOW RESP DAYS	22	1.44184126	3.90673852	0	16.9565217	0.83291945	31.7205078	15.2626059	270.955
NILL	ILL EPISODES	22	0.48300810	0.67562956	0	2.0000000	0.14404471	10.6261782	0.4564753	139.880
NDIA	DIAR EPISODES	22	0.18181818	0.58848989	0	2.0000000	0.12546647	4.0000000	0.3463203	323.669
NFEV	FEVER EPISODES	22	0.05928854	0.27808789	0	1.3043478	0.05928854	1.3043478	0.0773329	469.042
NUR	UP RESP EPISODES	22	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.0000000	.
NLR	LOW RESP EPISODES	22	0.23053774	0.50168478	0	1.3636364	0.10695955	5.0718303	0.2516876	217.615
				MONTH OF AGE=11-12						
ILLDAYS	DAYS ILL/MONTH	20	1.85298351	4.82943059	0	20.4000000	1.07989351	37.0596702	23.3233998	260.630
DIADAYS	DIAR DAYS	20	1.88689655	7.52146018	0	33.6000000	1.68184963	37.7379310	56.5723632	398.615
FEVDAYS	FEVER DAYS	20	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.0000000	.
URDAYS	UP RESP DAYS	20	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.0000000	.
LRDAYS	LOW RESP DAYS	20	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.0000000	.
NILL	ILL EPISODES	20	0.33694153	0.73487865	0	2.4000000	0.16432386	6.7388306	0.5400466	218.103
NDIA	DIAR EPISODES	20	0.29172414	1.08598961	0	4.8000000	0.24283466	5.8344828	1.1793734	372.266
NFEV	FEVER EPISODES	20	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.0000000	.
NUR	UP RESP EPISODES	20	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.0000000	.
NLR	LOW RESP EPISODES	20	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.0000000	.

INFANT YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NYA_ILL   EPISODES OF ILLNESS PER YR (ADJ)   FREQ  CUM.   PERCENT   CUM.
                                                   FREQ             PERCENT
          |
    0     |*********************************   33    33    30.56     30.56
          |
    2     |********                             8    41     7.41     37.96
          |
    3     |*******************                 19    60    17.59     55.56
          |
    4     |*******                              7    67     6.48     62.04
          |
    5     |*************                       13    80    12.04     74.07
          |
    6     |*****                                5    85     4.63     78.70
          |
    7     |******                               6    91     5.56     84.26
          |
    8     |*****                                5    96     4.63     88.89
          |
    9     |****                                 4   100     3.70     92.59
          |
   10     |*                                    1   101     0.93     93.52
          |
   11     |**                                   2   103     1.85     95.37
          |
   12     |**                                   2   105     1.85     97.22
          |
   13     |*                                    1   106     0.93     98.15
          |
   14     |*                                    1   107     0.93     99.07
          |
   23     |*                                    1   108     0.93    100.00
          |
          -----+----+----+----+----+----+---
               5   10   15   20   25   30

                     FREQUENCY
```

INFANT YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NYA_FEV EPI  OF FEV PER YR (ADJ) FREQ   CUM.   PERCENT    CUM.
                                        FREQ            PERCENT
               |
     0         |******************  92     92    85.19     85.19
               |
     2         |*                    7     99     6.48     91.67
               |
     3         |*                    5    104     4.63     96.30
               |
     4         |                     2    106     1.85     98.15
               |
     5         |                     1    107     0.93     99.07
               |
     8         |                     1    108     0.93    100.00
               |
               ----+---+---+---+--
                  20  40  60  80

                  FREQUENCY
```

INFANT YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NYA DIA  EPI  OF DIARR PER YEAR (ADJ)      FREQ  CUM.   PERCENT    CUM.
                                                 FREQ            PERCENT
          |
    0     |******************************    75    75     69.44     69.44
          |
    2     |****                              10    85      9.26     78.70
          |
    3     |****                              11    96     10.19     88.89
          |
    4     |*                                  3    99      2.78     91.67
          |
    5     |**                                 4   103      3.70     95.37
          |
    6     |                                   1   104      0.93     96.30
          |
    7     |*                                  2   106      1.85     98.15
          |
    8     |                                   1   107      0.93     99.07
          |
   10     |                                   1   108      0.93    100.00
          |
          ----+---+---+---+---+---+---+--
             10  20  30  40  50  60  70

                    FREQUENCY
```

INFANT YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NYA_UR  EPI OF  U RESP PER YR     FREQ  CUM.    PERCENT     CUM.
                                        FREQ              PERCENT
              |
        0     |*******************   99    99     91.67     91.67
              |
        2     |*                      5   104      4.63     96.30
              |
        3     |*                      4   108      3.70    100.00
              |
              -----+---+---+---+---+
                  20  40  60  80  100

                    FREQUENCY
```

INFANT YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
ILL_YDA   ILL DAYS PER YEAR (ADJ)                 FREQ   CUM.   PERCENT    CUM.
                                                         FREQ              PERCENT
          |
     0    |*********************************       33     33     30.56      30.56
     3    |*                                        1     34      0.93      31.48
     5    |**                                       2     36      1.85      33.33
     7    |*                                        1     37      0.93      34.26
     8    |*                                        1     38      0.93      35.19
     9    |*                                        1     39      0.93      36.11
    11    |****                                     4     43      3.70      39.81
    12    |***                                      3     46      2.78      42.59
    13    |*                                        1     47      0.93      43.52
    14    |**                                       2     49      1.85      45.37
    15    |*                                        1     50      0.93      46.30
    16    |****                                     4     54      3.70      50.00
    17    |*                                        1     55      0.93      50.93
    18    |*                                        1     56      0.93      51.85
    20    |****                                     4     60      3.70      55.56
    21    |*                                        1     61      0.93      56.48
    23    |*                                        1     62      0.93      57.41
    26    |**                                       2     64      1.85      59.26
    28    |*                                        1     65      0.93      60.19
    31    |*                                        1     66      0.93      61.11
    32    |**                                       2     68      1.85      62.96
    33    |**                                       2     70      1.85      64.81
    36    |**                                       2     72      1.85      66.67
    37    |*                                        1     73      0.93      67.59
    38    |*                                        1     74      0.93      68.52
    39    |**                                       2     76      1.85      70.37
    41    |*                                        1     77      0.93      71.30
    42    |***                                      3     80      2.78      74.07
    43    |**                                       2     82      1.85      75.93
    44    |**                                       2     84      1.85      77.78
    45    |**                                       2     86      1.85      79.63
    47    |*                                        1     87      0.93      80.56
    50    |****                                     4     91      3.70      84.26
    52    |**                                       2     93      1.85      86.11
    57    |*                                        1     94      0.93      87.04
    58    |*                                        1     95      0.93      87.96
    59    |*                                        1     96      0.93      88.89
    62    |*                                        1     97      0.93      89.81
    71    |*                                        1     98      0.93      90.74
    73    |**                                       2    100      1.85      92.59
    74    |*                                        1    101      0.93      93.52
    78    |*                                        1    102      0.93      94.44
    84    |*                                        1    103      0.93      95.37
    91    |*                                        1    104      0.93      96.30
   100    |*                                        1    105      0.93      97.22
   103    |*                                        1    106      0.93      98.15
   106    |*                                        1    107      0.93      99.07

   161    |*                                        1    108      0.93     100.00
          -----+----+----+----+----+----+---
               5   10   15   20   25   30

                     FREQUENCY
```

INFANT YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
FEV_YDA  FEV DAYS PER YR (ADJ)   FREQ  CUM.   PERCENT    CUM.
                                       FREQ              PERCENT
              |
     0        |******************   92    92     85.19     85.19
              |
     2        |                      1    93      0.93     86.11
              |
     3        |                      1    94      0.93     87.04
              |
     7        |*                     3    97      2.78     89.81
              |
     8        |                      2    99      1.85     91.67
              |
    11        |                      2   101      1.85     93.52
              |
    12        |                      1   102      0.93     94.44
              |
    15        |                      1   103      0.93     95.37
              |
    17        |                      2   105      1.85     97.22
              |
    18        |                      1   106      0.93     98.15
              |
    22        |                      1   107      0.93     99.07
              |
    23        |                      1   108      0.93    100.00
              |
              ----+---+---+---+--
                 20  40  60  80

                  FREQUENCY
```

INFANT YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

DIA_YDA	DIARRHEA DAYS PER YEAR (ADJ)	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0	******************************	75	75	69.44	69.44
2		1	76	0.93	70.37
3		1	77	0.93	71.30
7		1	78	0.93	72.22
8		1	79	0.93	73.15
11		1	80	0.93	74.07
12	*	2	82	1.85	75.93
13	*	3	85	2.78	78.70
14	*	2	87	1.85	80.56
16	*	2	89	1.85	82.41
17		1	90	0.93	83.33
18		1	91	0.93	84.26
20		1	92	0.93	85.19
24	*	2	94	1.85	87.04
25		1	95	0.93	87.96
26		1	96	0.93	88.89
28		1	97	0.93	89.81
32		1	98	0.93	90.74
33		1	99	0.93	91.67
36		1	100	0.93	92.59
39		1	101	0.93	93.52
40		1	102	0.93	94.44
41	*	2	104	1.85	96.30
43		1	105	0.93	97.22
52		1	106	0.93	98.15
60		1	107	0.93	99.07
77		1	108	0.93	100.00

```
----+---+---+---+---+---+---+--
   10  20  30  40  50  60  70
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FREQUENCY

INFANT YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
UR_YDA  U RESP DAYS PER YR (ADJ)  FREQ  CUM.   PERCENT    CUM.
                                        FREQ             PERCENT
             |
       0     |********************  99     99   91.67     91.67
             |
       2     |                       1    100    0.93     92.59
             |
       9     |                       2    102    1.85     94.44
             |
      16     |                       2    104    1.85     96.30
             |
      18     |                       1    105    0.93     97.22
             |
      22     |                       1    106    0.93     98.15
             |
      24     |                       1    107    0.93     99.07
             |
      25     |                       1    108    0.93    100.00
             |
             ----+---+---+---+---+
                20  40  60  80  100

                   FREQUENCY
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INFANT YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

'R_YDA	L. RESPIR DAYS PER YEAR (ADJ)	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0	*************************************	73	73	67.59	67.59
5	*	2	75	1.85	69.44
7	*	2	77	1.85	71.30
8	*	1	78	0.93	72.22
10	*	1	79	0.93	73.15
11	*	2	81	1.85	75.00
12	*	2	83	1.85	76.85
14	*	2	85	1.85	78.70
15	*	1	86	0.93	79.63
16	*	1	87	0.93	80.56
17	*	1	88	0.93	81.48
.8	*	1	89	0.93	82.41
19	*	2	91	1.85	84.26
20	*	2	93	1.85	86.11
21	*	2	95	1.85	87.96
23	*	1	96	0.93	88.89
27	*	2	98	1.85	90.74
29	*	1	99	0.93	91.67
33	*	2	101	1.85	93.52
34	*	2	103	1.85	95.37
39	*	1	104	0.93	96.30
41	*	1	105	0.93	97.22
48	*	1	106	0.93	98.15
50	*	1	107	0.93	99.07
66	*	1	108	0.93	100.00

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-----+-----+-----+-----+-----+-----+-----+--
    10    20    30    40    50    60    70
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FREQUENCY

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                    INFANT YEARLY MORBIDITY (ADJUSTED)

                          FREQUENCY BAR CHART

NYA_LR   EPISODES OF L. RESP PER YR (ADJ)       FREQ  CUM.   PERCENT    CUM.
                                                      FREQ            PERCENT
         |
     0   |*************************************  73     73    67.59     67.59
         |
     2   |********                                16     89    14.81     82.41
         |
     3   |*****                                    9     98     8.33     90.74
         |
     4   |***                                      5    103     4.63     95.37
         |
     5   |*                                        2    105     1.85     97.22
         |
     6   |*                                        2    107     1.85     99.07
         |
     7   |*                                        1    108     0.93    100.00
         |
        -----+----+----+----+----+----+----+--
            10   20   30   40   50   60   70

                     FREQUENCY
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Toddler Morbidity by Month

VARIABLE	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
MONTH OF AGE=18									
ILLDAYS	102	2.46033733	4.54015895	0	30.00000000	0.44954272	250.95440815	20.61304328	184.534
DIADAYS	102	1.10180191	3.16556164	0	17.72727273	0.31343731	112.38379473	10.02078048	287.308
FEVDAYS	102	0.37929044	1.10061442	0	5.71428571	0.10397707	38.68762488	1.21135209	290.177
URDAYS	102	0.09612936	0.63719695	0	5.71428571	0.06309190	9.80519481	0.40601995	662.854
LRDAYS	102	0.85526466	2.26968086	0	11.05263158	0.22473189	87.23699560	5.15145121	265.378
NILL	102	0.69791478	2.99854202	0	30.00000000	0.29689990	71.18730739	8.99125427	429.643
NDIA	102	0.20844215	0.53479865	0	2.64705882	0.05295296	21.26109931	0.28600960	256.569
NFEV	102	0.11004784	0.28556017	0	1.36363636	0.02827467	11.22487929	0.08154461	259.487
NUR	102	0.02037179	0.11763449	0	0.71428571	0.01164755	2.07792208	0.01383787	577.438
NLR	102	0.14027286	0.40649959	0	3.00000000	0.04024946	14.30783167	0.16524192	289.792
MONTH OF AGE=19									
ILLDAYS	114	0.93571471	2.39761658	0	10.90909091	0.22455737	106.67147638	5.74856528	256.234
DIADAYS	114	0.42379863	1.98266136	0	14.40000000	0.18569325	48.31304348	3.93094609	467.831
FEVDAYS	114	0.26802206	1.19183074	0	7.82608696	0.11162518	30.55451505	1.42046051	444.676
URDAYS	114	0.11403509	0.85970536	0	7.00000000	0.08051878	13.00000000	0.73909331	753.895
LRDAYS	114	0.28222849	1.32201830	0	10.90909091	0.12381836	32.17404817	1.74773239	468.421
NILL	114	0.21034618	0.48022570	0	2.30769231	0.04497726	23.97946435	0.23061672	228.303
NDIA	114	0.08688024	0.38833467	0	2.40000000	0.03637087	9.90434783	0.15080381	446.977
NFEV	114	0.06984686	0.27615965	0	1.30434783	0.02586472	7.96254181	0.07626415	395.379
NUR	114	0.01754386	0.13186584	0	1.00000000	0.01235037	2.00000000	0.01738860	751.635
NLR	114	0.08446135	0.29165668	0	1.36363636	0.02731615	9.62859363	0.08506362	345.314
MONTH OF AGE=20									
ILLDAYS	120	3.21384731	22.02511599	0	240.00000000	2.01060881	385.66167740	485.10573428	685.319
DIADAYS	120	1.67581312	13.76276137	0	150.00000000	1.25636248	201.09757484	189.41360040	821.259
FEVDAYS	120	0.42124542	1.87469979	0	12.85714286	0.17113589	50.54945055	3.51449929	445.037
URDAYS	120	2.10256410	21.91941550	0	240.00000000	2.00095972	252.30769231	480.46077603	1042.509
LRDAYS	120	0.55021368	2.29378556	0	13.84615385	0.20939302	66.02564103	5.26145220	416.890
NILL	120	0.47001144	2.76594074	0	30.00000000	0.25249469	56.40137257	7.65042816	588.484
NDIA	120	0.34568808	2.75388823	0	30.00000000	0.25139445	41.48256915	7.58390039	796.640
NFEV	120	0.06446836	0.26257916	0	1.42857143	0.02397009	7.73626374	0.06894782	407.296
NUR	120	0.26794872	2.74047745	0	30.00000000	0.25017022	32.15384615	7.51021663	1022.762
NLR	120	0.09099003	0.30531101	0	1.42857143	0.02787095	10.91880342	0.09321482	335.543
MONTH OF AGE=21									
ILLDAYS	122	4.01725819	27.24538524	0	300.00000000	2.46668128	490.10549920	742.31101708	678.208
DIADAYS	122	0.73369346	2.95048081	0	26.08695652	0.26712398	89.51060184	8.70533701	402.141
FEVDAYS	122	2.68781183	27.16584258	0	300.00000000	2.45947982	327.91304348	737.98300290	1010.705
URDAYS	122	1.95901639	19.05381571	0	210.00000000	1.72505142	239.00000000	363.04789324	972.622
LRDAYS	122	0.26889015	1.20524506	0	6.66666667	0.10911776	32.80459770	1.45261564	448.230
NILL	122	0.51324150	2.74546948	0	30.00000000	0.24856313	62.61546283	7.53760265	534.927
NDIA	122	0.13993238	0.47696850	0	3.00000000	0.04318270	17.07174984	0.22749895	340.856
NFEV	122	0.29347826	2.72187980	0	30.00000000	0.24642733	35.80434783	7.40862418	927.455
NUR	122	0.27868852	2.72200186	0	30.00000000	0.24643847	34.00000000	7.40929413	976.718
NLR	122	0.06149784	0.27536532	0	1.50000000	0.02493040	7.50273673	0.07582606	447.764

VARIABLE	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
MONTH OF AGE=22									
ILLDAYS	130	0.98060542	2.74183158	0	16.66666667	0.24047454	127.47870434	7.51764043	279.606
DIADAYS	130	0.48748474	1.84265595	0	12.22222222	0.16161162	63.37301587	3.39538093	377.993
FEVDAYS	130	0.18807018	1.35288616	0	13.33333333	0.11865597	24.44912281	1.83030096	719.352
URDAYS	130	0.07342657	0.83719175	0	9.54545455	0.07342657	9.54545455	0.70089002	1140.175
LRDAYS	130	0.11982906	0.81965750	0	7.77777778	0.07188372	15.57777778	0.67183842	684.022
NILL	130	0.15775125	0.38702326	0	1.57894737	0.03394419	20.50766310	0.14978700	245.338
NDIA	130	0.08742369	0.31464853	0	2.00000000	0.02759650	11.36507937	0.09900370	359.912
NFEV	130	0.02992353	0.19789099	0	1.57894737	0.01735531	3.89005848	0.03915689	661.289
NUR	130	0.01048951	0.11959882	0	1.36363636	0.01048951	1.36363636	0.01430388	1140.175
NLR	130	0.03316239	0.18742649	0	1.20000000	0.01643839	4.31111111	0.03512869	565.178
MONTH OF AGE=23									
ILLDAYS	135	1.16352376	2.71466946	0	16.36363636	0.23364155	157.07570782	7.36943028	233.314
DIADAYS	135	0.20000000	1.02796713	0	6.00000000	0.08847332	27.00000000	1.05671642	513.984
FEVDAYS	135	0.05047619	0.41382520	0	3.60000000	0.03561640	6.81428571	0.17125129	819.842
URDAYS	135	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
LRDAYS	135	0.39794407	1.59363938	0	10.34482759	0.13715864	53.72244996	2.53968647	400.468
NILL	135	0.23310719	0.51659944	0	2.72727273	0.04446180	31.46946999	0.26687498	221.615
NDIA	135	0.03703704	0.18955594	0	1.00000000	0.01631438	5.00000000	0.03593145	511.801
NFEV	135	0.01682540	0.13794173	0	1.20000000	0.01187213	2.27142857	0.01902792	819.842
NUR	135	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
NLR	135	0.08448749	0.33436791	0	2.30769231	0.02877781	11.40581143	0.11180190	395.760
MONTH OF AGE=24									
ILLDAYS	132	1.52249413	3.56758632	0	21.00000000	0.31051853	200.96922522	12.72767217	234.325
DIADAYS	132	0.19347319	1.24051066	0	10.00000000	0.10797259	25.53846154	1.53886669	641.180
FEVDAYS	132	0.06439394	0.65790932	0	7.50000000	0.05726366	8.50000000	0.43284467	1021.694
URDAYS	132	0.12310606	0.99928229	0	8.75000000	0.08697636	16.25000000	0.99856509	811.725
LRDAYS	132	0.28021558	1.47949099	0	10.90909091	0.12877316	36.98845599	2.18889359	527.983
NILL	132	0.27973426	0.57611095	0	2.72727273	0.05014402	36.92492230	0.33190383	205.949
NDIA	132	0.03263403	0.18579609	0	1.15384615	0.01617147	4.30769231	0.03452019	569.332
NFEV	132	0.01893939	0.15635767	0	1.50000000	0.01360919	2.50000000	0.02444772	825.569
NUR	132	0.01893939	0.15327597	0	1.25000000	0.01334096	2.50000000	0.02349352	809.297
NLR	132	0.06262845	0.31738019	0	2.72727273	0.02762440	8.26695527	0.10073018	506.767
MONTH OF AGE=25									
ILLDAYS	132	1.65146979	3.69075182	0	20.00000000	0.32123871	217.99401215	13.62164903	223.483
DIADAYS	132	0.36279912	1.56328422	0	12.00000000	0.13606643	47.88948383	2.44385756	430.895
FEVDAYS	132	0.16121809	0.88547237	0	7.14285714	0.07707048	21.28078818	0.78406132	549.239
URDAYS	132	0.03367003	0.38683924	0	4.44444444	0.03367003	4.44444444	0.14964459	1148.913
LRDAYS	132	0.58153722	2.45209197	0	17.50000000	0.21342721	76.76291342	6.01275504	421.657
NILL	132	0.31778650	0.60166714	0	2.50000000	0.05236840	41.94781822	0.36200335	189.331
NDIA	132	0.08265348	0.31824502	0	2.00000000	0.02769967	10.91025916	0.10127989	385.035
NFEV	132	0.04328071	0.22148365	0	1.42857143	0.01927768	5.71305419	0.04905501	511.738
NUR	132	0.00841751	0.09670981	0	1.11111111	0.00841751	1.11111111	0.00935279	1148.913
NLR	132	0.08659406	0.34202488	0	2.50000000	0.02976945	11.43041620	0.11698102	394.975

5

VARIABLE	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
MONTH OF AGE=26									
ILLDAYS	130	2.27164067	10.88273786	0	120.00000000	0.95447925	295.31328663	118.43398338	479.070
DIADAYS	130	0.16153846	0.87872217	0	6.00000000	0.07706903	21.00000000	0.77215265	543.971
FEVDAYS	130	0.24227479	1.20970445	0	7.89473684	0.10609810	31.49572206	1.46338485	499.311
URDAYS	130	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
LRDAYS	130	1.54226984	10.74827049	0	120.00000000	0.94268568	200.49507887	115.52531859	696.912
NILL	130	0.47599661	2.66147531	0	30.00000000	0.23342683	61.87955902	7.08345084	559.137
NDIA	130	0.03846154	0.19305163	0	1.00000000	0.01693175	5.00000000	0.03726893	501.934
NFEV	130	0.05142199	0.23898104	0	1.57894737	0.02096002	6.68485870	0.05711194	464.745
NUR	130	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
NLR	130	0.32133968	2.64329533	0	30.00000000	0.23183234	41.78065880	6.98701018	822.458
MONTH OF AGE=27									
ILLDAYS	129	1.55438467	3.91960637	0	20.00000000	0.34510210	200.51562237	15.36331411	252.165
DIADAYS	129	0.32438879	1.87677335	0	14.00000000	0.16524068	41.84615385	3.52227822	578.557
FEVDAYS	129	0.15065723	1.07149391	0	10.43478261	0.09433978	19.43478261	1.14809920	711.213
URDAYS	129	0.08660786	0.69476978	0	6.00000000	0.06117107	11.17241379	0.48270504	802.202
LRDAYS	129	0.63907212	2.93468705	0	20.00000000	0.25838479	82.44030366	8.61238809	459.211
NILL	129	0.26504270	0.63442026	0	3.75000000	0.05585759	34.19050857	0.40248907	239.365
NDIA	129	0.04114490	0.20623745	0	1.15384615	0.01815820	5.30769231	0.04253389	501.247
NFEV	129	0.02561510	0.16809321	0	1.30434783	0.01479978	3.30434783	0.02825533	656.227
NUR	129	0.01577118	0.12618403	0	1.03448276	0.01110988	2.03448276	0.01592241	800.092
NLR	129	0.12914346	0.53470282	0	3.75000000	0.04707796	16.65950656	0.28590711	414.038
MONTH OF AGE=28									
ILLDAYS	127	1.19654295	3.20877518	0	15.51724138	0.28473275	151.96095524	10.29623815	268.170
DIADAYS	127	0.09109422	0.70977725	0	7.50000000	0.06298255	11.56896552	0.50378375	779.168
FEVDAYS	127	0.29626840	1.39198447	0	8.00000000	0.12351865	37.62608696	1.93762077	469.839
URDAYS	127	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
LRDAYS	127	0.32566147	1.58070722	0	11.42857143	0.14026508	41.35900621	2.49863531	485.384
NILL	127	0.17668374	0.41487982	0	1.42857143	0.03681463	22.43883448	0.17212527	234.815
NDIA	127	0.02445599	0.15791689	0	1.07142857	0.01401286	3.10591133	0.02493774	645.719
NFEV	127	0.05121534	0.23245073	0	1.30434783	0.02062667	6.50434783	0.05403334	453.869
NUR	127	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
NLR	127	0.06403873	0.26876138	0	1.42857143	0.02384872	8.13291925	0.07223268	419.686
MONTH OF AGE=29									
ILLDAYS	122	1.47249855	3.58472293	0	18.38709677	0.32454556	179.64482315	12.85023779	243.445
DIADAYS	122	0.32390270	1.82569898	0	13.65636364	0.16529102	39.51612903	3.33317675	563.657
FEVDAYS	122	0.14472415	0.85211766	0	5.80645161	0.07714711	17.65634590	0.72610451	588.787
URDAYS	122	0.27418471	1.70712559	0	15.88235294	0.15455589	33.45053476	2.91427779	622.619
LRDAYS	122	0.68081642	2.73007411	0	17.69230769	0.24716930	83.05960311	7.45330465	401.000
NILL	122	0.28805668	0.73217243	0	6.00000000	0.06628778	35.14291500	0.53607647	254.177
NDIA	122	0.06020143	0.33195872	0	2.72727273	0.03005413	7.34457478	0.11019659	551.413
NFEV	122	0.03302502	0.18518962	0	1.36363636	0.01676628	4.02905272	0.03429520	560.755
NUR	122	0.03593462	0.20929695	0	1.76470588	0.01894886	4.38402406	0.04380521	582.438
NLR	122	0.13323198	0.61363455	0	6.00000000	0.05555586	16.25430096	0.37654736	460.576

96

```
1         SAS(R)       OS SAS 5.08          VS2/MVS JOB THORB    STEP SAS                                15:33 FRIDAY, OCTOBER 24, 1986
NOTE: COPYRIGHT (C) 1984 SAS INSTITUTE INC., CARY, N.C.  27511, U.S.A.
NOTE: THE JOB THORB HAS BEEN RUN UNDER RELEASE 5.08 OF SAS AT THE UNIVERSITY OF CONNECTICUT COMPUTER CENTER (06066006).

NOTE: CPUID   VERSION = FF  SERIAL = 124257  MODEL = 3084

NOTE: SAS OPTIONS SPECIFIED ARE:
       SORT=1

1          *OPTIONS OBS=10;
2
3          DATA TABLE;
4            SET DISK1.MORB;
                       341
5
6            ARRAY ADJ  10  ILL_DAYS DIA_DAYS FEV_DAYS UR_DAYS LR_DAYS
7                N_ILL N_DIA N_FEV N_UR N_LR;
8
9            ARRAY AD2  10
10              ILLDAYS DIADAYS FEVDAYS URDAYS LRDAYS
11               NILL NDIA NFEV NUR NLR;
12
13           DO I=1 TO 10;
14         AD2 I =(ADJ I /M_DAYOBS)*30;***ADJUSTS FOR NUMBER OF DAYS OBSERVED***;
15              END;                         **ESTIMATED DAYS/MONTH ILL, ETC****;
16
17


WARNING 341: YOUR SERVICE AGREEMENT HAS EXPIRED.  PLEASE
      CONTACT YOUR COMPUTING INSTALLATION'S USER SERVICE
      PERSONNEL OR INSTALLATION SAS REPRESENTATIVE.

NOTE: MISSING VALUES WERE GENERATED AS A RESULT OF PERFORMING
      AN OPERATION ON MISSING VALUES.
      EACH PLACE IS GIVEN BY: (NUMBER OF TIMES) AT (LINE):(COLUMN).

      2810 AT 14:8

NOTE: DATA SET WORK.TABLE HAS 1776 OBSERVATIONS AND 34 VARIABLES. 174 OBS/TRK.
NOTE: THE DATA STATEMENT USED 0.44 SECONDS.

18         PROC SORT DATA=TABLE;
19           BY M_AGE;
20

NOTE: DATA SET WORK.TABLE HAS 1776 OBSERVATIONS AND 34 VARIABLES. 174 OBS/TRK.
NOTE: THE PROCEDURE SORT USED 0.38 SECONDS.

21         PROC MEANS DATA=TABLE;
22           VAR ILLDAYS DIADAYS FEVDAYS URDAYS LRDAYS
23               NILL NDIA NFEV NUR NLR;
24                      BY M_AGE;
25
26
NOTE: THE PROCEDURE MEANS USED 0.53 SECONDS AND PRINTED PAGES 1 TO 3.

ERROR: ERRORS ON PAGES 1.

NOTE: SAS INSTITUTE INC.
      SAS CIRCLE
      PO BOX 8000
      CARY, N.C.  27511-8000
```

TODDLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NYA_ILL   EPISODES OF ILLNESS PER YR (ADJ) FREQ   CUM.    PERCENT     CUM.
                                                  FREQ               PERCENT
          |
     0    |********************************  32     32     23.36      23.36
          |
     1    |***************                   15     47     10.95      34.31
          |
     2    |******************                18     65     13.14      47.45
          |
     3    |*************************         25     90     18.25      65.69
          |
     4    |*******************               19    109     13.87      79.56
          |
     5    |**********                        10    119      7.30      86.86
          |
     6    |*********                          9    128      6.57      93.43
          |
     7    |****                               4    132      2.92      96.35
          |
     8    |*                                  1    133      0.73      97.08
          |
     9    |*                                  1    134      0.73      97.81
          |
    10    |**                                 2    136      1.46      99.27
          |
    12    |*                                  1    137      0.73     100.00
          |
          -----+----+----+----+----+----+--
               5   10   15   20   25   30

                     FREQUENCY
```

TODDLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NYA_FEV   EPISODES OF FEVER PER YR (ADJ)        FREQ  CUM.   PERCENT    CUM.
                                                      FREQ            PERCENT
           |
     0     |************************************  90    90    65.69    65.69
           |
     1     |***********                           27   117    19.71    85.40
           |
     2     |*****                                 13   130     9.49    94.89
           |
     3     |**                                     5   135     3.65    98.54
           |
     4     |*                                      2   137     1.46   100.00
           |
           ----+---+---+---+---+---+---+---+---+
              10  20  30  40  50  60  70  80  90

                         FREQUENCY
```

```
                    TODDLER YEARLY MORBIDITY (ADJUSTED)

                             FREQUENCY BAR CHART

NYA_DIA   EPISODES OF DIARRH PER YR (ADJ)  FREQ  CUM.   PERCENT    CUM.
                                                 FREQ             PERCENT
          |
     0    |********************************  79    79    57.66     57.66
          |
     1    |***********                       27   106    19.71     77.37
          |
     2    |******                            15   121    10.95     88.32
          |
     3    |****                              10   131     7.30     95.62
          |
     4    |**                                 5   136     3.65     99.27
          |
     6    |                                   1   137     0.73    100.00
          |
          ----+---+---+---+---+---+---+---+
             10  20  30  40  50  60  70  80

                      FREQUENCY
```

100

```
                    TODDLER YEARLY MORBIDITY (ADJUSTED)

                             FREQUENCY BAR CHART

NYA_UR  EPI OF U RESP PER YEAR (ADJ)   FREQ  CUM.   PERCENT    CUM.
                                             FREQ            PERCENT
             |
      0      |************************ 121   121     88.32     88.32
             |
      1      |**                        10   131      7.30     95.62
             |
      2      |*                          4   135      2.92     98.54
             |
      3      |                           2   137      1.46    100.00
             |
             ----+---+---+---+---+---+
                20  40  60  80 100 120

                        FREQUENCY
```

```
                TODDLER YEARLY MORBIDITY (ADJUSTED)

                        FREQUENCY BAR CHART

NYA_LR  EPI OF L RESP PER YEAR (ADJ)     FREQ  CUM.   PERCENT    CUM.
                                             FREQ             PERCENT
         |
    0    |******************************  75    75    54.74    54.74
         |
    1    |**********                      26   101    18.98    73.72
         |
    2    |**********                      24   125    17.52    91.24
         |
    3    |***                              7   132     5.11    96.35
         |
    4    |*                                2   134     1.46    97.81
         |
    5    |*                                2   136     1.46    99.27
         |
    8    |                                 1   137     0.73   100.00
         |
        ----+---+---+---+---+---+---+--
           10  20  30  40  50  60  70

                  FREQUENCY
```

TODDLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

ILL_YDA	ILL DAYS PER YEAR (ADJ)	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0	********************************	32	32	23.36	23.36
2	**	2	34	1.46	24.82
5	**	2	36	1.46	26.28
6	***	3	39	2.19	28.47
7	********	8	47	5.84	34.31
8	**	2	49	1.46	35.77
9	*	1	50	0.73	36.50
10	*****	5	55	3.65	40.15
11	**	2	57	1.46	41.61
12	****	4	61	2.92	44.53
13	**	2	63	1.46	45.99
14	**	2	65	1.46	47.45
15	**	2	67	1.46	48.91
16	****	4	71	2.92	51.82
17	***	3	74	2.19	54.01
18	********	8	82	5.84	59.85
19	****	4	86	2.92	62.77
20	*****	5	91	3.65	66.42
21	****	4	95	2.92	69.34
22	***	3	98	2.19	71.53
23	*	1	99	0.73	72.26
24	***	3	102	2.19	74.45
25	*	1	103	0.73	75.18
26	*	1	104	0.73	75.91
27	**	2	106	1.46	77.37
28	**	2	108	1.46	78.83
29	**	2	110	1.46	80.29
30	*	1	111	0.73	81.02
31	*	1	112	0.73	81.75
33	*	1	113	0.73	82.48
36	*	1	114	0.73	83.21
37	*****	5	119	3.65	86.86
39	****	4	123	2.92	89.78
44	**	2	125	1.46	91.24
46	**	2	127	1.46	92.70
47	*	1	128	0.73	93.43
48	**	2	130	1.46	94.89
53	*	1	131	0.73	95.62
59	*	1	132	0.73	96.35
60	*	1	133	0.73	97.08
63	*	1	134	0.73	97.81
64	*	1	135	0.73	98.54
77	*	1	136	0.73	99.27
95	*	1	137	0.73	100.00

-----+----+----+----+----+----+--
5 10 15 20 25 30

FREQUENCY

TODDLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
FEV_YDA   FEVER DAYS PER YEAR (ADJ)                  FREQ  CUM.   PERCENT   CUM.
                                                            FREQ             PERCENT
          |
    0     |************************************       90     90    65.69     65.69
          |
    1     |*                                           2     92     1.46     67.15
          |
    3     |**                                          6     98     4.38     71.53
          |
    4     |**                                          4    102     2.92     74.45
          |
    5     |***                                         8    110     5.84     80.29
          |
    6     |**                                          4    114     2.92     83.21
          |
    7     |*                                           3    117     2.19     85.40
          |
    8     |*                                           2    119     1.46     86.86
          |
    9     |**                                          4    123     2.92     89.78
          |
   10     |*                                           2    125     1.46     91.24
          |
   11     |*                                           2    127     1.46     92.70
          |
   12     |                                            1    128     0.73     93.43
          |
   13     |*                                           2    130     1.46     94.89
          |
   14     |*                                           2    132     1.46     96.35
          |
   17     |                                            1    133     0.73     97.08
          |
   18     |                                            1    134     0.73     97.81
          |
   20     |                                            1    135     0.73     98.54
          |
   21     |*                                           2    137     1.46    100.00
          |
          ----+---+---+---+---+---+---+---+---+
             10  20  30  40  50  60  70  80  90

                       FREQUENCY
```

TODDLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

DIA_YDA	DIARRHEA DAYS PER YEAR (ADJ)	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0	*******************************	79	79	57.66	57.66
1		1	80	0.73	58.39
2	*	2	82	1.46	59.85
3	**	4	86	2.92	62.77
4	*	3	89	2.19	64.96
5	**	5	94	3.65	68.61
6	*	3	97	2.19	70.80
7	**	4	101	2.92	73.72
8	**	4	105	2.92	76.64
9	*	3	108	2.19	78.83
10	*	2	110	1.46	80.29
11	*	3	113	2.19	82.48
12	*	3	116	2.19	84.67
13	*	3	119	2.19	86.86
14	*	2	121	1.46	88.32
16		1	122	0.73	89.05
17		1	123	0.73	89.78
18	**	4	127	2.92	92.70
20		1	128	0.73	93.43
21		1	129	0.73	94.16
22		1	130	0.73	94.89
23		1	131	0.73	95.62
27		1	132	0.73	96.35
29		1	133	0.73	97.08
30		1	134	0.73	97.81
32	*	2	136	1.46	99.27
40		1	137	0.73	100.00

```
----+---+---+---+---+---+---+---+
   10  20  30  40  50  60  70  80
```

FREQUENCY

TODDLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
UR_YDA  U. RESP DAYS PER YR (ADJ) FREQ  CUM.   PERCENT    CUM.
                                        FREQ             PERCENT
         |
    0    |************************ 121   121    88.32     88.32
         |
    4    |                           1   122     0.73     89.05
         |
    6    |                           2   124     1.46     90.51
         |
    7    |                           1   125     0.73     91.24
         |
    8    |*                          3   128     2.19     93.43
         |
    9    |                           2   130     1.46     94.89
         |
   10    |                           2   132     1.46     96.35
         |
   11    |                           1   133     0.73     97.08
         |
   12    |                           1   134     0.73     97.81
         |
   15    |                           1   135     0.73     98.54
         |
   21    |                           1   136     0.73     99.27
         |
   30    |                           1   137     0.73    100.00
         |
         ----+---+---+---+---+---+
            20  40  60  80 100 120

              FREQUENCY
```

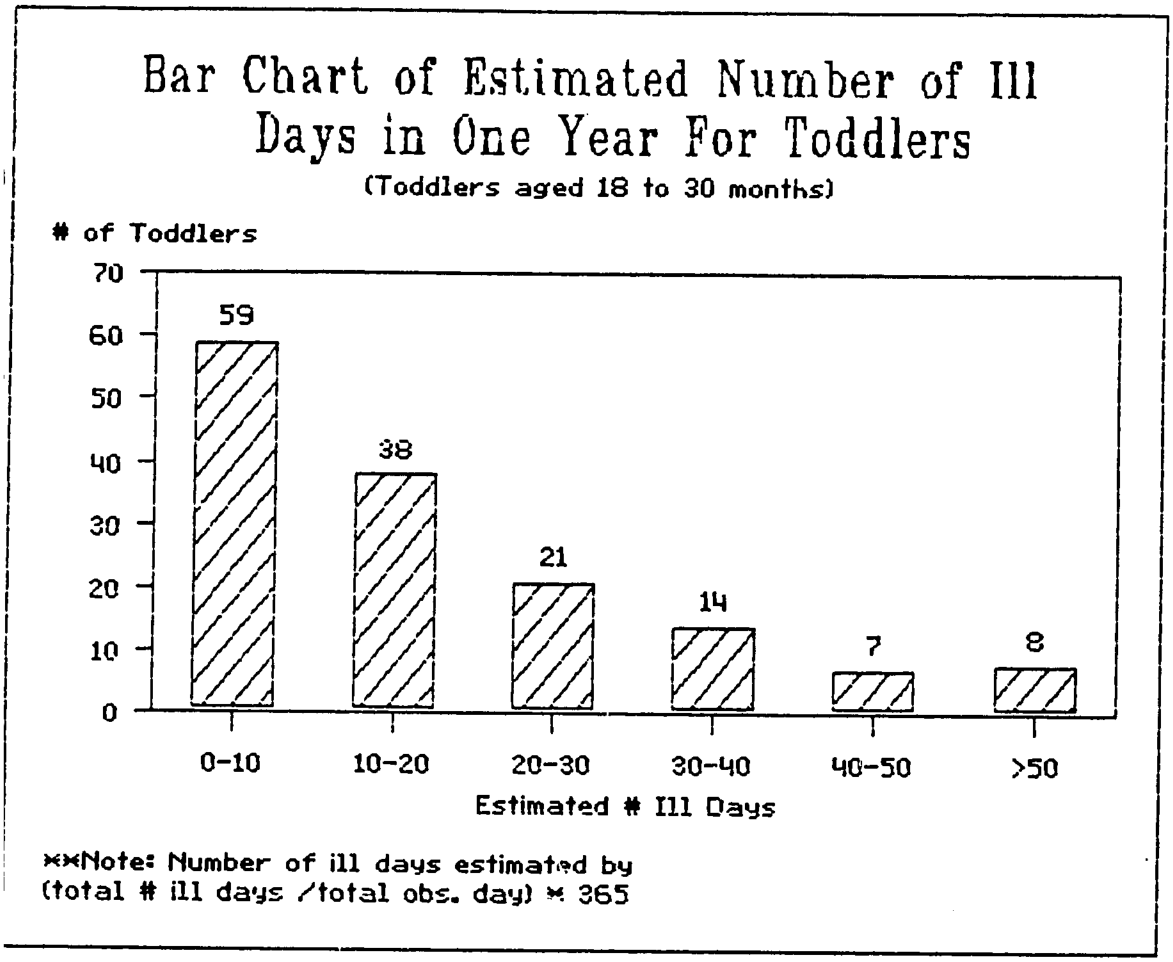
TODDLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

LR_YDA	L. RESPIR DAYS PER YEAR (ADJ)	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0	******************************	75	75	54.74	54.74
2		1	76	0.73	55.47
3		1	77	0.73	56.20
4	**	6	83	4.38	60.58
5	*	3	86	2.19	62.77
6	**	4	90	2.92	65.69
7	***	7	97	5.11	70.80
8	***	8	105	5.84	76.64
9	*	3	108	2.19	78.83
10	**	4	112	2.92	81.75
11	*	3	115	2.19	83.94
12		1	116	0.73	84.67
13	*	3	119	2.19	86.86
16	*	3	122	2.19	89.05
17	*	2	124	1.46	90.51
19	*	3	127	2.19	92.70
21	*	2	129	1.46	94.16
26	*	2	131	1.46	95.62
28		1	132	0.73	96.35
33		1	133	0.73	97.08
37		1	134	0.73	97.81
44		1	135	0.73	98.54
56		1	136	0.73	99.27
78		1	137	0.73	100.00

10 20 30 40 50 60 70

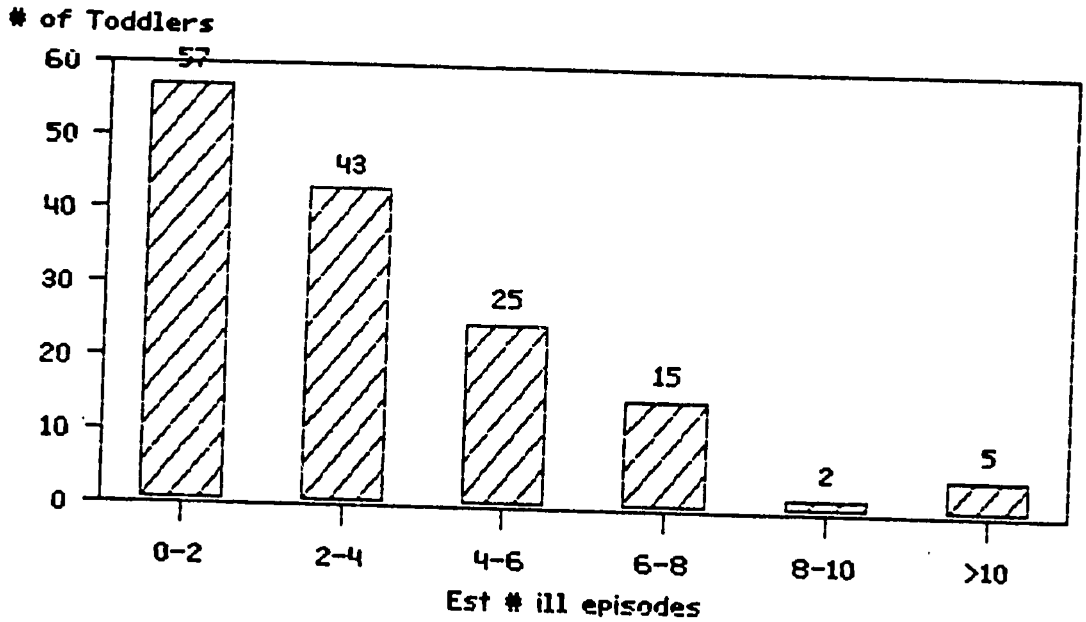
FREQUENCY


Bar Chart of Estimated Number of Ill Days in One Year For Toddlers
(Toddlers aged 18 to 30 months)
# of Toddlers
70
60
50
40
30
20
10
0
59
38
21
14
7
8
0-10
10-20
20-30
30-40
40-50
>50
Estimated # Ill Days
**Note: Number of ill days estimated by
(total # ill days /total obs. day) * 365

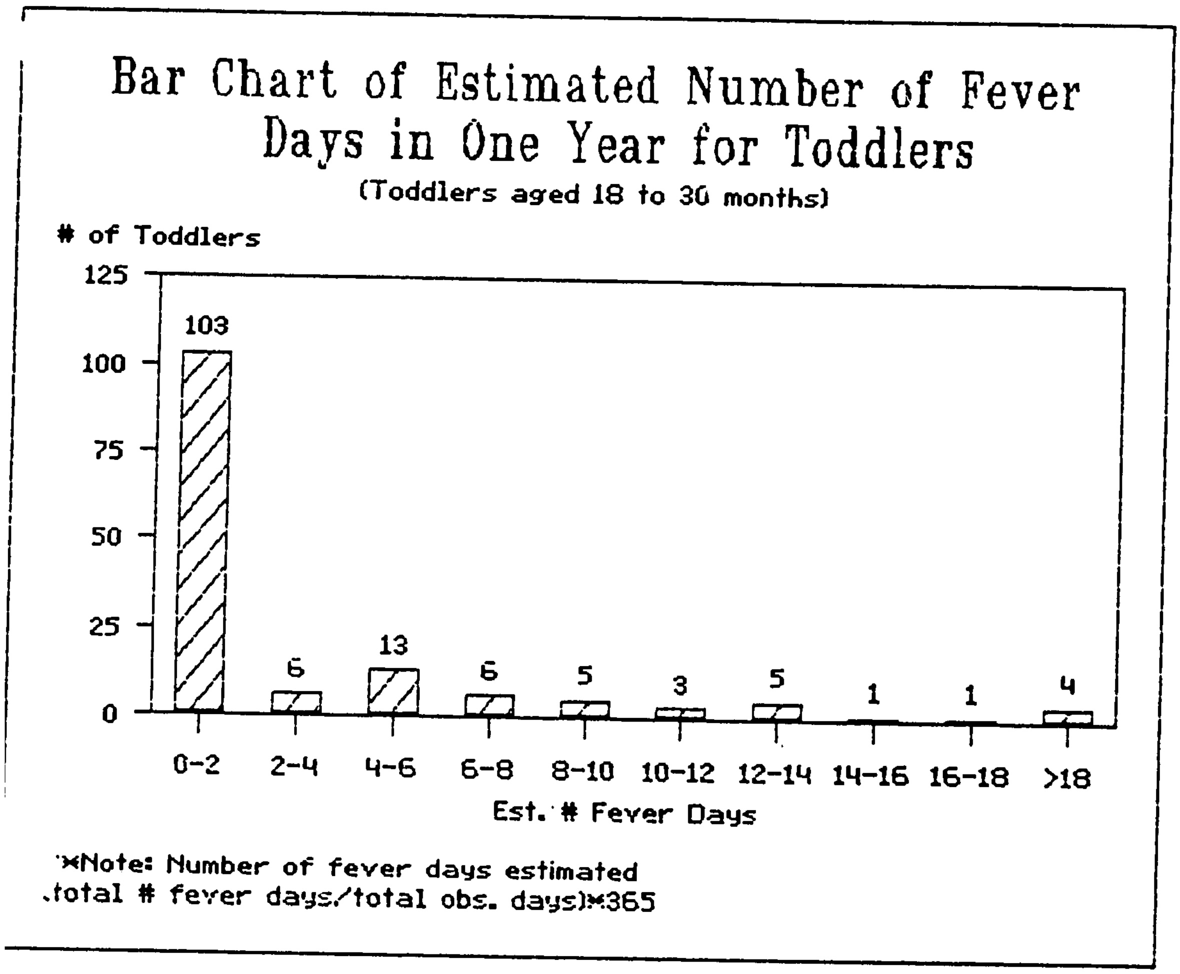
108

Bar Chart of Estimated Number of Illness Episodes in One Year for Toddlers

(Toddlers aged 18 to 30 months)



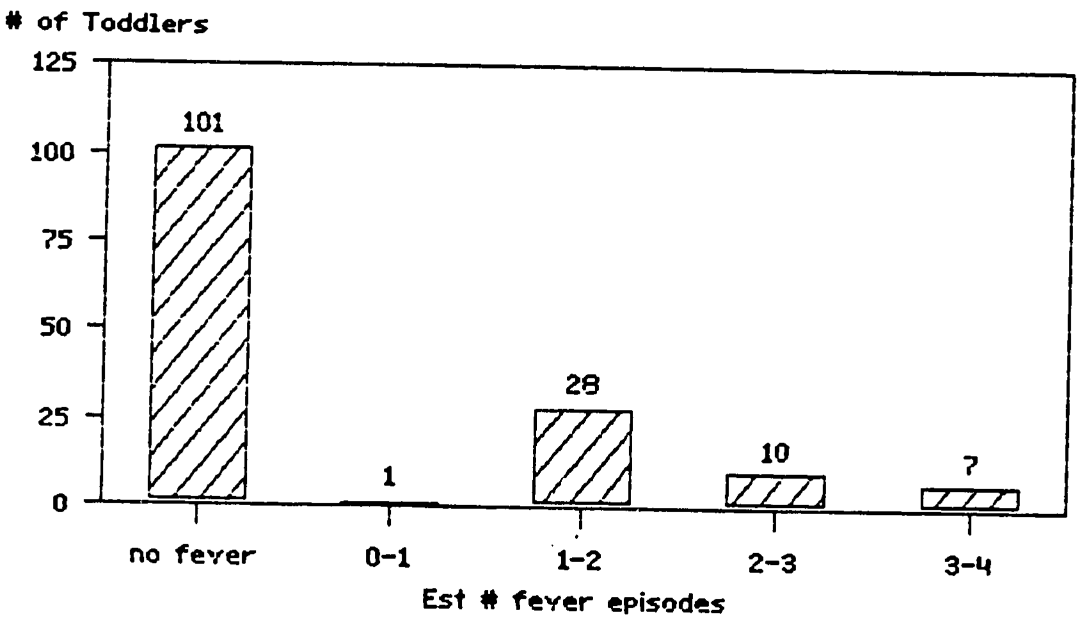
**Note: # of illness episoded estimated
tal # ill epi/total obs. days) * 365


Bar Chart of Estimated Number of Fever Days in One Year for Toddlers
(Toddlers aged 18 to 30 months)
# of Toddlers
125
100
75
50
25
0
103
6
13
6
5
3
5
1
1
4
0-2
2-4
4-6
6-8
8-10
10-12
12-14
14-16
16-18
>18
Est. # Fever Days
*Note: Number of fever days estimated
(total # fever days/total obs. days)*365

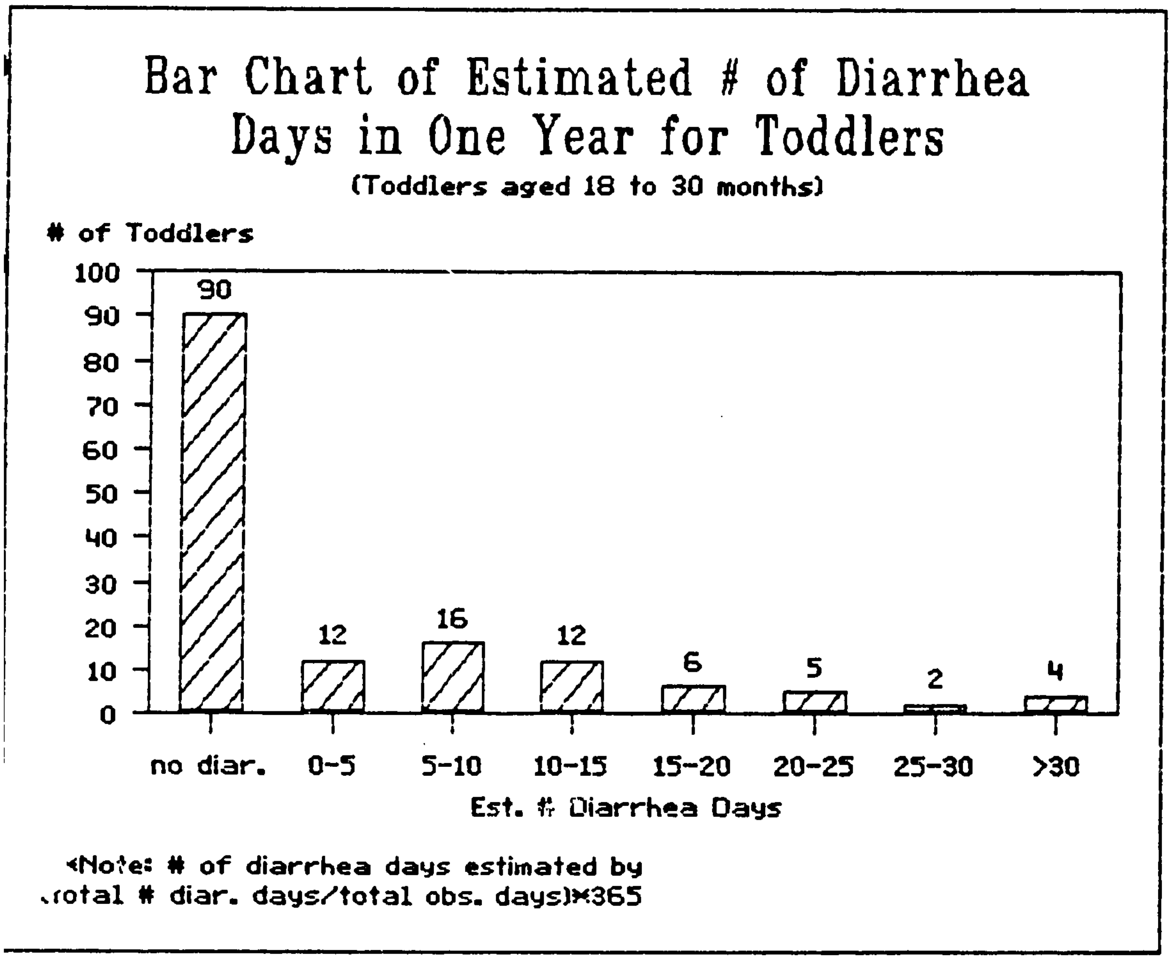
110

Bar Chart of Estimated Number of Fever Episodes in One Year for Toddlers

(Toddlers aged 18 to 30 months)

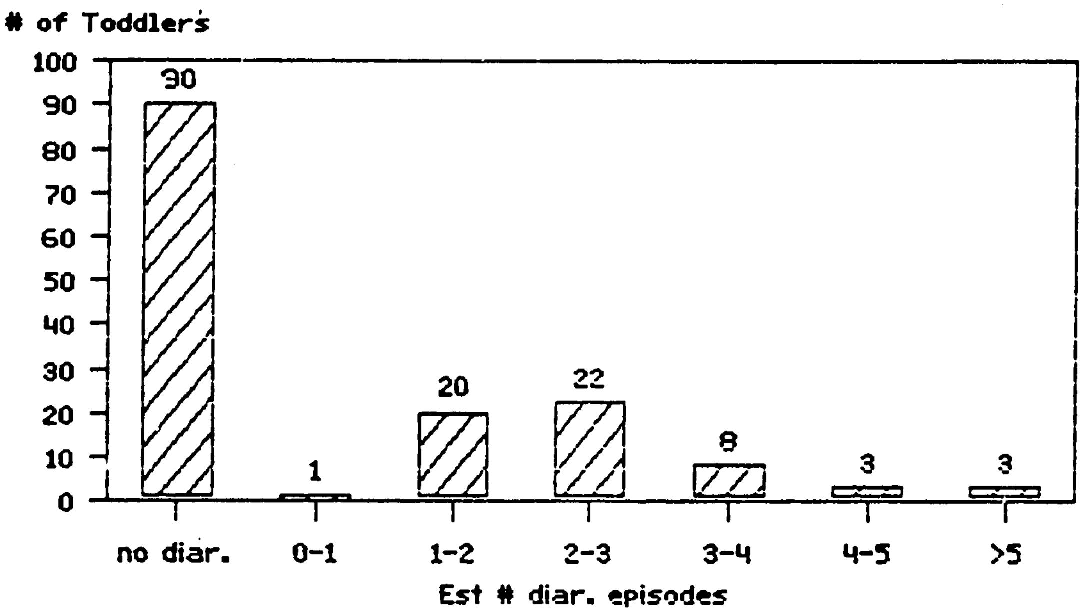


**Note: # of fever episodes estimated by (total fever epi./total obs. days) * 365


Bar Chart of Estimated # of Diarrhea Days in One Year for Toddlers
(Toddlers aged 18 to 30 months)
# of Toddlers
100
90
80
70
60
50
40
30
20
10
0
90
12
16
12
6
5
2
4
no diar.
0-5
5-10
10-15
15-20
20-25
25-30
>30
Est. # Diarrhea Days
*Note: # of diarrhea days estimated by
(total # diar. days/total obs. days)*365

Bar Chart of Estimated # of Diarrhea Episodes in One Year for Toddlers

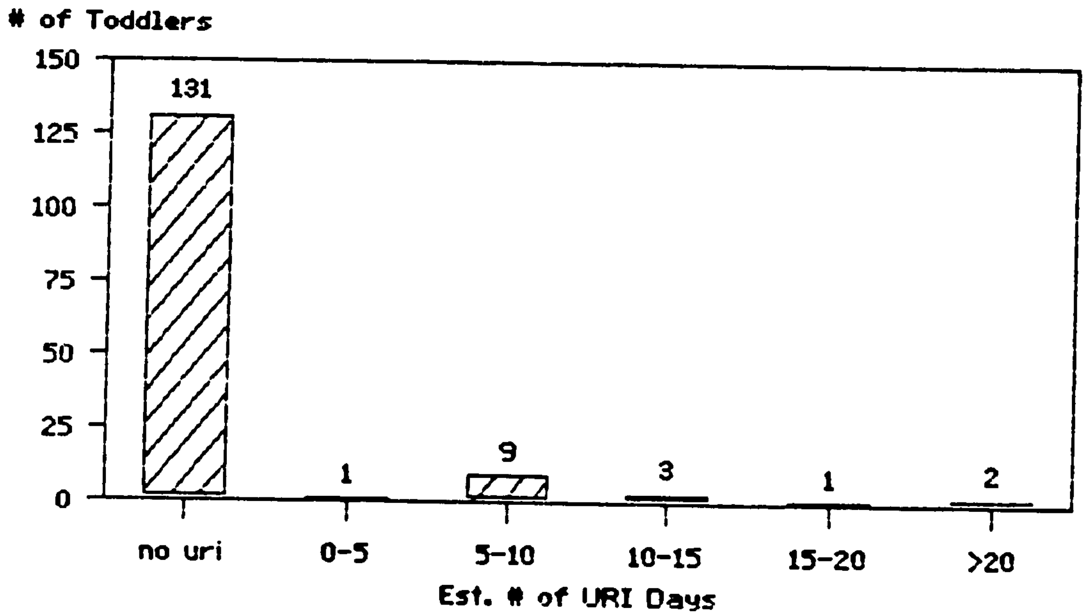
(Toddlers aged 18 to 30 months)



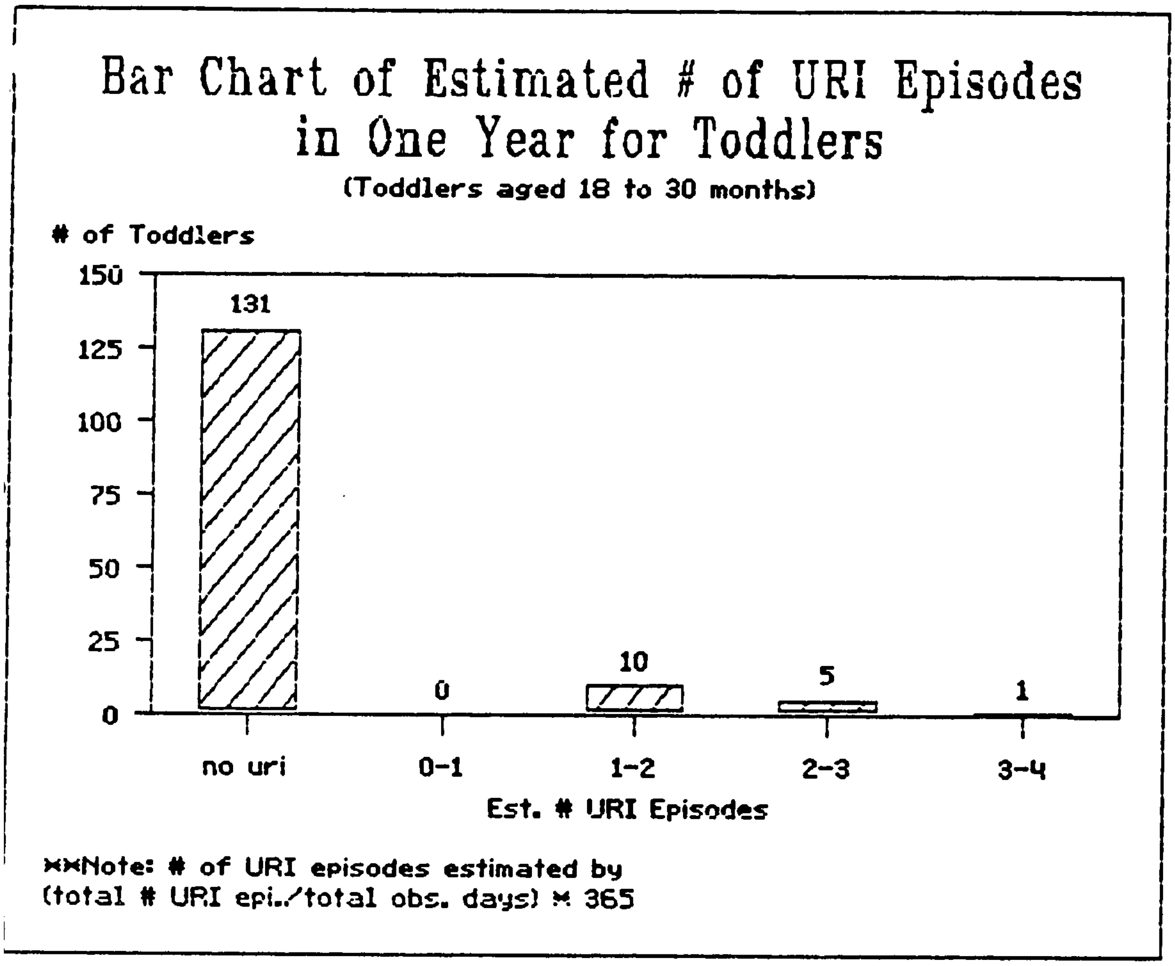
*Note: # of diarrhea episodes estimated
..otal # diar. days/total obs. days)*365

Bar Chart of Estimated # of URI Days in One Year for Toddlers

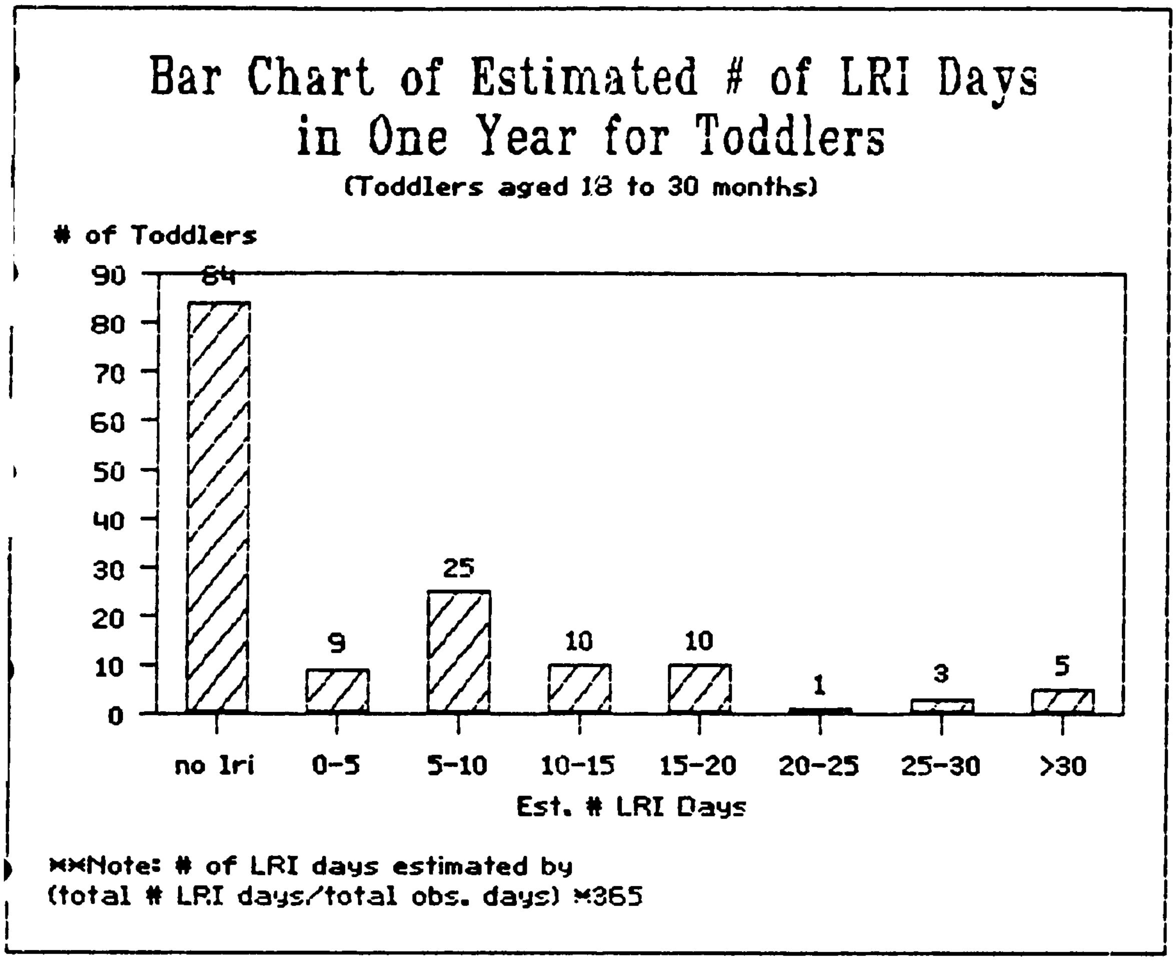
(Toddlers aged 18 to 30 months)



*Note: # of URI days estimates by
(total # uri days/total obs. days) * 365

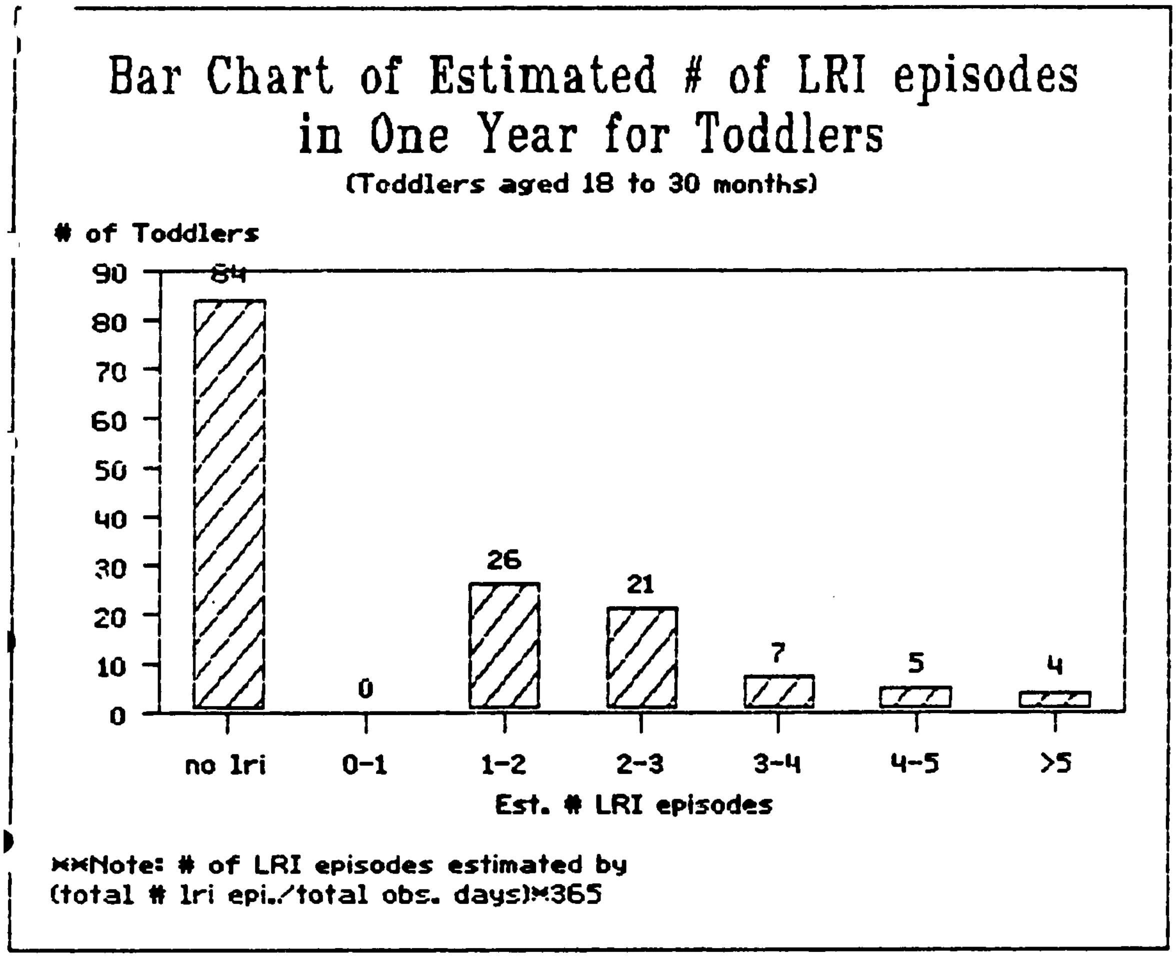

Bar Chart of Estimated # of URI Episodes in One Year for Toddlers
(Toddlers aged 18 to 30 months)
# of Toddlers
150
125
100
75
50
25
0
131
0
10
5
1
no uri
0-1
1-2
2-3
3-4
Est. # URI Episodes
**Note: # of URI episodes estimated by
(total # URI epi./total obs. days) * 365

115



Bar Chart of Estimated # of LRI Days
in One Year for Toddlers
(Toddlers aged 18 to 30 months)
# of Toddlers
90
80
70
60
50
40
30
20
10
0
84
9
25
10
10
1
3
5
no lri
0-5
5-10
10-15
15-20
20-25
25-30
>30
Est. # LRI Days
**Note: # of LRI days estimated by
(total # LRI days/total obs. days) *365

116


Bar Chart of Estimated # of LRI episodes
in One Year for Toddlers
(Toddlers aged 18 to 30 months)
# of Toddlers
90
80
70
60
50
40
30
20
10
0
84
0
26
21
7
5
4
no lri
0-1
1-2
2-3
3-4
4-5
>5
Est. # LRI episodes
**Note: # of LRI episodes estimated by
(total # lri epi./total obs. days)*365

117

SCHOOLERS: ESTIMATED MORBIDITY DAYS/MONTH BY MONTH OF AGE

15:02 THURSDAY, OCTOBER 30, 1986

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
AGE IN YEARS.MONTHS=7.1										
ILLDAYS	DAYS ILL/MONTH	41	0.15906681	1.01852453	0	6.52173913	0.15906681	6.52173913	1.03739223	640.312
DIADAYS	DIAR DAYS	41	0.15906681	1.01852453	0	6.52173913	0.15906681	6.52173913	1.03739223	640.312
FEVDAYS	FEVER DAYS	41	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
URDAYS	UP RESP DAYS	41	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
LRDAYS	LOW RESP DAYS	41	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
NILL	ILL EPISODES	41	0.03181336	0.20370491	0	1.30434783	0.03181336	1.30434783	0.04149569	640.312
NDIA	DIAR EPISODES	41	0.03181336	0.20370491	0	1.30434783	0.03181336	1.30434783	0.04149569	640.312
NFEV	FEVER EPISODES	41	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
NUR	UP RESP EPISODES	41	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
NLR	LOW RESP EPISODES	41	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
AGE IN YEARS.MONTHS=7.2										
ILLDAYS	DAYS ILL/MONTH	50	0.32000000	1.58358931	0	8.00000000	0.22395335	16.0000000	2.50775510	494.872
DIADAYS	DIAR DAYS	50	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	50	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
URDAYS	UP RESP DAYS	50	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
LRDAYS	LOW RESP DAYS	50	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NILL	ILL EPISODES	50	0.04000000	0.19794866	0	1.00000000	0.02799417	2.0000000	0.03918367	494.872
NDIA	DIAR EPISODES	50	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	50	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NUR	UP RESP EPISODES	50	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NLR	LOW RESP EPISODES	50	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
AGE IN YEARS.MONTHS=7.3										
ILLDAYS	DAYS ILL/MONTH	60	0.33333333	1.48057097	0	8.00000000	0.19114089	20.0000000	2.19209040	444.171
DIADAYS	DIAR DAYS	60	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	60	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
URDAYS	UP RESP DAYS	60	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
LRDAYS	LOW RESP DAYS	60	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NILL	ILL EPISODES	60	0.05000000	0.21978418	0	1.00000000	0.02837402	3.0000000	0.04830508	439.568
NDIA	DIAR EPISODES	60	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	60	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NUR	UP RESP EPISODES	60	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NLR	LOW RESP EPISODES	60	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
AGE IN YEARS.MONTHS=7.4										
ILLDAYS	DAYS ILL/MONTH	68	0.23235294	1.44743120	0	11.0000000	0.17552681	15.8000000	2.09505707	622.945
DIADAYS	DIAR DAYS	68	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	68	0.14705882	1.21267813	0	10.0000000	0.14705882	10.0000000	1.47058824	824.621
URDAYS	UP RESP DAYS	68	0.16176471	1.33394594	0	11.0000000	0.16176471	11.0000000	1.77941176	824.621
LRDAYS	LOW RESP DAYS	68	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NILL	ILL EPISODES	68	0.03235294	0.18803078	0	1.2000000	0.02280208	2.2000000	0.03535558	581.186
NDIA	DIAR EPISODES	68	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	68	0.01470588	0.12126781	0	1.0000000	0.01470588	1.0000000	0.01470588	824.621
NUR	UP RESP EPISODES	68	0.01470588	0.12126781	0	1.0000000	0.01470588	1.0000000	0.01470588	824.621
NLR	LOW RESP EPISODES	68	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
AGE IN YEARS.MONTHS=7.5										
ILLDAYS	DAYS ILL/MONTH	80	0.08750000	0.67867611	0	6.00000000	0.07587830	7.00000000	0.46060127	775.630
DIADAYS	DIAR DAYS	80	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
FEVDAYS	FEVER DAYS	80	0.01250000	0.11180340	0	1.00000000	0.01250000	1.00000000	0.01250000	894.427
URDAYS	UP RESP DAYS	80	0.01250000	0.11180340	0	1.00000000	0.01250000	1.00000000	0.01250000	894.427
LRDAYS	LOW RESP DAYS	80	0.01250000	0.11180340	0	1.00000000	0.01250000	1.00000000	0.01250000	894.427
NILL	ILL EPISODES	80	0.03750000	0.24873096	0	2.00000000	0.02780897	3.00000000	0.06186709	663.283
NDIA	DIAR EPISODES	80	0.00000000	0.00000000	0	0.00000000	0.00000000	0.00000000	0.00000000	.
NFEV	FEVER EPISODES	80	0.01250000	0.11180340	0	1.00000000	0.01250000	1.00000000	0.01250000	894.427
NUR	UP RESP EPISODES	80	0.01250000	0.11180340	0	1.00000000	0.01250000	1.00000000	0.01250000	894.427
NLR	LOW RESP EPISODES	80	0.01250000	0.11180340	0	1.00000000	0.01250000	1.00000000	0.01250000	894.427
AGE IN YEARS.MONTHS=7.6										
ILLDAYS	DAYS ILL/MONTH	86	0.25581395	1.26664027	0	8.00000000	0.13658533	22.0000000	1.60437756	495.141
DIADAYS	DIAR DAYS	86	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	86	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
URDAYS	UP RESP DAYS	86	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
LRDAYS	LOW RESP DAYS	86	0.09302326	0.86266219	0	8.00000000	0.09302326	8.0000000	0.74418605	927.362
NILL	ILL EPISODES	86	0.05426357	0.25494054	0	1.66666667	0.02749095	4.6666667	0.06499468	469.819
NDIA	DIAR EPISODES	86	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	86	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NUR	UP RESP EPISODES	86	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NLR	LOW RESP EPISODES	86	0.01162791	0.10783277	0	1.00000000	0.01162791	1.0000000	0.01162791	927.362
AGE IN YEARS.MONTHS=7.7										
ILLDAYS	DAYS ILL/MONTH	91	0.30147783	1.38788114	0	8.40000000	0.14548948	27.4344828	1.92621407	460.359
DIADAYS	DIAR DAYS	91	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	91	0.05494505	0.52414242	0	5.00000000	0.05494505	5.0000000	0.27472527	953.939
URDAYS	UP RESP DAYS	91	0.16923077	1.13995052	0	8.40000000	0.11949928	15.4000000	1.29948718	673.607
LRDAYS	LOW RESP DAYS	91	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NILL	ILL EPISODES	91	0.06026904	0.25258904	0	1.25000000	0.02647853	5.4844828	0.06380122	419.102
NDIA	DIAR EPISODES	91	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	91	0.01373626	0.13103560	0	1.25000000	0.01373626	1.2500000	0.01717033	953.939
NUR	UP RESP EPISODES	91	0.02417582	0.16285007	0	1.20000000	0.01707133	2.2000000	0.02652015	673.607
NLR	LOW RESP EPISODES	91	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
AGE IN YEARS.MONTHS=7.8										
ILLDAYS	DAYS ILL/MONTH	107	0.50341632	2.06585054	0	12.0000000	0.19971331	53.8655462	4.26773844	410.366
DIADAYS	DIAR DAYS	107	0.24032043	2.48589383	0	25.7142857	0.24032043	25.7142857	6.17966813	1034.408
FEVDAYS	FEVER DAYS	107	0.14018692	1.19312969	0	12.0000000	0.11534420	15.0000000	1.42355846	851.099
URDAYS	UP RESP DAYS	107	0.03738318	0.30484248	0	3.0000000	0.02947023	4.0000000	0.09292894	815.454
LRDAYS	LOW RESP DAYS	107	0.14018692	1.19312969	0	12.0000000	0.11534420	15.0000000	1.42355846	851.099
NILL	ILL EPISODES	107	0.09526427	0.34591890	0	1.7647059	0.03344124	10.1932773	0.11965989	363.115
NDIA	DIAR EPISODES	107	0.04005340	0.41431564	0	4.2857143	0.04005340	4.2857143	0.17165745	1034.408
NFEV	FEVER EPISODES	107	0.02336449	0.17352040	0	1.5000000	0.01677485	2.5000000	0.03010933	742.667
NUR	UP RESP EPISODES	107	0.01869159	0.13607076	0	1.0000000	0.01315446	2.0000000	0.01851525	727.979
NLR	LOW RESP EPISODES	107	0.02336449	0.17352040	0	1.5000000	0.01677485	2.5000000	0.03010933	742.667

4/9

AGE IN YEARS.MONTHS=7.9

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
ILLDAYS	DAYS ILL/MONTH	112	0.18941327	1.26032087	0	11.0000000	0.11908913	21.2142857	1.58840870	665.382
DIADAYS	DIAR DAYS	112	0.02869898	0.30372145	0	3.2142857	0.02869898	3.2142857	0.09224672	1058.301
FEVDAYS	FEVER DAYS	112	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
URDAYS	UP RESP DAYS	112	0.06250000	0.66143783	0	7.0000000	0.06250000	7.0000000	0.43750000	1058.301
LRDAYS	LOW RESP DAYS	112	0.09821429	1.03940230	0	11.0000000	0.09821429	11.0000000	1.08035714	1058.301
NILL	ILL EPISODES	112	0.02742347	0.16613600	0	1.0714286	0.01569838	3.0714286	0.02760117	605.817
NDIA	DIAR EPISODES	112	0.00956633	0.10124048	0	1.0714286	0.00956633	1.0714286	0.01024964	1058.301
NFEV	FEVER EPISODES	112	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NUR	UP RESP EPISODES	112	0.00892857	0.09449112	0	1.0000000	0.00892857	1.0000000	0.00892857	1058.301
NLR	LOW RESP EPISODES	112	0.00892857	0.09449112	0	1.0000000	0.00892857	1.0000000	0.00892857	1058.301

AGE IN YEARS.MONTHS=7.10

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
ILLDAYS	DAYS ILL/MONTH	121	0.50673534	1.96689241	0	12.0000000	0.17880840	61.3149758	3.86866573	388.150
DIADAYS	DIAR DAYS	121	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	121	0.25769952	1.44255659	0	10.8000000	0.13114151	31.1816425	2.08096950	559.782
URDAYS	UP RESP DAYS	121	0.04132231	0.45454545	0	5.0000000	0.04132231	5.0000000	0.20661157	1100.000
LRDAYS	LOW RESP DAYS	121	0.12892562	1.07109275	0	10.8000000	0.09737207	15.6000000	1.14723967	830.783
NILL	ILL EPISODES	121	0.08203777	0.29206314	0	1.3043478	0.02655119	9.9265700	0.08530088	356.011
NDIA	DIAR EPISODES	121	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	121	0.03814429	0.20816335	0	1.3043478	0.01892394	4.6154589	0.04333198	545.726
NUR	UP RESP EPISODES	121	0.00826446	0.09090909	0	1.0000000	0.00826446	1.0000000	0.00826446	1100.000
NLR	LOW RESP EPISODES	121	0.01983471	0.15363367	0	1.2000000	0.01396670	2.4000000	0.02360331	774.570

AGE IN YEARS.MONTHS=7.11

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
ILLDAYS	DAYS ILL/MONTH	125	0.28340100	1.31284827	0	10.9090909	0.11742472	35.4251247	1.72357058	463.248
DIADAYS	DIAR DAYS	125	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	125	0.01723077	0.13602207	0	1.1538462	0.01216618	2.1538462	0.01850200	789.414
URDAYS	UP RESP DAYS	125	0.00800000	0.08944272	0	1.0000000	0.00800000	1.0000000	0.00800000	1118.034
LRDAYS	LOW RESP DAYS	125	0.17394280	1.09759386	0	10.9090909	0.09817178	21.7428505	1.20471228	631.008
NILL	ILL EPISODES	125	0.08712707	0.34499658	0	2.0000000	0.03085743	10.8908841	0.11902264	395.969
NDIA	DIAR EPISODES	125	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	125	0.01723077	0.13602207	0	1.1538462	0.01216618	2.1538462	0.01850200	789.414
NUR	UP RESP EPISODES	125	0.00800000	0.08944272	0	1.0000000	0.00800000	1.0000000	0.00800000	1118.034
NLR	LOW RESP EPISODES	125	0.05146152	0.25940344	0	1.7647059	0.02320175	6.4326901	0.06729015	504.073

AGE IN YEARS.MONTHS=7.12

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
ILLDAYS	DAYS ILL/MONTH	130	0.44288103	1.84953090	0	12.8571429	0.16221459	57.5745342	3.42076454	417.613
DIADAYS	DIAR DAYS	130	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	130	0.10109890	0.81503165	0	7.1428571	0.07148300	13.1428571	0.66427659	806.173
URDAYS	UP RESP DAYS	130	0.04615385	0.52623481	0	6.0000000	0.04615385	6.0000000	0.27692308	1140.175
LRDAYS	LOW RESP DAYS	130	0.27967033	1.62678193	0	12.8571429	0.14267821	36.3571429	2.64641944	581.678
NILL	ILL EPISODES	130	0.07102246	0.28306729	0	1.5000000	0.02482664	9.2329193	0.08012709	398.560
NDIA	DIAR EPISODES	130	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	130	0.01868132	0.15238282	0	1.4285714	0.01336486	2.4285714	0.02322052	815.696
NUR	UP RESP EPISODES	130	0.00769231	0.08770580	0	1.0000000	0.00769231	1.0000000	0.00769231	1140.175
NLR	LOW RESP EPISODES	130	0.03791209	0.21752597	0	1.5000000	0.01907829	4.9285714	0.04731755	573.764

SCHOOLERS: ESTIMATED MORBIDITY DAYS/MONTH BY MONTH OF AGE

15:02 THURSDAY, OCTOBER 30, 1986

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
AGE IN YEARS.MONTHS=8.1										
ILLDAYS	DAYS ILL/MONTH	135	0.41646091	2.08911992	0	20.0000000	0.17980282	56.2222222	4.36442206	501.637
DIADAYS	DIAR DAYS	135	0.06666667	0.57562426	0	6.0000000	0.04954185	9.0000000	0.33134328	863.436
FEVDAYS	FEVER DAYS	135	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
URDAYS	UP RESP DAYS	135	0.03292181	0.38251687	0	4.4444444	0.03292181	4.4444444	0.14631916	1161.895
LRDAYS	LOW RESP DAYS	135	0.08724280	0.75045410	0	7.7777778	0.06458880	11.7777778	0.56318135	860.190
NILL	ILL EPISODES	135	0.07016461	0.29125335	0	2.0000000	0.02506710	9.4722222	0.08482852	415.100
NDIA	DIAR EPISODES	135	0.02222222	0.19187475	0	2.0000000	0.01651395	3.0000000	0.03681592	863.436
NFEV	FEVER EPISODES	135	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NUR	UP RESP EPISODES	135	0.00823045	0.09562922	0	1.1111111	0.00823045	1.1111111	0.00914495	1161.895
NLR	LOW RESP EPISODES	135	0.01563786	0.12817766	0	1.1111111	0.01103178	2.1111111	0.01642951	819.662
AGE IN YEARS.MONTHS=8.2										
ILLDAYS	DAYS ILL/MONTH	135	0.44175084	2.12572521	0	19.0000000	0.18295330	59.6363636	4.51870766	481.205
DIADAYS	DIAR DAYS	135	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	135	0.01481481	0.17213259	0	2.0000000	0.01481481	2.0000000	0.02962963	1161.895
URDAYS	UP RESP DAYS	135	0.07070707	0.82154192	0	9.5454545	0.07070707	9.5454545	0.67493113	1161.895
LRDAYS	LOW RESP DAYS	135	0.08215488	0.69553139	0	7.0000000	0.05986181	11.0909091	0.48376392	846.610
NILL	ILL EPISODES	135	0.06464646	0.26138010	0	1.3636364	0.02249602	8.7272727	0.06831956	404.322
NDIA	DIAR EPISODES	135	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	135	0.00740741	0.08606630	0	1.0000000	0.00740741	1.0000000	0.00740741	1161.895
NUR	UP RESP EPISODES	135	0.01010101	0.11736313	0	1.3636364	0.01010101	1.3636364	0.01377410	1161.895
NLR	LOW RESP EPISODES	135	0.01750842	0.14501983	0	1.3636364	0.01248132	2.3636364	0.02103075	828.286
AGE IN YEARS.MONTHS=8.3										
ILLDAYS	DAYS ILL/MONTH	139	0.84601403	2.97257733	0	16.6666667	0.25213072	117.595951	8.83621601	351.363
DIADAYS	DIAR DAYS	139	0.00000000	0.00000000	0	0.0000000	0.00000000	0.000000	0.00000000	.
FEVDAYS	FEVER DAYS	139	0.06631217	0.55566872	0	5.2173913	0.04713121	9.217391	0.30876773	837.959
URDAYS	UP RESP DAYS	139	0.10791367	0.73908137	0	6.0000000	0.06268806	15.000000	0.54624127	684.882
LRDAYS	LOW RESP DAYS	139	0.27410928	1.54637238	0	13.3333333	0.13116159	38.101190	2.39126754	564.144
NILL	ILL EPISODES	139	0.15059554	0.53024665	0	3.3333333	0.04497493	20.932780	0.28116151	352.100
NDIA	DIAR EPISODES	139	0.00000000	0.00000000	0	0.0000000	0.00000000	0.000000	0.00000000	.
NFEV	FEVER EPISODES	139	0.01657804	0.13891718	0	1.3043478	0.01178280	2.304348	0.01929798	837.959
NUR	UP RESP EPISODES	139	0.02302158	0.15618483	0	1.2000000	0.01324742	3.200000	0.02439370	678.428
NLR	LOW RESP EPISODES	139	0.06213601	0.36246829	0	3.3333333	0.03074416	8.636905	0.13138326	583.347
AGE IN YEARS.MONTHS=8.4										
ILLDAYS	DAYS ILL/MONTH	138	0.50027205	1.73144856	0	11.7391304	0.14739069	69.0375431	2.99791413	346.101
DIADAYS	DIAR DAYS	138	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	138	0.12100299	0.80990244	0	7.1428571	0.06894347	16.6984127	0.65594195	669.324
URDAYS	UP RESP DAYS	138	0.02173913	0.25537696	0	3.0000000	0.02173913	3.0000000	0.06521739	1174.734
LRDAYS	LOW RESP DAYS	138	0.18695652	0.95020751	0	6.0000000	0.08088704	25.8000000	0.90289432	508.251
NILL	ILL EPISODES	138	0.11336254	0.36210315	0	2.0000000	0.03082427	15.6440304	0.13111869	319.420
NDIA	DIAR EPISODES	138	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	138	0.03289625	0.19343317	0	1.4285714	0.01646613	4.5396825	0.03741639	588.010
NUR	UP RESP EPISODES	138	0.00724638	0.08512565	0	1.0000000	0.00724638	1.0000000	0.00724638	1174.734
NLR	LOW RESP EPISODES	138	0.05507246	0.26883704	0	2.0000000	0.02288493	7.6000000	0.07227335	488.151

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
AGE IN YEARS.MONTHS=8.5										
ILLDAYS	DAYS ILL/MONTH	134	0.45613692	2.17276805	0	17.7272727	0.18769857	61.1223466	4.72092100	476.341
DIADAYS	DIAR DAYS	134	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	134	0.07313433	0.51535289	0	4.8000000	0.04451971	9.8000000	0.26558860	704.666
URDAYS	UP RESP DAYS	134	0.10511727	0.63082888	0	4.8000000	0.05449532	14.0857143	0.39794508	600.119
LRDAYS	LOW RESP DAYS	134	0.27216231	1.59359958	0	13.7500000	0.13766604	36.4697492	2.53955963	585.533
NILL	ILL EPISODES	134	0.09073272	0.36860956	0	2.7272727	0.03184302	12.1581841	0.13587301	406.259
NDIA	DIAR EPISODES	134	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	134	0.02389060	0.15902859	0	1.2000000	0.01373798	3.2000000	0.02529009	665.932
NUR	UP RESP EPISODES	134	0.03187633	0.18295407	0	1.2000000	0.01580482	4.2714286	0.03347219	573.950
NLR	LOW RESP EPISODES	134	0.04364268	0.22405912	0	1.3636364	0.01935576	5.8481191	0.05020249	513.395
AGE IN YEARS.MONTHS=8.6										
ILLDAYS	DAYS ILL/MONTH	124	0.28225806	2.72763778	0	30.0000000	0.24494910	35.0000000	7.44000787	966.363
DIADAYS	DIAR DAYS	124	0.24193548	2.69407953	0	30.0000000	0.24193548	30.0000000	7.25806452	1113.553
FEVDAYS	FEVER DAYS	124	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
URDAYS	UP RESP DAYS	124	0.24193548	2.69407953	0	30.0000000	0.24193548	30.0000000	7.25806452	1113.553
LRDAYS	LOW RESP DAYS	124	0.04032258	0.44901326	0	5.0000000	0.04032258	5.0000000	0.20161290	1113.553
NILL	ILL EPISODES	124	0.01858345	0.14701641	0	1.3043478	0.01320246	2.3043478	0.02161383	791.115
NDIA	DIAR EPISODES	124	0.01051893	0.11713389	0	1.3043478	0.01051893	1.3043478	0.01372035	1113.553
NFEV	FEVER EPISODES	124	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NUR	UP RESP EPISODES	124	0.01051893	0.11713389	0	1.3043478	0.01051893	1.3043478	0.01372035	1113.553
NLR	LOW RESP EPISODES	124	0.00806452	0.08980265	0	1.0000000	0.00806452	1.0000000	0.00806452	1113.553
AGE IN YEARS.MONTHS=8.7										
ILLDAYS	DAYS ILL/MONTH	113	0.58023454	2.35601580	0	16.0000000	0.22163532	65.5665025	5.55081044	406.045
DIADAYS	DIAR DAYS	113	0.14159292	1.50515339	0	16.0000000	0.14159292	16.0000000	2.26548673	1063.015
FEVDAYS	FEVER DAYS	113	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
URDAYS	UP RESP DAYS	113	0.14159292	1.50515339	0	16.0000000	0.14159292	16.0000000	2.26548673	1063.015
LRDAYS	LOW RESP DAYS	113	0.08849558	0.94072087	0	10.0000000	0.08849558	10.0000000	0.88495575	1063.015
NILL	ILL EPISODES	113	0.07489428	0.27511583	0	1.4285714	0.02588072	8.4630542	0.07568872	367.339
NDIA	DIAR EPISODES	113	0.00884956	0.09407209	0	1.0000000	0.00884956	1.0000000	0.00884956	1063.015
NFEV	FEVER EPISODES	113	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NUR	UP RESP EPISODES	113	0.00884956	0.09407209	0	1.0000000	0.00884956	1.0000000	0.00884956	1063.015
NLR	LOW RESP EPISODES	113	0.01264223	0.13438870	0	1.4285714	0.01264223	1.4285714	0.01806032	1063.015
AGE IN YEARS.MONTHS=8.8										
ILLDAYS	DAYS ILL/MONTH	112	0.21506519	1.19086078	0	9.00000000	0.11252577	24.0873016	1.41814940	553.721
DIADAYS	DIAR DAYS	112	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	112	0.03968254	0.41996053	0	4.44444444	0.03968254	4.4444444	0.17636684	1058.301
URDAYS	UP RESP DAYS	112	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
LRDAYS	LOW RESP DAYS	112	0.10664683	0.82050989	0	7.50000000	0.07753090	11.9444444	0.67323648	769.371
NILL	ILL EPISODES	112	0.05073696	0.23907126	0	1.50000000	0.02259011	5.6825397	0.05715507	471.197
NDIA	DIAR EPISODES	112	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	112	0.00992063	0.10499013	0	1.11111111	0.00992063	1.1111111	0.01102293	1058.301
NUR	UP RESP EPISODES	112	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NLR	LOW RESP EPISODES	112	0.02331349	0.17562485	0	1.50000000	0.01659499	2.6111111	0.03084409	753.319

VARIABLE	LABEL	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	SUM	VARIANCE	C.V.
AGE IN YEARS.MONTHS=8.9										
ILLDAYS	DAYS ILL/MONTH	103	0.54256547	2.30412373	0	16.5517241	0.22703206	55.8842430	5.30898615	424.672
DIADAYS	DIAR DAYS	103	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	103	0.02912621	0.29559878	0	3.0000000	0.02912621	3.0000000	0.08737864	1014.889
URDAYS	UP RESP DAYS	103	0.04017409	0.40772246	0	4.1379310	0.04017409	4.1379310	0.16623760	1014.889
LRDAYS	LOW RESP DAYS	103	0.07030465	0.71351430	0	7.2413793	0.07030465	7.2413793	0.50910266	1014.889
NILL	ILL EPISODES	103	0.09724537	0.37355056	0	2.0689655	0.03680703	10.0162733	0.13954002	384.132
NDIA	DIAR EPISODES	103	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	103	0.01456311	0.14779939	0	1.5000000	0.01456311	1.5000000	0.02184466	1014.889
NUR	UP RESP EPISODES	103	0.01004352	0.10193061	0	1.0344828	0.01004352	1.0344828	0.01038985	1014.889
NLR	LOW RESP EPISODES	103	0.01004352	0.10193061	0	1.0344828	0.01004352	1.0344828	0.01038985	1014.889
AGE IN YEARS.MONTHS=8.10										
ILLDAYS	DAYS ILL/MONTH	97	0.29536901	1.62701406	0	12.8571429	0.16519825	28.6507937	2.64717475	550.841
DIADAYS	DIAR DAYS	97	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	97	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
URDAYS	UP RESP DAYS	97	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
LRDAYS	LOW RESP DAYS	97	0.13254786	1.30544507	0	12.8571429	0.13254786	12.8571429	1.70418683	984.886
NILL	ILL EPISODES	97	0.05195549	0.25418007	0	1.4285714	0.02580808	5.0396825	0.06460751	489.227
NDIA	DIAR EPISODES	97	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	97	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NUR	UP RESP EPISODES	97	0.00000000	0.00000000	0	0.0000000	0.00000000	0.0000000	0.00000000	.
NLR	LOW RESP EPISODES	97	0.01472754	0.14504945	0	1.4285714	0.01472754	1.4285714	0.02103934	984.886
AGE IN YEARS.MONTHS=8.11										
ILLDAYS	DAYS ILL/MONTH	89	0.17761184	0.97171847	0	6.52173913	0.10300195	15.8074534	0.94423679	547.102
DIADAYS	DIAR DAYS	89	0.04494382	0.42399915	0	4.00000000	0.04494382	4.0000000	0.17977528	943.398
FEVDAYS	FEVER DAYS	89	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
URDAYS	UP RESP DAYS	89	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
LRDAYS	LOW RESP DAYS	89	0.07327797	0.69130297	0	6.52173913	0.07327797	6.5217391	0.47789979	943.398
NILL	ILL EPISODES	89	0.04916603	0.27456873	0	2.00000000	0.02910423	4.3757764	0.07538799	558.452
NDIA	DIAR EPISODES	89	0.01123596	0.10599979	0	1.00000000	0.01123596	1.0000000	0.01123596	943.398
NFEV	FEVER EPISODES	89	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NUR	UP RESP EPISODES	89	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NLR	LOW RESP EPISODES	89	0.01465559	0.13826059	0	1.30434783	0.01465559	1.3043478	0.01911599	943.398
AGE IN YEARS.MONTHS=8.12										
ILLDAYS	DAYS ILL/MONTH	82	0.47948456	1.68444248	0	8.57142857	0.18601555	39.3177340	2.83734646	351.303
DIADAYS	DIAR DAYS	82	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
FEVDAYS	FEVER DAYS	82	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
URDAYS	UP RESP DAYS	82	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
LRDAYS	LOW RESP DAYS	82	0.20683648	1.10531855	0	8.57142857	0.12206201	16.9605911	1.22172910	534.392
NILL	ILL EPISODES	82	0.11366094	0.35529675	0	1.50000000	0.03923596	9.3201970	0.12623578	312.594
NDIA	DIAR EPISODES	82	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NFEV	FEVER EPISODES	82	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NUR	UP RESP EPISODES	82	0.00000000	0.00000000	0	0.00000000	0.00000000	0.0000000	0.00000000	.
NLR	LOW RESP EPISODES	82	0.05529857	0.24865514	0	1.42857143	0.02745937	4.5344828	0.06182938	449.659

SCHOOLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NY _ILL   EPISODES OF ILLNESS PER YR (ADJ)      FREQ  CUM.   PERCENT     CUM.
                                                      FREQ             PERCENT
          |
     0    |************************************  89     89    52.35    52.35
          |
     1    |*******************                   47    136    27.65    80.00
          |
     2    |*********                             23    159    13.53    93.53
          |
     3    |****                                  11    170     6.47   100.00
          |
          ----+---+---+---+---+---+---+---+---+
             10  20  30  40  50  60  70  80  90

                         FREQUENCY
```

SCHOOLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NYA_FEV   EPISODES OF FEVER PER YR (ADJ) FREQ  CUM.   PERCENT    CUM.
                                               FREQ              PERCENT
          |
    0     |****************************** 149   149    87.65     87.65
          |
    1     |****                            19   168    11.18     98.82
          |
    2     |                                 1   169     0.59     99.41
          |
    3     |                                 1   170     0.59    100.00
          |
          ----+---+---+---+---+---+---+--
             20  40  60  80  100 120 140

                    FREQUENCY
```

SCHOOLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NYA_DIA   EPISODES OF DIARRH PER YR (ADJ)   FREQ  CUM.   PERCENT    CUM.
                                                  FREQ             PERCENT
          |
     0    |*********************************  163   163    95.88    95.88
          |
     1    |*                                    6   169     3.53    99.41
          |
     3    |                                     1   170     0.59   100.00
          |
          ----+---+---+---+---+---+---+---+-
             20  40  60  80  100 120 140 160

                      FREQUENCY
```

SCHOOLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NYA_UR  EPI OF U. RESP PER YEAR (ADJ)    FREQ  CUM.   PERCENT    CUM.
                                               FREQ              PERCENT
           |
     0     |****************************** 150   150     88.24     88.24
           |
     1     |***                             16   166      9.41     97.65
           |
     2     |*                                3   169      1.76     99.41
           |
     3     |                                 1   170      0.59    100.00
           |
           ----+---+---+---+---+---+---+--
              20  40  60  80 100 120 140

                    FREQUENCY
```

SCHOOLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
NYA_LR  EPI OF L RESP PER YEAR (ADJ) FREQ  CUM.   PERCENT    CUM.
                                           FREQ              PERCENT
          |
     0    |*************************** 135   135    79.41     79.41
          |
     1    |******                       29   164    17.06     96.47
          |
     2    |*                             3   167     1.76     98.24
          |
     3    |*                             3   170     1.76    100.00
          |
          ----+---+---+---+---+---+---
             20  40  60  80  100 120

                   FREQUENCY
```

SCHOOLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

ILL_YDA	ILL DAYS PER YEAR (ADJ)	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
0	************************************	89	89	52.35	52.35
2	*	2	91	1.18	53.53
3	***	7	98	4.12	57.65
4	**	6	104	3.53	61.18
5	**	6	110	3.53	64.71
6	*****	12	122	7.06	71.76
7	**	5	127	2.94	74.71
8	**	5	132	2.94	77.65
9	**	4	136	2.35	80.00
10	***	7	143	4.12	84.12
11	**	5	148	2.94	87.06
12	*	3	151	1.76	88.82
13		1	152	0.59	89.41
14	*	3	155	1.76	91.18
15		1	156	0.59	91.76
16	**	4	160	2.35	94.12
17	*	3	163	1.76	95.88
18	*	2	165	1.18	97.06
20	*	3	168	1.76	98.82
22		1	169	0.59	99.41
33		1	170	0.59	100.00

```
----+---+---+---+---+---+---+---+---+
   10  20  30  40  50  60  70  80  90
```

FREQUENCY

SCHOOLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
FEV_YDA   FEVER DAYS PER YEAR (ADJ)         FREQ   CUM.   PERCENT    CUM.
                                                   FREQ              PERCENT
               |
      0        |****************************** 149    149     87.65     87.65
               |
      1        |*                                4    153      2.35     90.00
               |
      2        |*                                3    156      1.76     91.76
               |
      3        |                                 1    157      0.59     92.35
               |
      4        |*                                6    163      3.53     95.88
               |
      5        |                                 1    164      0.59     96.47
               |
      6        |*                                4    168      2.35     98.82
               |
      9        |                                 1    169      0.59     99.41
               |
     10        |                                 1    170      0.59    100.00
               |
               ----+---+---+---+---+---+---+--
                  20  40  60  80 100 120 140

                        FREQUENCY
```

130

SCHOOLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
DIA_YDA   DIARRHEA DAYS PER YEAR (ADJ)        FREQ   CUM.   PERCENT    CUM.
                                                     FREQ             PERCENT
          |
     0    |*********************************  163    163     95.88     95.88
          |
     2    |                                     1    164      0.59     96.47
          |
     3    |                                     2    166      1.18     97.65
          |
     4    |                                     1    167      0.59     98.24
          |
     6    |                                     1    168      0.59     98.82
          |
    18    |                                     1    169      0.59     99.41
          |
    28    |                                     1    170      0.59    100.00
          |
          ----+---+---+---+---+---+---+---+-
             20  40  60  80  100 120 140 160

                      FREQUENCY
```

SCHOOLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
UR_YDA   U. RESPIR DAYS PER YEAR (ADJ)  FREQ  CUM.    PERCENT    CUM.
                                              FREQ              PERCENT
         |
    0    |******************************  150   150     88.24     88.24
         |
    1    |                                  2   152      1.18     89.41
         |
    2    |                                  1   153      0.59     90.00
         |
    3    |*                                 3   156      1.76     91.76
         |
    4    |*                                 4   160      2.35     94.12
         |
    5    |*                                 3   163      1.76     95.88
         |
    6    |*                                 4   167      2.35     98.24
         |
    9    |                                  1   168      0.59     98.82
         |
   10    |                                  1   169      0.59     99.41
         |
   28    |                                  1   170      0.59    100.00
         |
        ----+---+---+---+---+---+---+--
           20  40  60  80 100 120 140

                  FREQUENCY
```

SCHOOLER YEARLY MORBIDITY (ADJUSTED)

FREQUENCY BAR CHART

```
LR_YDA   L RESP DAYS PER YEAR (ADJ)    FREQ   CUM.    PERCENT    CUM.
                                              FREQ               PERCENT
         |
    0    |*************************** 135    135     79.41      79.41
         |
    2    |                               2    137      1.18      80.59
         |
    3    |*                              3    140      1.76      82.35
         |
    4    |*                              3    143      1.76      84.12
         |
    5    |**                             8    151      4.71      88.82
         |
    6    |*                              6    157      3.53      92.35
         |
    7    |*                              6    163      3.53      95.88
         |
    8    |                               1    164      0.59      96.47
         |
   10    |                               2    166      1.18      97.65
         |
   12    |                               1    167      0.59      98.24
         |
   13    |                               1    168      0.59      98.82
         |
   14    |                               1    169      0.59      99.41
         |
   18    |                               1    170      0.59     100.00
         |
         ----+---+---+---+---+---+---
            20  40  60  80  100 120

                 FREQUENCY
```

APPENDIX V

TODDLER PSYCHOLOGY

SOLIS: BAYLEY MDI SCORES (18 MOS.)

```
MIDPOINT
MDI                                FREQ  CUM.   PERCENT   CUM.
                                         FREQ             PERCENT
          |
          |
   80     |**************           14    14    14.14     14.14
          |
   90     |*****                     5    19     5.05     19.19
          |
  100     |**********               10    29    10.10     29.29
          |
  110     |*******************      19    48    19.19     48.48
          |
  120     |************             12    60    12.12     60.61
          |
  130     |*********                 9    69     9.09     69.70
          |
  140     |*******************      19    88    19.19     88.89
          |
  150     |***********              11    99    11.11    100.00
          |
          -----+----+----+----
               5   10   15

             FREQUENCY
```

SOLIS: BAYLEY PDI SCORES (18 MOS.)

MIDPOINT PDI (Motor Score)		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
70	************	24	24	25.00	25.00
80	***	6	30	6.25	31.25
90	*	1	31	1.04	32.29
100	**	4	35	4.17	36.46
110	***************	29	64	30.21	66.67
120	**********	19	83	19.79	86.46
130	*******	13	96	13.54	100.00
140		0	96	0.00	100.00
150		0	96	0.00	100.00

-----+----+----+

10 20 30

FREQUENCY

SOLIS: BAYLEY MDI SCORES (24 MOS.)

```
MIDPOINT
MENTAL SCORE (MDI)                        FREQ  CUM.   PERCENT    CUM.
                                                FREQ             PERCENT
               |
       70      |****                         7     7     5.93      5.93
               |
       80      |**                           4    11     3.39      9.32
               |
       90      |**                           4    15     3.39     12.71
               |
      100      |**                           4    19     3.39     16.10
               |
      110      |****                         7    26     5.93     22.03
               |
      120      |*******                     13    39    11.02     33.05
               |
      130      |*********                   17    56    14.41     47.46
               |
      140      |**************              27    83    22.88     70.34
               |
      150      |******************          35   118    29.66    100.00
               |
               -----+----+----+---
                   10   20   30

                   FREQUENCY
```

SOLIS: BAYLEY PDI SCORES (24 MOS.)

```
MIDPOINT
MOTOR SCORE (PDI)                                 FREQ   CUM.    PERCENT    CUM.
                                                         FREQ               PERCENT
               |
    70         |**                                   3      3       2.56       2.56
               |
    80         |*                                    1      4       0.85       3.42
               |
    90         |*********                           18     22      15.38      18.80
               |
   100         |*********************               42     64      35.90      54.70
               |
   110         |****                                 7     71       5.98      60.68
               |
   120         |*****                                9     80       7.69      68.38
               |
   130         |***                                  5     85       4.27      72.65
               |
   140         |***                                  6     91       5.13      77.78
               |
   150         |*************                       26    117      22.22     100.00
               |
               -----+----+----+----+-
                   10   20   30   40

                     FREQUENCY
```

SOLIS: BAYLEY MDI SCORES (30 MOS.)

```
MIDPOINT
TOTAL MENTAL SCORE (MDI)          FREQ   CUM.   PERCENT    CUM.
                                         FREQ              PERCENT
                |
       70       |*                   1      1      1.45      1.45
                |
       80       |                    0      1      0.00      1.45
                |
       90       |                    0      1      0.00      1.45
                |
      100       |**                  3      4      4.35      5.80
                |
      110       |********           16     20     23.19     28.99
                |
      120       |******************  35     55     50.72     79.71
                |
      130       |*******            13     68     18.84     98.55
                |
      140       |                    0     68      0.00     98.55
                |
      150       |*                   1     69      1.45    100.00
                |
               -----+-----+-----+---
                   10    20    30

                   FREQUENCY
```

SOLIS: BAYLEY PDI SCORES (30 MOS.)

```
MIDPOINT
TOTAL MOTOR SCORE (PDI)                         FREQ  CUM.   PERCENT    CUM.
                                                      FREQ            PERCENT
                 |
        70       |****                             4     4     5.80      5.80
                 |
        80       |**********                      10    14    14.49     20.29
                 |
        90       |********                         8    22    11.59     31.88
                 |
       100       |*****                            5    27     7.25     39.13
                 |
       110       |                                 0    27     0.00     39.13
                 |
       120       |**********************          22    49    31.88     71.01
                 |
       130       |****************                16    65    23.19     94.20
                 |
       140       |****                             4    69     5.80    100.00
                 |
       150       |                                 0    69     0.00    100.00
                 |
                -----+----+----+----+--
                     5   10   15   20

                       FREQUENCY
```

RELATIONSHIPS OF BAYLEY SCALES TO HOUSEHOLD CHARACTERISTICS
24 MONTH OLDS*

HOUSEHOLD CHARS.	BAYLEY SCALES MDI	PDI	COGNITIVE	EXTROVERSION
Animal Wealth	-	-	.34	.25
Household Possessions	-	-	.24	.23
Family Type	-	-	-	.30
Sanitation: External Env.	-	-	-	.24
Sanitation: Internal Env.	-	-	.23	.34
Mother's Appearance	-	-	.27	.37
Child's Appearance	-	.21	.36	.44

* $p < .02$

APPENDIX VI

Average Calorie Intakes of Children by Month of Age

APPENDIX VII

AUTOREGRESSION REPORT

"Preliminary Analysis of Toddler Longitudinal Data
in Mexico CRSP Report"

Report on Preliminary Analysis of Toddler Longitudinal Data in Mexico CRSP Project

9-25-86

Drs Adolfo Chavez, Lindsay Allen, and Gretel Pelto, Principal Investigators

Dr. Edward Stanek, Susan Shetterly, and Martha Zorn, Statisticians

144

Table of Contents

I. Introduction

This report contains the results to date of analyses conducted on toddler (age 18-30 months) data from the CRSP project in Mexico. The report summarizes results of analyses that were proposed at meetings by statisticians from the three CRSP projects in June and September, 1986. At those meetings, an auto-regressive model approach similar to that proposed by Rosner et al. (Statistics in Medicine, 4, 457-467, 1985) was adopted by the three projects. Parallel analyses using similar variable definitions and similar models were to be developed by each project. This report summarizes these efforts by the Mexico project at Storrs, Conn., and Amherst, Mass.. Other analyses are in progress in Mexico.

Data on toddlers in the Mexico project is screened in Mexico, and then sent to Storrs to be assembled into raw data files prior to analysis. These raw data files are the source from which these analyses are performed. Presently, the raw data files are nearly in final form. However, in order to maintain consistent analysis files throughout the course of the analyses reported here, an early version of the raw data files were used for these analyses (raw files that were available in June, 1986 at Storrs.) Final analyses will be made on complete raw data files in the future. Consequently, this report summarizes preliminary results.

II. Description of Project

A. Time period for data collection

Toddlers were enrolled in the Mexico CRSP from Feb. 10, 1984 through May. 28, 1985. Toddlers were enrolled in a longitudinal manner, with new toddlers entering the study throughout this period. A toddler was eligible to enroll when he (she) turned 18 months. Follow-up on each toddler was for one calendar year.

B. Time period for data included in this report

Data collection was designed in all three projects to start at the toddlers 18 month birthdate, and continue on a monthly (or weekly) basis until the toddler was aged 30 months. Not all data was available at the time raw data sets were used in forming these analyses. Data included was collected in the following time periods:

Diet Data:	Jan 13,	1984----Feb 27, 1986
Anthropometry Data:	April 12,	1984----Feb. 28, 1986
Morbidity Data:	Feb. 22	1984----Mar. 3, 1986

C. Description of subjects included in analysis

As part of data quality control, study subjects in the Mexico project were routinely reviewed for integrity and compliance. Some toddlers enrolled in early 1984 had already passed their 18 month birthdate. These toddlers are not included in the analysis since they had no possibility of having complete data. Other toddlers were dropped from the study due to families moving out of the area or other related problems. A total of 148 toddlers were initially recorded with diet, anthropometry or morbidity data. Of these, 92 toddlers are included in this analysis. These toddlers were enrolled in the study for the full one year period.

D. Restriction of time period for analysis

Due to logistics of interview schedules, some measures were made just prior to 18 months or after 30 months. In addition, some families were included in the study with other target individuals prior to the toddler turning 18 months, so additional data on the toddlers is often available. For the purpose of these analyses, data collected from two weeks prior to the toddlers 18th month birthdate, to data collected prior to two weeks after the 30 month birthdate is included.

Time Period: 18 mth - 14 days -------30 mths + 14 days

Data collected outside of this time period is not included in these analyses. For reference, the amount of data collected outside of this time period for several variables is as follows:

	In Time period Number (%)	Not in Time period Number (%)
Weight	1151 (78)	324 (22)
Height	459 (69)	206 (31)
Diet	1805 (85)	323 (15)

As can be seen in this tabulation, a substantial amount of data was collected outside of the protocol time period.

E. Variable Names and Brief descriptions

The variable names used in computer runs will be used in this report in tables of output as well as narratives. A listing of the names used and their meaning is given below.

B_DATE	birthdate
COM_ID	community id
FAM_ID	family id
IND_ID	individual id
SEX	sex (1 = Male 2 = Female)
SES1	condition of house (ses variable)
SES3	log (agricultural instruments)
SES2	log (# of animals)
SES4	log (material standard of living)
MONTH	month of age (when month=1, subject is between birthdate + 533 and birthdate + 577 when month=2 subject is between birthdate + 577 and birthdate + 607, etc)
HHSIZE	sqrt of household size: estimated by number of subjects per family in the family master file
BKCAL	baseline diet/1000 (version A diet data) (mean kcal intake for the first 3 months)
BDIAR	baseline diarrhea (ratio #days/days observed in first 3 months)
BFEVR	baseline fever (ratio #days/days observed in first 3 months)
BSICK	baseline illness (ratio #days ill/days observed in first 3 months)
BHT	baseline height (mean height of first three months)
BWT	baseline weight (mean weight of first three months)
KCAL	mean kcal intake/1000 by month
HT	mean of height by month
WT	meen of weight by month
LKCAL	previous month's mean kcal/1000 intake
LHT	previous month's mean of height
LWT	previous month's mean of weight
LDIAR	previous month's ratio (#days diarrhea/days observed)
LFEVR	previous month's ratio (#days fever/days observed)
LSICK	previous month's ratio (#days ill/days observed)

Variables used in Regressions with 0,1 missing value indicators

DBKCAL	dummy variable for BKCAL (1 if BKCAL missing, 0 otherwise)
DLKCAL	dummy variable for LKCAL (1 if LKCAL missing, 0 otherwise)
DLSICK	dummy variable for LSICK, LFEVR, LDIAR (all these variables are missing for the same observations) (1 if LSICK missing, 0 otherwise)
DSES1	dummy variable for all four ses variables (all ses variables are missing for the same observations in the subset used in this report) (1 if ses missing, 0 otherwise)

III. Description of Variable Definitions and Edit Checks

A. Edit Checks for extreme values

Each principal variable in the analysis was checked initially to detect erronous values. A common procedure for edit checking was established at the June, 1986 joint meeting of CRSP statisticians. An attempt to implement this procedure resulted in some slight modifications. The resulting edit checks used in the Mexico project may differ slightly from those used in other projects.

i. Weight

To set the outlier criteria for weight observations , simple linear regression was used , regressing weight on time. Weight observations larger than 30 kgs were excluded from the regression. Outliers were identified if they were farther than 2.5 kgs from the predicted weight value. These outliers were then set to missing.

Number of weight observations in data set = 1151
Number of weight observations set to missing = 4
Percent of weight observations set to missing = 0.35%

ii. Height

To set the outlier criteria for height observations , simple linear regession was used , regressing height on time. Outliers were identified if the height measure exceeded 3.5 cm or -3.0 cm from the predicted height value. These outliers were set to missing.

Number of height observations in data set = 459
Number of height observations set to missing = 2
Percent of height observations set to missing = 0.44%

iii. Diet

Two upper limits for kcal measures were calculated. One upper limit was equal to 3.0 x median kcal for the individual and the other upper limit was 3.0 x an overall median value for a target type (sex specific, in protocol period and longitudinal study). If the given kcal measure for an individual exceeded both of these limits, then the diet measure would be considered missing.

Number of kcal measures in data set	=	1028
Number of kcal measures set to missing	=	4
Percent of kcal measures set to missing	=	0.39%

B. Definition of Monthly variables

Monthly files were set up for anthropometry , diet and morbidity data. The files included data for one year for each individual. The time period ranged from 18 months to 30 months. Each individual contained 12 observations in the monthly file, corresponding to the 12 months in the time period. The months represented 30 day periods beginning with month #1 from age 1 year 6 months (547 days) to 1 year 7 months, and continuing to month #12, representing age 2 years 5 months to 2 years 6 months. The first and last month include data two weeks prior to (or after) the start (or end) of the month. The three variables created for each type of measurement corresponded to the following:

i) average measure in given 30 day month
ii) number of weight measures in given month
iii) average difference between average day of measure and midpoint of the month.

IV. Summary Descriptive Results

A. Weight

i. Raw data

Following is a descriptive summary of weight for the data set that has been edit checked. The summary includes summary statistics concerning:

NWT = number of weight measures per subject
WTDAYS = number of days from first to last weight measure
MEANWT = average weight per subject
INTWT = predicted weight at 2 years from linear reg.
SLOPEWT = annual slope for weight
SRMSWT = standard deviation about regression line

```
Variable=NWT -- number of weight measures per subject
=====================================================

  # of subjects = 92          Mean = 12.47     Skewness = -0.82
  # of weight obs. = 1147     SD   = 3.34      Kurtosis = -0.11

   Stem Leaf                     #            Boxplot
     18 0                        1               |
     17 0000                     4               |
     16 00000000                 8               |
     15 00000000000000000000    20            +-----+
     14 000000000000            12            |     |
     13 000000000                9            *-----*
     12 00000                    5            |  +  |
     11 000000000000            12            +-----+
     10 00000                    5               |
      9 000                      3               |
      8 00                       2               |
      7 000                      3               |
      6 000                      3               |
      5 0000                     4               |
      4 0                        1               0
        ----+----+----+----+

Variable=WTDAYS -- number of days from first to last weight measure
===================================================================

  # of subjects = 92      Mean = 313      Skewness = -0.75
                          SD   = 48.8     Kurtosis =  0.19

   Stem Leaf                     #            Boxplot
     38 3                        1               |
     37 023                      3               |
     36 0001246                  7               |
     35 015678                   6               |
     34 112244555667            12            +-----+
     33 1122233566799           13            |     |
     32 4477                     4            *-----*
     31 25569                    5            |  +  |
     30 044556889999            12            |     |
     29 2348                     4            |     |
     28 00049                    5            +-----+
     27 2599999                  7               |
     26 0                        1               |
     25 5778                     4               |
     24 5559                     4               |
     23 3                        1               |
     22 3                        1               |
     21                                          |
     20 4                        1               |
     19                                          |
     18 8                        1               0
        ----+----+----+----+
   Multiply Stem.Leaf by 10**+1
```

```
Variable=MEANWT -- average weight per subject
=============================================

   # of subjects = 92         Mean = 10.74        Skewness = 0.33
                              SD   =  1.06        Kurtosis = 0.11

  Stem Leaf                          #           Boxplot
    13 9                             1              0
    13 00                            2              |
    12 56                            2              |
    12 012222344                     9              |
    11 6677889                       7              |
    11 000011111111233334           18           +------+
    10 555568888999                 12           *--+---*
    10 00000112222223333334444      23           +------+
     9 566678888                     9              |
     9 03334                         5              |
     8 788                           3              |
     8 3                             1              |
       ----+----+----+----+---


Variable=INTWT -- Predicted weight at 2 years from linear regression
====================================================================

   # of subjects = 92           Mean = 10.58       Skewness = 0.41
                                SD   =  1.02       Kurtosis = 0.40

  Stem Leaf                        #           Boxplot
    13 9                           1              0
    13 0                           1              0
    12 566                         3              |
    12 0112                        4              |
    11 6778889                     7              |
    11 000000000112233344         18           +------+
    10 55566677889999             14           |  +   |
    10 000000011222223334444      21           *------*
     9 5566666777899              13           +------+
     9 001123                      6              |
     8 789                         3              |
     8 3                           1              |
       ----+----+----+----+-
```

```
Variable=SLOPEWT -- annual slope for weight
===========================================
   # of subjects = 92      Mean = 2.10      Skewness = -0.53
                           SD   = 0.882     Kurtosis = -0.13

   Stem Leaf                    #          Boxplot
     38 6                       1             |
     36                                       |
     34 714                     3             |
     32 0023                    4             |
     30 788023                  6             |
     28 00058025789            11          +-----+
     26 0366                    4          |     |
     24 124488228               9          |     |
     22 22343779                8          +-----+
     20 124484488               9          |  +  |
     18 223544                  6          |     |
     16 1772689                 7          |     |
     14 27459                   5          +-----+
     12 60577                   5             |
     10 61                      2             |
      8 666                     3             |
      6 459                     3             |
      4 66                      2             |
      2                                       |
      0 6                       1             |
     -0 975                     3             |
        ----+----+----+----+
    Multiply Stem.Leaf by 10**-1

Variable=SRMSWT -- standard deviation about regression line
===========================================================

   # of subjects = 92         Mean = 0.678     Skewness = 0.818
                              SD   = 0.152     Kurtosis = 0.607

   Stem Leaf                    #          Boxplot
     11 9                       1             0
     11
     10 9                       1             |
     10 01                      2             |
      9                                       |
      9 123                     3             |
      8 55677                   5             |
      8 11222344444            11             |
      7 6788                    4          +-----+
      7 00122344                8          |     |
      6 556788899               9          |  +  |
      6 001122222233334444     18          +-----+
      5 55566666777789         14          +-----+
      5 0112344                 7             |
      4 6789990                 7             |
      4 34                      2             |
        ----+----+----+----+
```

Descriptive Statistics by Sex

SEX=1 (Male)

N Obs	Variable	Minimum	Maximum	Mean	Std Dev
48	NWT	4.00	17.00	11.87	3.77
	WTDAYS	188.00	373.00	308.21	45.93
	MEANWT	8.83	13.03	10.76	0.91
	INTWT	8.92	13.00	10.58	0.85
	SLOPEWT	-0.09	3.86	2.15	0.88
	SRMSWT	0.46	1.19	0.70	0.16

SEX=2 (Female)

N Obs	Variable	Minimum	Maximum	Mean	Std Dev
44	NWT	6.00	18.00	13.11	2.70
	WTDAYS	245.00	383.00	319.18	34.02
	MEANWT	8.32	13.91	10.73	1.21
	INTWT	8.26	13.85	10.59	1.20
	SLOPEWT	-0.07	3.51	2.06	0.89
	SRMSWT	0.43	1.09	0.65	0.14

ii. Monthly weight measures

A data set was created with one weight measure per month. The variables created are defined as follows:

MWT - Average of weight measures in given 30 day month
NWT - Number of weight measures in given month
MWTDAY- Average difference between average day of weight measure and midpoint of the month

A simple description of these measures follows.

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
1104	MWT	843	6.90	14.60	10.70	1.29
	NWT	843	1.00	3.00	1.36	0.53
	MWTDAY	843	-29.00	27.50	0.90	8.15

Since there are 92 toddlers, there is a possibility of 92*12=1104 weight measures. There are 843 months with toddler weight measures, representing 76.4% of possible months with measures. The number of weight measures per month varies from one to three. On average, weight measures are made about 1 day (0.90) after the middle of the month. However, the measure can be made anywhere from 29 days prior to the monthly midpoint (because of the 2 week period included prior to 18 months) or up to 27 days after the minpoint of the month.

The number of subjects with one or more weight measures by month is summarized below:

Number of Weight Measures Per Subject by Month

NUMBER OF WEIGHT MEASURES — MONTH

Freq / Pct / R Pct / C Pct

NUMBER OF WEIGHT MEASURES		1	2	3	4	5	6	Total
1	Freq	21	41	45	49	53	56	562
	Pct	2.49	4.86	5.34	5.81	6.29	6.64	66.67
	R Pct	3.74	7.30	8.01	8.72	9.43	9.96	
	C Pct	48.84	78.85	76.27	69.01	76.81	73.68	
2	Freq	20	10	14	22	14	18	258
	Pct	2.37	1.19	1.66	2.61	1.66	2.14	30.60
	R Pct	7.75	3.88	5.43	8.53	5.43	6.98	
	C Pct	46.51	19.23	23.73	30.99	20.29	23.68	
3	Freq	2	1	0	0	2	2	23
	Pct	0.24	0.12	0.00	0.00	0.24	0.24	2.73
	R Pct	8.70	4.35	0.00	0.00	8.70	8.70	
	C Pct	4.65	1.92	0.00	0.00	2.90	2.63	
Total		43	52	59	71	69	76	843
			5.10	6.17	7.00	8.42	8.19	9.02

NUMBER OF WEIGHT MEASURES — MONTH

Freq / Pct / R Pct / C Pct

NUMBER OF WEIGHT MEASURES		7	8	9	10	11	12	Total
1	Freq	49	52	59	46	56	35	562
	Pct	5.81	6.17	7.00	5.46	6.64	4.15	66.67
	R Pct	8.72	9.25	10.50	8.19	9.96	6.23	
	C Pct	67.12	65.82	77.63	58.23	71.79	39.77	
2	Freq	24	25	16	30	21	44	258
	Pct	2.85	2.97	1.90	3.56	2.49	5.22	30.60
	R Pct	9.30	9.69	6.20	11.63	8.14	17.05	
	C Pct	32.88	31.65	21.05	37.97	26.92	50.00	
3	Freq	0	2	1	3	1	9	23
	Pct	0.00	0.24	0.12	0.36	0.12	1.07	2.73
	R Pct	0.00	8.70	4.35	13.04	4.35	39.13	
	C Pct	0.00	2.53	1.32	3.80	1.28	10.23	
Total		73	79	76	79	78	88	843
			8.66	9.37	9.02	9.37	9.25	10.44

Frequency Missing = 261

B. Height

i. Raw data

In the near future we plan to run simple descriptive summary statistics on height, similar to those done on weight.

ii. Monthly height measures

A data set was created with one height measure per month. The variables created are defined as follows:

MHT - Average of height measures in given 30 day month
NHT - Number of height measures in given month
MHTDAY- Average difference between average day of height measure and midpoint of the month

A simple description of these measures follows.

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
1104	MHT	367	68.50	91.80	79.37	4.38
	NHT	367	1.00	2.00	1.01	0.12
	MHTDAY	367	-29.00	29.00	0.13	9.89

Since there are 92 toddlers, there is a possibility of 92*12=1104 height measures. There are 367 months with toddler height measures, representing 33.2% of possible months with measures. The number of height measures per month varies from one to two. On average, weight measures are made about 0.13 days after the middle of the month. However, the measure can be made anywhere from 29 days prior to the monthly midpoint (because of the 2 week period included prior to 18 months) or up to 29 days after the minpoint of the month.

The number of subjects with one or more height measures by month is summarized below:

Number of Height Measures Per Subject by Month

NUMBER OF HEIGHT MEASURES by MONTH

NUMBER OF HEIGHT MEASURES	Frequency / Percent / Row Pct / Col Pct	1	2	3	4	5	6	Total
1	Frequency	36	22	22	38	27	32	362
	Percent	9.81	5.99	5.99	10.35	7.36	8.72	98.64
	Row Pct	9.94	6.08	6.08	10.50	7.46	8.84	
	Col Pct	97.30	100.00	100.00	100.00	100.00	100.00	
2	Frequency	1	0	0	0	0	0	5
	Percent	0.27	0.00	0.00	0.00	0.00	0.00	1.36
	Row Pct	20.00	0.00	0.00	0.00	0.00	0.00	
	Col Pct	2.70	0.00	0.00	0.00	0.00	0.00	
Total		37	22	22	38	27	32	367
		10.08	5.99	5.99	10.35	7.36	8.72	100.00

NUMBER OF HEIGHT MEASURES by MONTH

NUMBER OF HEIGHT MEASURES	Frequency / Percent / Row Pct / Col Pct	7	8	9	10	11	12	Total
1	Frequency	28	32	22	34	27	42	362
	Percent	7.63	8.72	5.99	9.26	7.36	11.44	98.64
	Row Pct	7.73	8.84	6.08	9.39	7.46	11.60	
	Col Pct	100.00	100.00	100.00	100.00	100.00	91.30	
2	Frequency	0	0	0	0	0	4	5
	Percent	0.00	0.00	0.00	0.00	0.00	1.09	1.36
	Row Pct	0.00	0.00	0.00	0.00	0.00	80.00	
	Col Pct	0.00	0.00	0.00	0.00	0.00	8.70	
Total		28	32	22	34	27	46	367
		7.63	8.72	5.99	9.26	7.36	12.53	100.00

Frequency Missing = 737

C. Diet

i. Raw data

In the near future , simple summary statistics on kcal measures similar to those done on the weight measures will be availiable.

ii. Monthly diet measure

In the diet data, restricted by longitudinal study and protocol period, there are 91 subjects. In creating this file, each subject is forced to have an observation for each month whether or not there is data for that month. Hence, this file has 1092 observations (91*12). Only 472 of these observations actually have diet data however, a meager 43% of the total.

The overall mean kcals for all subjects for this data set is 963.79. Males have a lower average of 818.5 vs the female average of 975.

The monthly toddler diet file created three new variables:

MDIET = average diet measure for each month
MDAY = average difference of the diet measurements distance from the midpoint of the month
NDIET = number of diet measures per month (per subject)

A few descriptive statistics for these measures are given in the following table:

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
1092	MDIET	472	0.00	2775.50	969.31	445.47
	NDIET	472	1.00	6.00	2.17	0.71
	MDAY	472	-29.00	24.50	-0.11	8.43

The timing of diet measurements varies widely, as shown by the max and min values for the variable mday. However, on the average, the measurements are only made a fraction of a day (-.11) away from the midpoint of the month. The average number of diet measurements is around 2, with the maximum per subject being 6 per month.

A table which summarizes the number of diet measures per subject by month can be found on the following page.

Table of Number of Diet measures per Subject by Month

NDIET Frequency / Percent	MONTH 1	2	3	4	5	6	Total
1	4 0.85	4 0.85	7 1.48	7 1.48	8 1.69	0 0.00	34 7.20
2	29 6.14	53 11.23	42 8.90	46 9.75	35 7.42	35 7.42	370 78.39
3	3 0.64	2 0.42	5 1.06	2 0.42	1 0.21	3 0.64	25 5.30
4	7 1.48	6 1.27	3 0.64	4 0.85	1 0.21	6 1.27	41 8.69
5	1 0.21	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1 0.21
6	1 0.21	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1 0.21
Total	45 9.53	65 13.77	57 12.08	59 12.50	45 9.53	44 9.32	472 100.00

(Continued)

Table of NDIET by MONTH continued:

NDIET Frequency / Percent	MONTH 7	8	9	10	11	12	Total
1	0 0.00	2 0.42	2 0.42	0 0.00	0 0.00	0 0.00	34 7.20
2	33 6.99	26 5.51	20 4.24	17 3.60	19 4.03	15 3.18	370 78.39
3	1 0.21	2 0.42	1 0.21	1 0.21	1 0.21	3 0.64	25 5.30
4	2 0.42	2 0.42	3 0.64	5 1.06	1 0.21	1 0.21	41 8.69
5	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1 0.21
6	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1 0.21
Total	36 7.63	32 6.78	26 5.51	23 4.87	21 4.45	19 4.03	472 100.00

Frequency Missing = 620

V. Auto-Regression Results

A. Description of the Method

A unique aspect of the CRSP project is the longitudinal nature of the data collected. This design strategy allows profiles to be constructed for individual subjects over time. Since data are collected on a regular basis on anthropometric measures (height and weight) , diet (Kcal), and morbidity variables (Days ill, days with diarrhea, days with fever), profiles can be constructed on a subject specific basis for each of these types of data. The hope of the CRSP is that the simultaneous longitudinal collection of these variables will allow the relationship between function and intake to be quantified. Early attempts to summarize these data in the form of individual profiles were presented at a meeting of the CRSP projects in Los Angles in Feb., 1986. Although the individual plots were useful, this descriptive summary fell far short of characterizing the functional relationships. Simple linear regressions on individual variables provided more of a summary of individual relationships over time, but a strategy for integrating the various longitudinal measures was lacking.

Further work was done in each project characterizing morbidity variables, and generating linear regressions prior to the June meeting of statistician at Purdue. It was clear at this time that another analysis strategy was needed. Steve Selvin suggested the auto-regressive modelling strategy proposed by Rosner, Munoz, Tager, Speizer and Weiss, ("The use of an autoregressive model for the analysis of longitudinal data in epidemiologic studies" , 1985, Statistics in Medicine, Vol. 4., 457-467). This strategy was adopted by the group of statisticians. The strategy has several important advantages. First, models can be developed that preserve a logical time sequence for cause and effect. Second, the strategy makes use of all repeated measures, and allows tests to be based on sample sizes that correspond to the number of measures, as opposed to the number of subjects. Third, the method allowed for testing of different time intervals between intake and outcome, so that the nature or the auto-correlative stucture could be examined. Fourth, the method could be applied using conventional, existing software.

There were several limitations in applying the procedure to the CRSP data that were also readily apparent. First, the method was designed for complete data. Longitudinal plots of Mexico data (and of other CRSP projects) illustrated frequent incomplete data. Second, time intervals between data collection points are assumed to be equally spaced. Data in the Mexico project (and other CRSP projects) are not equally spaced due to field logistics.
Third, the method did not
explicitly account for subject effects, but assumed equal auto-correlation across subjects. Fourth, unequal numbers of measures for a variable are present for different subjects at a given time, so that assumptions of homogeneous variance are violated.

160

Although there are limitations in applying the methodology to the CRSP data, each project agreed to try to fit models to their data in a standard fashion. This section of the report summarizes results for these modeling efforts for the Mexico project.

The basic regression equation used for modeling is as follows:

$$y_{it}=\alpha+\gamma_0 y_{i(t-1)}+\gamma_1 x_{i(t-1)}+\beta_0 z_{0i}+\beta_1 z_{1i}+\epsilon_{it}$$

where

y_{it} is the value of the dependent variable for the ith subject at time t

$y_{i(t-1)}$ is the value of the dependent variable for the ith subject at time (t-1)

$x_{i(t-1)}$ is the value of another variable for the ith subject at time (t-1)

z_{0i} is the baseline valuse of the dependent variable for the ith subject

z_{1i} is the baseline value for another variable for the ith subject and

ϵ_{it} is a random error.

The model is fit using ordinary least squares, and test statistics presented assume that the error ϵ_{it} is independent and identically normally distributed. Models fit for the Mexico data summarized in this report are for toddlers using weight as a dependent variable. Other models using other dependent variables are currently being investigated. Models are first fit only allowing dependent variables to enter if they have complete data on all independent variables included in the model. Subsequent models are fit using indicator variables to allow inclusion of more data even when a subset of independent varibles may be missing.

B. Regression results on complete data

As noted earlier, the regression models presented here used mean weight for toddlers as the dependent variable. The first models regress mean weight on only a few independent variables. Successive models progressively became more complicated. The independent variables used include baseline weight, baseline height, baseline diet, lag weight, household size, sex, ses, and morbidity variables. In this analysis, two seperate sets of morbidity variables were tried. Both sets contained lag variables for fever, diarrhea, and illness days as ratios to the number of days observed. Similar ratios for the first 3 months of data were used as baseline variables. The difference between the sets is that one set classified morbidity information in dichotomous groups of illness present or absent. The other set kept the actual values of the ratios. (The variable names for the dichotomous variables use the standardized morbidity names with 01 as a suffix, i.e. LSICK01) The table on the following page summarizes the results of the intial regression runs. The actual output for these runs can be found in the appendix of this report. A discussion of the results follows the table.

Notes on the notation in the table:

The model numbers in the table run horizontally across the top row. The next three rows display the mean square errors, r squares, and number of observations for each model. The remaining rows contain information on the p values of the parameter estimates for independent variables. If a variable was not used in a model, it will have a blank space in the corresponding model column. Variables in the model will have NS displayed if the p value was greater than .15 and otherwise will show p values themselves.

Variable name	Model #'s 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MSE	.72	.43	.43	.45	.43	.44	.43	.43	.45	.45	.43	.45	.44	.44	.45	.46
R square	.58	.75	.75	.76	.78	.77	.78	.78	.78	.77	.77	.77	.78	.78	.77	.77
N	445	445	434	251	250	251	250	250	229	229	250	251	250	250	229	229
BWT	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
BHT	<.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
LWT		<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
BKCAL			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
LKCAL				.110	NS	.109	NS	NS	NS	NS	NS	.108	NS	NS	NS	NS
BSICK					.062		.056	.056	.070	.070						
BFEVR					NS		NS	NS	NS	NS						
BDIAR					NS		NS	NS	NS	NS						
LSICK						NS	NS	NS	NS	NS						
LFEVR						NS	NS	NS	NS	NS						
LDIAR						.001	.003	.003	.005	.007						
HHSIZE								NS	NS	NS				NS	NS	NS
SEX										NS						NS
SES1									NS	NS					NS	NS
SES2									NS	NS					NS	NS
SES3									NS	NS					NS	NS
SES4									NS	NS					NS	NS
BSICK01											NS		NS	NS	NS	NS
BFEVR01											NS		NS	NS	NS	NS
BDIAR01											NS		NS	NS	NS	NS
LSICK01												NS	NS	NS	NS	NS
LFEVR01												NS	NS	NS	NS	NS
LDIAR01												.007	.012	.012	.027	.035

Discussion:

Each of the models fit are for mean weight for months in which there was complete todder data in Mexico. A total of 16 models are reported in the table. These models include data on subjects only when all other variables are present for the model, and hence are based on complete data. Inspection of the number of months available for the models (N) indicates that the largest drop in available months occurs with the addition of lag(Kcal) (LKCAL). At the time data was abstracted for these regressions, data on LKCAL was not complete. The 445 months included in the first model represent data on 68 subjects, (a average of 6.5 observations per subject). When complete data on lag(Kcal) is required for the model, there are only 251 months included (for an average of 3.5 observations per subject).

All of the models are statistically significant, but this significance primarily reflects the predictive power of baseline weight and lag(weight) on current weight. Note that the mean square error in the models drops from 0.72 with inclusion of base weight (BWT) and base height(BHT) to 0.43 with inclusion of lag(weight)LWT. The proportion of variance explained by the models is relatively constant for each of the other models fit (ie. Models 3-12). When lag(weight) is included in the model, base weight (BWT) and lag(weight) (LWT) are significant and base(height) is no longer significant.

Of principal interest is lag(Kcal) in the models. There is a possibility that LKCAL may be close to entering the model (see models 4, 6, and 12). Coefficients for LKCAL in each of these models are positive, as shown below.

Model	Coefficient	SD
4	0.0918	0.0572
6	0.0730	0.0544
12	0.0706	0.0581

The direction of the coefficients is what one might expect from the somewhat obvious relationship between intake and weight gain. The significance levels are at best marginal.

Other variables that appear to be related to weight are baseline illness (BSICK) and lag(Diarrhea) (LDIAR). Coefficients for these variables in equations 5-8 are as follows:

	BSICK		LDIAR	
Model	Coefficient	SD	Coefficient	SD
5	0.0537	0.0287	----	----
6	-----	------	-0.104	0.032
7	0.0558	0.0290	-0.095	0.032
8	0.0562	0.0292	-0.096	0.031

The fact that baseline illness (number of sick days in first 3 months) appears to be positively related to weight may reflect some catch up growth. The negative effect of the previous months diarrhea also has some logical intuitive appeal.

C. Regression Results using Indicator dummy variables

As the preceding regression results illustrate, large numbers of observations can be lost due to missing values. The model with the smallest number of independent variables has 445 observations, while the model containing all the independent variables is only able to use 229 observations. Because a missing value on any single independent variable causes the loss of an observation from the regression, information is lost for other variables. George McCabe has been working with a method of running these regression models which retains all the observations in a regression run. This is accomplished by replacing missing values with zeros. To distinguish these zeros from true values, an indicator variable is constructed for each variable with the value of 1 if the variable was missing, 0 if it was present. The indicator variable can be interpreted as a measure of whether or not dates for which data is missing on a particular variable differ from dates for which data is present (in the sense that the mean value for the dependent variable may differ). In a particular model, we hope that data is missing at random, and hence that the indicator variable created for missing data is non-significant. On the other hand, we hope that other variables contribute significantly to explaining variation in the dependent variable.

Using the model parameterization for which the models are fit does not allow expiicit testing of the separate effects of random missing data, and significance of an explainatory variable. Although construction of such tests is possible using other parameterizations, it is more complex and had not been done at this time. (See section V.E for a discussion of models that separate these two effects.) The hypothesis of significance of an explanatory variable is testable using the indicator variable models using single degree of freedom tests. These tests may be unduely conservative, since the residual variability may be overstated due to including observations where there are missing values. The indicator variable can not be tested to assess data missing at random directly. If a two degree of freedom test is performed (the variable is considered in conjunction with the indicator variable) the significance of the parameter estimates can be judged. The weakness of this test is that the test is a joint test for random missing data and significance, one hypotheses which we want to accept and one which we want to reject. In general, if missing data appears at random, we would anticipate less significant results using the indicator variable strategy and a two degree of freedom test as compared with the analyses based on the complete data. The table on the following page summarizes regression runs on the dependent variable WT, using this method.

Table 2: Regression Runs with Indicator Variables

	Model #'s 1	2	3	4	5	6	7	8	9	10
MSE	.43	.44	.44	.44	.43	.43	.44	.44	.43	.43
R SQUARE	.75	.75	.75	.75	.75	.75	.75	.75	.75	.75
N	444	444	444	444	444	444	444	444	444	444
BWT	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
BHT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
LWT	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
BKCAL		NS	NS	NS	NS	NS	NS	NS	NS	NS
BKCAL DBKCAL		NS	NS	NS	NS	NS	NS	NS	NS	NS
LKCAL			NS	NS	NS	NS	NS	NS	NS	NS
LKCAL DLKCAL			NS	NS	NS	NS	NS	NS	NS	NS
BSICK				NS		NS			NS	NS
BFEVR				NS		NS			NS	NS
BD[illegible]R				NS		NS			NS	NS
L[illegible]K					NS	NS			NS	NS
L[illegible]K DLSICK					NS	NS			NS	NS
LFEVR					NS	NS			NS	NS
LFEVR DLSICK					NS	NS			NS	NS
LDIAR					.016	.023			.023	.024
LDIAR DLSICK					.042	.055			.057	.059
HHSIZE									NS	NS
SES1							NS	NS		
SES1 DSES1							NS	NS		
SES2							NS	NS		
SES2 DSES1							NS	NS		
SES3							NS	NS		
SES3 DSES1							NS	NS		
SE[illegible]							NS	NS		
[illegible]E D[illegible]							NS	NS		
SEX										NS

*Note on Notation: The format of this table follows that of the first regression table. It is important to note that although the independent variable names have been kept the same, the variables in this table have zeros in the place of missing values.

A second note concerns the dummy variables. Dummy variables were not constructed for BWT, BHT, LWT, BSICK, BFEVR, BDIAR, SEX, or HHSIZE since these variables have virtually complete data for all the observations in the subset we are using. Also, several of the variables have missing values for exactly the same observations. In these cases, a single indicator variable is used for all the appropriate variables. This occurs for the lag morbidity variables and SES variables.

Discussion:

Because this analysis was run on a subset of subjects who had complete data for the variables baseline height, baseline weight, and lag(weight), model #1 in this table corresponds exactly to model #2 in the earlier table of results. This methodology retains all observations during analysis so that N remains a constant 444 in all the regression runs. The proportion of variance explained in these models remains virtually constant throughout. Again, lag(weight) and baseline weight are highly significant predictors of mean weight.

It is most interesting to note the differences in these results compared to the earlier runs using complete data. The variable of lag(KCAL) which appeared close to entering on earlier runs becomes less significant in this analysis. All p values are 'NS' in the table, signifying p values greater than .15. A similar change in significance occurs for the variable for baseline illness (BSICK). In the first analysis, the p values for this variable ranged from .056 to .70. In these regressions, all p values are greater than .15 and the lowest value is actually .33 for model #10. Finally, the variable for lag(diarrhea) changes from being highly significant in the initial runs (p values of .001 to .007), to having only borderline significance in this analysis (p values of .042 to 0.059). The coefficients remain negative for LDIAR as in the earlier models.

The changes in significance from the earlier results may be expected assuming a random missing data pattern. However, inspection of the changes in models indicates other differences. For example, the variable BSICK is significant in model 5 using complete data, but is non-significant in the comparable model 4 using the indicator variables and more cases. The coefficients for BSICK in the two models are as follows:

Number of Obs	BSICK Coeff	SD	T-test	p-value
Complete 251	0.0537	0.0287	1.87	0.0627
Indicator 445	0.0170	0.0197	0.961	0.3895

47

The coefficients for BSICK appear different in the two models. Data on BSICK is available for all 445 observations. A possible interpretation of these differing results is that the complete data subset of observations is a select group, and that the significance of BSICK in this data set is the result of that selection.

Another method of comparing the outputs for these two analyses was undertaken. As discussed above, holding all observations in the models is important if the subset of observations with complete data are not adequate representatives of the whole data set. In the models fit here, the number of observations used drops off most noticeably when the variable LKCAL is added. Due to this fact, a test of the differences in the parameter estimates for observations with complete data versus those with some missing values was undertaken at this point in the analysis. Observations with complete data available on the variables BWT,BHT,BKCAL, and LWT were divided into two subsets depending on the presence or absence of LKCAL. If regressions are run on the subsets separately, the outputs given below result.

SUBSET 1:LKCAL present (251 observations)

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.088987	1.05091410	-0.085	0.9326
BWT	1	0.340298	0.07911277	4.301	0.0001
BHT	1	0.012513	0.01839357	0.680	0.4970
BKCAL	1	-0.081627	0.12652418	-0.645	0.5194
LWT	1	0.629264	0.05445295	11.556	0.0001

SUBSET 2: LKCAL missing (183 observations)

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	0.364014	1.45961498	0.249	0.8033
BWT	1	0.253826	0.08186116	3.101	0.0022
BHT	1	0.008277	0.02444957	0.339	0.7354
BKCAL	1	0.001138	0.14638398	0.008	0.9938
LWT	1	0.693604	0.05973227	11.612	0.0001

It is difficult to judge the differences in the parameter estimates without using appropriate statistical tests. A reference cell parameterization was used to run a single model containing BWT, BHT, BKCAL, and LWT in combination with newly created variables which represent these same variables restricted to the subset of observations with LKCAL missing. These new variables are suffixed with "B" (i.e. BWTB, BHTB, etc.) The parameter estimates and tests from this regression run are shown below.

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.088987	1.04536257	-0.085	0.9322
BWT	1	0.340298	0.07869485	4.324	0.0001
BHT	1	0.012513	0.01829641	0.684	0.4944
BKCAL	1	-0.081627	0.12585581	-0.649	0.5170
LWT	1	0.629264	0.05416530	11.617	0.0001
I1B	1	0.453001	1.80418488	0.251	0.8019
BWTB	1	-0.086472	0.11399223	-0.759	0.4485
BHTB	1	-0.004236	0.03068338	-0.138	0.8903
BKCALB	1	0.082765	0.19387636	0.427	0.6697
LWTB	1	0.064340	0.08096369	0.795	0.4272

Dep Variable: WT
Test of I1B, BWTB, BHTB, BKCALB, LWTB

Numerator:	0.1500	DF:	5	F value:	0.3375
Denominator:	0.4444	DF:	424	Prob >F:	0.8901

The five degree of freedom F test is an overall test of differences between the parameter estimates for the subset with LKCAL missing and the parameter estimates for the full set of data. This test result is not significant. The T tests for the "B" suffixed variables are single degree of freedom tests for significant differences between each variable pair. For example, the T test associated with BWTB tests whether the parameter estimate for BWT in the subset with LKCAL missing differs significantly from the parameter estimate for BWT in the full data set. The p values for all these single degree of freedom tests of differences are nonsignificant. These results lead one to conclude there do not appear to be important differences associated with the presence or absence of LKCAL in the variables considered here.

D. Preliminary results of subject effects in models

Subject effects were added to two simple models to observe the results. This was accomplished by using an ID variable for individuals as a class variable in the GLM program of SAS.
The first model regressed the mean wt values on lag weight. The output is given below.

General Linear Models Procedure

Dependent Variable: WT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	69	598.615516	8.675587	20.30	0.0001
Error	375	160.297748	0.427461		
Corrected Total	444	758.913265			

R-Square	C.V.	Root MSE	WT Mean
0.788780	6.0043983	0.653805	10.8887640

Source	DF	Type I SS	Mean Square	F Value	Pr > F
ID	68	560.0753	8.2364	19.27	0.0001
LWT	1	38.5402	38.5402	90.16	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > |T|	Std Error of Estimate
LWT	0.454415142	9.50	0.0001	0.0478568357

This model can be compared to a simple regression of mean weight on lag weight not controlling for subject effects. The output of this model follows on the next page.

Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	1	547.16060	547.16060	1144.695	0.0001
Error	443	211.75267	0.47800		
C Total	444	758.91326			

Root MSE	0.69137	R-Square	0.7210
Dep Mean	10.88876	Adj R-Sq	0.7203
C.V.	6.34942		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	1.584949	0.27693578	5.723	0.0001
LWT	1	0.868831	0.02567974	33.833	0.0001

By the r square in the simpler model, lag weight appears to be explaining about 72 percent of the total variability of mean weight. In the subject effect model, the r square of .79 gives the percentage explained by both subject effects and lag weight. The fraction explained by lag weight can be calculated as 38.54/758.91 or .05. Thus the percent of variability explained by lag weight alone is to a large extent due to its relation to subject effects.

Similar regressions were run for models with LWT and LKCAL. These outputs are shown below.

General Linear Models Procedure

Dependent Variable: WT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	64	393.558770	6.149356	15.84	0.0001
Error	191	74.153066	0.388236		
Corrected Total	255	467.711836			

R-Square	C.V.	Root MSE	WT Mean
0.841456	5.7496956	0.623086	10.8368490

Source	DF	Type I SS	Mean Square	F Value	Pr > F
ID	62	375.7487	6.0605	15.61	0.0001
LWT	1	16.4448	16.4448	42.36	0.0001
LKCAL	1	1.3653	1.3653	3.52	0.0623

Parameter	Estimate	T for HO	Pr > T	Std Error of estimate
LWT	0.423425095	6.07	0.0001	0.0697255267
LKCAL	0.140377559	1.88	0.0623	0.0748578205

****

Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	341.40555	170.70277	341.929	0.0001
Error	253	126.30629	0.49923		
C Total	255	467.71184			

Root MSE	0.70657	R-Square	0.7299
Dep Mean	10.83685	Adj R-Sq	0.7278
C.V.	6.52002		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|
INTERCEP	1	1.407700	0.36881184	3.817	0.0002
LWT	1	0.880706	0.03372163	26.117	0.0001
LKCAL	1	0.019818	0.05708326	0.347	0.7287

As with the earlier model, the variability explained by lag weight is largely due to a subject effect. It is of interest here to examine the effect on LKCAL when subject effects are added to the model. If a simple regression of mean weight on lag weight is run for the subset of observations with LKCAL, the sums of squares for the model is 341.3454 and the r square is .7298. Comparing this to the simple regression with LWT and LKCAL, it is readily seen that LKCAL only adds .0001 to the r square. In the model with subject effects, the variability explained by LKCAL is 1.365/467.712 or .0029. The addition of subject effects therefore has the opposite effect on the strength of LKCAL, although the amount of variability explained remains quite small in both models.

E. Effect of Indicator Variables in Models

To evaluate the effect of using indicator variable models to deal with missing values, a small sample of the toddler data was selected for simple regression runs. The examples produced by these runs will be used to illustrate some of the results of using indicator variables. Although only simple cases are dealt with here, this discussion will provide a basic understanding of some of the factors involved in these models.

Variables in the data are as follow:

Ind_id	Individual subject id
MONTH	Month of toddlers age (1=18 months)
MWT	Mean weight of toddler in this month
LAGWT	Mean weight of toddler in previous month (missing if previous weight was missing)
LAGWTA	Mean weight of toddler in previous month, but coded as 0 if the previous months weight was missing
LAGWTB	Mean weight of toddler in previous month, but coded as 10.68273077 (mean of lagwt when mwt is present) when lagwt is missing
IWT	0 if lagwt is present 1 if lagwt is missing
IMISS	0 if lagwt and mwt are present 1 if lagwt or mwt are missing

A listing of the data used in the trial analyses follows:

OBS	IND_ID	MONTH	MWT	LAGWT	LAGWTA	IWT	IMISS
1	38	12	9.3000	10.0000	10.0000	0	0
2	58	10	11.0000	11.9000	11.9000	0	0
3	58	11	12.2000	11.0000	11.0000	0	0
4	58	12	12.4000	12.2000	12.2000	0	0
5	568	4	12.0755	9.6500	9.6500	0	0
6	568	5	10.2000	12.0755	12.0755	0	0
7	568	6	10.2500	10.2000	10.2000	0	0
8	568	7	9.8000	10.2500	10.2500	0	0
9	568	8	10.3000	9.8000	9.8000	0	0
10	568	9	10.5000	10.3000	10.3000	0	0
11	568	10	10.5000	10.5000	10.5000	0	0
12	568	11	10.5000	10.5000	10.5000	0	0
13	568	12	10.3500	10.5000	10.5000	0	0
14	38	1	.	.	0.0000	1	1
15	38	2	.	.	0.0000	1	1
16	38	3	.	.	0.0000	1	1
17	38	4	9.0000	.	0.0000	1	1
18	38	5	.	9.0000	9.0000	0	1
19	38	6	.	.	0.0000	1	1
20	38	7	.	.	0.0000	1	1
21	38	8	8.8000	.	0.0000	1	1
22	38	9	.	8.8000	8.8000	0	1
23	38	10	.	.	0.0000	1	1
24	38	11	10.0000	.	0.0000	1	1
25	58	1	.	.	0.0000	1	1
26	58	2	10.7000	.	0.0000	1	1
27	58	3	.	10.7000	10.7000	0	1
28	58	4	.	.	0.0000	1	1
29	58	5	11.5000	.	0.0000	1	1
30	58	6	.	11.5000	11.5000	0	1
31	58	7	.	.	0.0000	1	1
32	58	8	.	.	0.0000	1	1
33	58	9	11.9000	.	0.0000	1	1
34	568	1	9.0000	.	0.0000	1	1
35	568	2	.	9.0000	9.0000	0	1
36	568	3	9.6500	.	0.0000	1	1

174

First, descriptive statistics were calculated overall.

N of Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
36	MWT	21	8.80	12.40	10.47	1.07
	LAGWT	18	8.80	12.20	10.44	1.02
	LAGWTA	36	0.00	12.20	5.22	5.34
	IWT	36	0.00	1.00	0.50	0.51

Next, these statistics were calculated by subset of complete data using the variable IMISS.

------------------------------ IMISS=0 ------------------------------

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
13	MWT	13	9.30	12.40	10.72	0.95
	LAGWT	13	9.65	12.20	10.68	0.86
	LAGWTA	13	9.65	12.20	10.68	0.86
	IWT	13	0.00	0.00	0.00	0.00

------------------------------ IMISS=1 ------------------------------

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
23	MWT	8	8.80	11.90	10.07	1.19
	LAGWT	5	8.80	11.50	9.80	1.22
	LAGWTA	23	0.00	11.50	2.13	4.17
	IWT	23	0.00	1.00	0.78	0.42

Next, simple linear regression models were fit. The models fit are as follows:

Model	Dependent Variable	Independent Variable
1	MWT	LAGWT
2	MWT	LAGWTA
3	MWT	LAGWTA IWT
4	MWT	LAGWTB
5	MWT	LAGWTB IWT

Model: MODEL1
Dep Variable: MWT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	1	1.33851	1.33851	1.566	0.2368
Error	11	9.40275	0.85480		
C Total	12	10.74126			

Root MSE	0.92455	R-Square	0.1246
Dep Mean	10.72120	Adj R-Sq	0.0450
C.V.	8.62359		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	6.555639	3.33869851	1.964	0.0754
LAGWT	1	0.389934	0.31160908	1.251	0.2368

Model: MODEL2
Dep Variable: MWT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	1	2.50922	2.50922	2.358	0.1411
Error	19	20.21489	1.06394		
C Total	20	22.72410			

Root MSE	1.03148	R-Square	0.1104
Dep Mean	10.47264	Adj R-Sq	0.0636
C.V.	9.84923		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	10.035395	0.36294624	27.650	0.0001
LAGWTA	1	0.066119	0.04305397	1.536	0.1411

Model: MODEL3
Dep Variable: MWT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	3.44667	1.72333	1.609	0.2275
Error	18	19.27744	1.07097		
C Total	20	22.72410			

Root MSE	1.03488	R-Square	0.1517
Dep Mean	10.47264	Adj R-Sq	0.0574
C.V.	9.88171		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	6.555639	3.73709820	1.754	0.0964
LAGWTA	1	0.389934	0.34879271	1.118	0.2783
IWT	1	3.513111	3.75496658	0.936	0.3619

Model: MODEL4
Dep Variable: MWT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	1	1.33852	1.33852	1.189	0.2891
Error	19	21.38558	1.12556		
C Total	20	22.72410			

Root MSE	1.06092	R-Square	0.0589
Dep Mean	10.47264	Adj R-Sq	0.0094
C.V.	10.13042		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	6.307078	3.82684878	1.648	0.1158
LAGWTB	1	0.389935	0.35757138	1.091	0.2891

Model: MODEL5
Dep Variable: MWT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	3.44667	1.72333	1.609	0.2275
Error	18	19.27744	1.07097		
C Total	20	22.72410			

Root MSE	1.03488	R-Square	0.1517
Dep Mean	10.47264	Adj R-Sq	0.0574
C.V.	9.88171		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	6.555639	3.73709820	1.754	0.0964
LAGWTB	1	0.389934	0.34879271	1.118	0.2783
IWT	1	-0.652444	0.46503043	-1.403	0.1776

Discussion: Note that the model uses only 13 observations. The mean square error is 0.8548, based on 11 degrees of freedom. The overall variance of the weight measures, sst/df=0.8951. This model can be contrasted with the results of Model 2. Here all weight measures are used, regardless of whether the previous weight measure was taken. The number of observations is increased to 21, with the variance of these weight measures increasing to sst/df=22.72/20= 1.1362. The additional weight measures that were added had a larger standard deviation than the weight measures used in Model 1.

# of Measures	In Model	Variance
13	1	0.895
8	2 but not 1	1.498
21	2	1.136

The total sum of squares is the same in models 2-5, so all have an increased baseline variability in weight.

Addition of the LAGWTA variable in model 2 is difficult to interpret by itself since the mean LAGWTA will be shifted down towards zero as a results of coding missing LAGWTA values as zero. However, adding IWT to the equation, as in Model 3 produces regression coefficients for LAGWTA and the intercept that are identical to those in Model 1. Note that the test statistic for LAGWTA differs in Model 3 from that in Model 1 due to different total sums of square error. In general, we expect the test statistic to be smaller in absolute magnitude in Model 3, since we have included dependent variables in the equation without including independent variables to explain corresponding varibility. Note that in Model 3, the variable IWT is correlated with the variable LAGWTA. The effect of that correlation is to make the IWT variable in Model 3 not directly interpretable.

Additional models 4 and 5 use LAGWTB with values of the mean lag weight replacing missing lagwt values. This has the advantage that the variable LAGWTB and IWT are independent. The results of Model 4 indicate that the intercept for weight differs from that in Model 1, due to the addition of the weight measures without comparable lag weights. The coefficient for LAGWTB is the same as in Models 1 and 3, but the standard error differs from that in Model 3 since an additional variable for missing lag variables has not been included. The inclusion of this variable in Model 5 reduces the MSE, and hence changes the t-test for LAGWTB. Note that in Model 5, the variable IWT can be interprsted as a dummy variable that tests for a random pattern in the missing values. The lack of a random pattern will result in a significant coefficient for IWT.

F. Description of Extent and Impact of Missing Data

Descriptive statistics were gathered on the toddler data file used for regressions. From this information, a picture of the patterns of missing data can be drawn. The data set currently being studied is not yet complete. Thus, some of the missing data patterns shown may improve in the future. To get an idea of how much this might be true, toddlers were categorized by their date of entry. Tables showing missing values for these different entry groups give some idea whether the missing data is for younger toddlers for whom data may be still en route.

The toddler regression file contains only those observations taken from month 4 to month 12 (month 4 = birthdate + 637 to birthdate + 667 , month 5 = birthdate + 667 to birthdate + 697). The earlier three months of data were used to create baseline measures.

A initial view of the amount of data available for analysis can be seen by looking at the number of observations and subjects by variable.

Longitudinal Data

Name	Number of Obs.	Number of Subjects
KCAL	503	90
LKCAL	482	91
WT	689	92
LWT	660	92
HT	286	92
LHT	262	92

Cross Sectional Data

Name	Number of Obs.	Number of Subjects
BKCAL	702	78
BHT	630	70
BWT	693	77
SES4	738	82
SES2	783	87
SES3	783	87
SES1	783	87

It would be hoped that once the data set is complete that the static variables will not be as limiting on the number of subjects as is shown above. The longitudinal variables appear deceptively strong. Using the planned data analysis, it is necessary to have a reasonable distribution of these observations throughout the study period. The following table shows the number of subjects with data present for WT, LWT, LKCAL, and SEX broken down by month.

Month		4	5	6	7	8
	N	22	23	26	26	35
	MWT	10.07	10.25	10.37	10.76	10.60
MEANS	LAGWT	10.06	10.11	10.13	10.63	10.65
	LAGDT	1402.32	1139.17	1381.	1403.55	1240.82
	SEX	1.45	1.48	1.50	1.58	1.63
	MONTH	9	10	11	12	
	N	30	35	30	41	
MEANS	MWT	10.92	10.88	11.27	11.59	
	LAGWT	10.54	10.85	11.02	11.37	
	LAGDT	1308.80	1353.50	1687.12	1716.05	
	SEX	1.57	1.46	1.57	1.44	

The number of subjects per month drops down to an average of about 30. The impact that this could have on longitudinal data analysis is self evident.

A more in depth look at the data available for subjects by month is considered in the following tables. These tables display the number of observations per subject (the maximum possible in the regression file being 9). The tables are also categorized by entry dates to provide information on which cohort of toddlers is missing the most data.

Number of Monthly Diet Observations per Subject by Entry Date

Number of Obs. — Entry Date into Protocol Period

Frequency / Row Pct / Col Pct	1	2	3	Total
0	2	0	0	2
	100.00	0.00	0.00	
	10.53	0.00	0.00	
1	1	2	0	3
	33.33	66.67	0.00	
	5.26	5.13	0.00	
2	1	4	0	5
	20.00	80.00	0.00	
	5.26	10.26	0.00	
3	1	6	0	7
	14.29	85.71	0.00	
	5.26	15.38	0.00	
4	1	4	3	8
	12.50	50.00	37.50	
	5.26	10.26	8.82	
5	2	3	10	15
	13.33	20.00	66.67	
	10.53	7.69	29.41	
6	4	10	12	26
	15.38	38.46	46.15	
	21.05	25.64	35.29	
7	3	2	2	7
	42.86	28.57	28.57	
	15.79	5.13	5.88	
8	3	5	6	14
	21.43	35.71	42.86	
	15.79	12.82	17.65	
9	1	3	1	5
	20.00	60.00	20.00	
	5.26	7.69	2.94	
Total	19	39	34	92
	20.65	42.39	36.96	100.00

Key

- 1 - Jan84 to Jun84
- 2 - Jul84 to Dec84
- 3 - Jan85 to Jul85

Number of Lag Diet Observations Per Subject by Entry Date

Number of Obs. Entry Date into Protocol Period

Frequency / Row Pct / Col Pct	1	2	3	Total
0	1 100.00 5.26	0 0.00 0.00	0 0.00 0.00	1
1	1 16.67 5.26	5 83.33 12.82	0 0.00 0.00	6
2	1 14.29 5.26	6 85.71 15.38	0 0.00 0.00	7
3	1 20.00 5.26	3 60.00 7.69	1 20.00 2.94	5
4	1 9.09 5.26	3 27.27 7.69	7 63.64 20.59	11
5	2 11.76 10.53	6 35.29 15.38	9 52.94 26.47	17
6	4 22.22 21.05	6 33.33 15.38	8 44.44 23.53	18
7	5 38.46 26.32	3 23.08 7.69	5 38.46 14.71	13
8	2 28.57 10.53	4 57.14 10.26	1 14.29 2.94	7
9	1 14.29 5.26	3 42.86 7.69	3 42.86 8.82	7
Total	19 20.65	39 42.39	34 36.96	92 100.00

Key
==========
1 - Jan84 to Jun84
2 - Jul84 to Dec84
3 - Jan85 to Jun85

173

Number of Monthly Weight Observations Per Subject By Entry Date

Number of Observations	Frequency / Row Pct / Col Pct	Entry Date into Protocol Period 1	2	3	Total
3	Frequency	1	0	0	1
	Row Pct	100.00	0.00	0.00	
	Col Pct	4.17	0.00	0.00	
4	Frequency	4	0	0	4
	Row Pct	100.00	0.00	0.00	
	Col Pct	16.67	0.00	0.00	
5	Frequency	5	1	0	6
	Row Pct	83.33	16.67	0.00	
	Col Pct	20.83	3.03	0.00	
6	Frequency	5	3	1	9
	Row Pct	55.56	33.33	11.11	
	Col Pct	20.83	9.09	2.86	
7	Frequency	6	6	9	21
	Row Pct	28.57	28.57	42.86	
	Col Pct	25.00	18.18	25.71	
8	Frequency	1	8	11	20
	Row Pct	5.00	40.00	55.00	
	Col Pct	4.17	24.24	31.43	
9	Frequency	2	15	14	31
	Row Pct	6.45	48.39	45.16	
	Col Pct	8.33	45.45	40.00	
Total		24	33	35	92
		26.09	35.87	38.04	100.00

Key

1 - Jan84 to Jun84
2 - Jul84 to Dec84
3 - Jan85 to Jun85

Number of Leg Weight Observations Per Subject by Entry Date

Number of Obs. — Entry Date into Protocol Period

Number of Obs.	Frequency / Percent / Row Pct / Col Pct	1	2	3	Total
3	Frequency	3	0	0	3
	Percent	3.26	0.00	0.00	3.26
	Row Pct	100.00	0.00	0.00	
	Col Pct	12.50	0.00	0.00	
4	Frequency	6	0	0	6
	Percent	6.52	0.00	0.00	6.52
	Row Pct	100.00	0.00	0.00	
	Col Pct	25.00	0.00	0.00	
5	Frequency	5	1	0	6
	Percent	5.43	1.09	0.00	6.52
	Row Pct	83.33	16.67	0.00	
	Col Pct	20.83	3.03	0.00	
6	Frequency	6	8	3	17
	Percent	6.52	8.70	3.26	18.48
	Row Pct	35.29	47.06	17.65	
	Col Pct	25.00	24.24	8.57	
7	Frequency	2	2	7	11
	Percent	2.17	2.17	7.61	11.96
	Row Pct	18.18	18.18	63.64	
	Col Pct	8.33	6.06	20.00	
8	Frequency	2	7	14	23
	Percent	2.17	7.61	15.22	25.00
	Row Pct	8.70	30.43	60.87	
	Col Pct	8.33	21.21	40.00	
9	Frequency	0	15	11	26
	Percent	0.00	16.30	11.96	28.26
	Row Pct	0.00	57.69	42.31	
	Col Pct	0.00	45.45	31.43	
Total		24	33	35	92
		26.09	35.87	38.04	100.00

Key
1 - Jan84 to Jun84
2 - Jul84 to Dec84
3 - Jan85 to Jun85

Number of Height Observations Per Subject by Entry Date

Number of Obs. — Entry Date into Protocol Period

Frequency / Percent / Row Pct / Col Pct	1	2	3	Total
2	2	3	7	12
	2.17	3.26	7.61	13.04
	16.67	25.00	58.33	
	8 33	9.09	20.00	
3	16	21	21	58
	17.39	22.83	22.83	63.04
	27.59	36.21	36.21	
	66.67	63.64	60.00	
4	6	9	7	22
	6.52	9.78	7.61	23.91
	27.27	40.91	31.82	
	25.00	27.27	20.00	
Total	24	33	35	92
	26.09	35.87	38.04	100.00

Key
1 - Jan84 to Jun84
2 - Jul84 to Dec84
3 - Jan85 to Jun85

Number of Leg Height Observations Per Subject By Entry Date

Number of Observations — Entry Date into Protocol Period

Frequency / Percent / Row Pct / Col Pct	1	2	3	Total
1	0 0.00 0.00 0.00	1 1.09 100.00 3.03	0 0.00 0.00 0.00	1 1.09
2	6 6.52 27.27 25.00	5 5.43 22.73 15.15	11 11.96 50.00 31.43	22 23.91
3	16 17.39 26.67 66.67	21 22.83 35.00 63.64	23 25.00 38.33 65.71	60 65.22
4	2 2.17 25.00 8.33	5 5.43 62.50 15.15	1 1.09 12.50 2.86	8 8.70
5	0 0.00 0.00 0.00	1 1.09 100.00 3.03	0 0.00 0.00 0.00	1 1.09
Total	24 26.09	33 35.87	35 38.04	92 100.00

Key
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1 - Jan83 to Jun84
2 - Jul84 to Dec84
3 - Jan85 to Jun85

147

The preceding tables for weight and diet data show that the missing data appears to be worse for toddlers entering the study during the earliest phase of data collection. Height data does not vary a great deal between the three categories of entry times. Unfortunately, it is unlikely data on the earlier cohort of toddlers has not yet been received. Missing data is thus likely to remain a difficult problem. Looking at the diet data which is currently in hand, only 5% of the toddlers have complete data for monthly diet observations (9 observations). Only about 30% have nearly complete data with 7 or 8 observations available. Lag diet data shows much the same picture. Around 8% of the toddlers have complete data, and 29% with nearly complete. The longitudinal data analysis will have to be judged for validity and problems with bias as a result of this missing data.

Next it was of interest to examine the static variables to see how many subjects have all 7 variables.
First we looked at the 3 SES variables SES2 , SES3 , SES1, since they each had 87 subjects with values. We found, as was expected , that the same 87 subjects had the 3 SES variables present (see below).

	SES3	
	Missing	Present
	SES1	SES1
	Missing	Present
	N	N
SES2		
Missing	5.00	
Present		87.00

Next we found that the 82 subjects that have SES4 data have the other 3 SES variables.

	SES2	
	Missing	Present
	N	N
SES4		
Missing	5.00	5.00
Present		82.00

SES4 (material standard of living) is highly correlated with SES1 (condition of house) with a correlation coefficient of greater than .7 . Therefore, if the number of subjects is to be kept at higher levels, one could consider leaving this variable out of the analyses.

If one elects to use only the three SES variables with more complete information, the question of how limiting the other static variables would be arises. The following table adds the baseline variables for diet, height, and weight.

	BKCAL			
	Missing		Present	
	BHT		BHT	
	Missing	Present	Missing	Present
BWT	N	N	N	N
Missing	9.00		6.00	.
Present	3.00	1.00	4.00	64.00

As shown above only 64 of the 87 subjects that have the three SES variables have BDT , BHT, and BWT also present. Since BHT and BWT are highly correlated, it would be possible to exclude BHT, thus increasing the number of subjects included in the analyses to 68.

Finally, the next few pages contain time plots which show graphically the missing data problem in the current data set. The plots illustrate visually the restriction of data which occurs as more variables are used if one requires complete data on all variables.

Toddler Weight Data by Month

Below is a time plot by month for the 68 toddlers with values present for SES1, SES2, SES3, BKCAL, and BWT. A subject is missing weight data in a month if there is no number to represent the given month. A subject with a mean weight value in a given month will be represented in the plot. The subjects are sorted by birthdate.

Key (month - age in months)
=================
4 - month 4
5 - month 5
6 - month 6
7 - month 7
8 - month 8
9 - month 9
0 - month 10
1 - month 11
2 - month 12

```
              MONTH
 min                                                 max
 4                                                    12
*----------------------------------------------------*
|             6------------8------------0-----------2|
|             6-------------------------0------1     |
|       5-------------------------9-----0------1----2|
|             6-------------------9-----0------1----2|
|             6------7------------9-----0------1----2|
|       5------------7-----8------9-----0------1----2|
|4-------------------------8------9------------1----2|
|4-------------------7-----8------------0------1----2|
|                    7-----8------------0------1----2|
|             6------7-----8------9-----0------1----2|
|             6------7-----8------------0------1----2|
|             6------7-----8------9-----0------1----2|
|       5-----6------------8------9------------1----2|
|4------5------------------8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|       5------------7-----8------9-----0------1----2|
|4------------6------7-----8------9-----0------1----2|
|       5-----6------------8------------0------1----2|
|4------5-----6------7-----8------9------------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|       5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
```

```
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|             6------7-----8------9-----0------1----2|
|       5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|       5------------7-----8------------0------1----2|
|4------------6------7-----8------9-----0-----------2|
|4------5-----6------------8------9-----0-----------2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|       5-----6------7-----8-------------------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0-----------2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------------0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9------------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------------6------7-----8------------0------1----2|
|4------5-----6------7------------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0-----------2|
|4------5-----6------7-----8------9-----0-----------2|
|4------5-----6------7------------9-----0------1----2|
|4------5-----6------7-----8------9-----------------2|
|4------5------------7-----8------9-----0-----------2|
|4------5-----6------7------------9-----0-----------2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------------8------9-----0-----------2|
|4------5-----6------7-----8------9-----0-----------2|
|4------5------------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------------8------9------------1----2|
|4------5-----6-------------------9-----0------1----2|
|4------5-----6------7-----8------9------------1----2|
|4------5-----6------7-----8------------0------1     |
|4------------6------7-----8------9-----0            |
+----------------------------------------------------+
```

49

Toddler Weight and Lag Weight Data by Month

Below is a time plot by month for the 68 toddlers with values present for SES1, SES2, SES3 , BKCAL, and BWT. A subject is missing weight data or lag weight data in a month if there is no number to represent the given month. A subject with a mean weight value and a lag weight value in a given month will be represented in the plot. The subjects are sorted by birthdate.

Key (month - age in months)
=================
4 - month 4
5 - month 5
6 - month 6
7 - month 7
8 - month 8
9 - month 9
0 - month 10
1 - month 11
2 - month 12

MONTH

```
 min                                                 max
 4                                                    12
*----------------------------------------------------*
|                                                    |
|                                              1     |
|                                       0------1----2|
|                                       0------1----2|
|                    7------------------0------1----2|
|                          8------9-----0------1----2|
|                                 9-----------------2|
|                          8-------------------1----2|
|                          8-------------------1----2|
|                    7-----8------9-----0------1----2|
|                    7-----8-------------------1----2|
|                    7-----8------9-----0------1----2|
|             6-------------------9-----------------2|
|       5-------------------------9-----0------1----2|
|       5-----6------7-----8------9-----0------1----2|
|                          8------9-----0------1----2|
|4-------------------7-----8------9-----0------1----2|
|             6--------------------------------1----2|
|4------5-----6------7-----8------9-----------------2|
|4------5-----6------7-----8------9-----0------1----2|
|             6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
```

192

```
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|                    7-----8------9-----0------1----2|
|             6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|                          8-------------------1----2|
|4-------------------7-----8------9-----0            |
|       5-----6-------------------9-----0            |
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|             6------7-----8------------------------2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0            |
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8-------------------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----------------2|
|4------5-----6------7-----8------9-----0------1----2|
|4-------------------7-----8-------------------1----2|
|4------5-----6------7------------------0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0            |
|4------5-----6------7-----8------9-----0            |
|4------5-----6------7------------------0------1----2|
|4------5-----6------7-----8------9                  |
|       5------------------8------9-----0            |
|4------5-----6------7------------------0            |
|       5-----6------7-----8------9-----0------1----2|
|4------5-----6-------------------9-----0            |
|4------5-----6------7-----8------9-----0            |
|4------5------------------8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6-------------------9-----------------2|
|4------5-----6-------------------------0------1----2|
|4------5-----6------7-----8------9-----------------2|
|4------5-----6------7-----8-------------------1     |
|                    7-----8------9-----0            |
•----------------------------------------------------•
```

Toddler Weight , Lag Weight and Lag Diet Data by Month Timeplot

Below is a time plot by month for the 68 toddlers with values present for SES1 , SES2 , SES3 , BKCAL, and BWT. A subject is missing weight data ,lag weight data or lag diet data in a month if there is no number to represent the given month. A subject with a mean weight value , lag weight value and lag diet value in a given month will be represented in the plot. The subjects are sorted by birthdate.

Key (month - age in months)
==================
4 - month 4
5 - month 5
6 - month 6
7 - month 7
8 - month 8
9 - month 9
0 - month 10
1 - month 11
2 - month 12

MONTH

```
 min                                                max
 4                                                   12
*----------------------------------------------------*
|                                                    |
|                                                    |
|                                                    |
|                                                    |
|                                       0------1     |
|                    7-------------------------1----2|
|                                                    |
|                                                    |
|                                              1----2|
|                          8------------------------2|
|                                 9-----0------1----2|
|                                                    |
|                    7------------9-----0------1----2|
|             6-------------------9-----------------2|
|       5-------------------------9-----0------1     |
|                                                   2|
|                                                   2|
|                                                   2|
|                                                   2|
|                                                   2|
|4------5-----6------7-----8------9-----0            |
|             6------7-----8------9-----0------1----2|
|4------5-----6------7-----8------9-----0------1----2|
```

```
|4------------6------7-----8------------0------1     |
|                                       0------1     |
|       5-----6------7-----8------9                  |
|                                       0-----------2|
|                          8------9-----0            |
|                                       0-----------2|
|       5-----6------------8------9-----0------1     |
|                          8-------------------1----2|
|                                 9                  |
|       5-------------------------9-----0            |
|       5-----6------7-----8------------------------2|
|4------5-----6------7-----8------9-----0            |
|             6------7-----8------------------------2|
|                          8------------0-----------2|
|                          8------9------------1----2|
|4------5-----6------7-----8------9-----0            |
|4------5-----6------------8------------0------1     |
|                    7-----8-------------------1----2|
|                    7-----8------9-----0-----------2|
|                    7-----8------------0------1----2|
|4------5-----6-------------------------0-----------2|
|4------------6------7------------------------------2|
|             6-------------------------------------2|
|4------5-----6------7-----8-------------------1----2|
|                                                   2|
|             6------7------------------0------1----2|
|             6------7-----8------------0------1     |
|       5-----6------7-----8------9                  |
|       5-----6-------------------9                  |
|4------5--------------------------------------1----2|
|       5-----6------------8------9                  |
|                          8------9-----0            |
|       5------------7                               |
|                          8------9-----0------1----2|
|4--------------------------------9-----0            |
|4-------------------------8------9-----0            |
|4------5------------------8------9-----0------1----2|
|                    7-----8------------0------1----2|
|4------------6------------8------9-----0------1----2|
|4-------------------7-----8------------0-----------2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6-------------------9                  |
|4------5-----6-------------------------0------1----2|
|                    7-----8------9-----------------2|
|4-------------------------8-------------------1     |
|                    7-----8------9-----0            |
.----------------------------------------------------.
```

Toddler Weight and Lag Diet Data by Month Timeplot

Below is a time plot by month for the 68 toddlers with values present for SES1, SES2 , SES3 , BKCAL, and BWT. A subject is missing weight data or lag diet data in a month if there is no number to represent the given month. A subject with a mean weight value and lag diet value in a given month will be represented in the plot. The subjects are sorted by birthdate.

```
Key (month - age in months)
==================
 4 - month 4
 5 - month 5
 6 - month 6
 7 - month 7
 8 - month 8
 9 - month 9
 0 - month 10
 1 - month 11
 2 - month 12
```

MONTH

```
  min
  4                                                      max
                                                          12
 *-------------------------------------------------------*
 |           6------------8------------0-----------2|
 |           6                                      |
 |     5                                            |
 |           6------------------9-----0------1      |
 |                 7------------9------------1----2|
 |     5------------7                               |
 |4                                                 |
 |4-----------------7------------------------1----2|
 |                 7-----8------------0-----------2|
 |           6------------------9-----0------1----2|
 |                                                  |
 |           6------7-----------9-----0------1----2|
 |     5-----6------------------9------------1----2|
 |4------5-----------------8------9-----0------1    |
 |4---------------------------------------------2|
 |                                                2|
 |                                                2| 3
 |                                                2|
 |                                          1----2|
 |4------5-----6------7-----8------9-----0          | 12
 |       5-----6------7-----8------9-----0------1----2|
 |4------5-----6------7-----8------9-----0------1----2|
 |4------------6------7-----8------------0------1     |
```

```
|                                       0------1     |
|       5-----6------7-----8------9                  |
|                                       0-----------2|
|             6------------8------9-----0            |
|                                       0-----------2|
|       5-----6------------8------9-----0------1     |
|       5------------7-----8------------0------1----2|
|                                 9-----------------2|
|4------5------------------8------9-----0            |
|       5-----6------7-----8------------------------2| 2
|4------5-----6------7-----8------9-----0            |
|       5-----6------7-----8------------------------2|
|                          8------------0-----------2|
|                          8------9------------1----2|
|4------5-----6------7-----8------9-----0-----------2|
|4------5-----6------------8------------0------1     |
|                    7-----8------------0------1----2| 3
|                    7-----8------9-----0-----------2|
|                    7-----8------------0------1----2|
|4------5-----6-------------------------0-----------2|
|4------------6------7------------------------------2|
|             6--------------------------------1----2|
|4------5-----6------7-----8-------------------1----2|
|                                       0-----------2|
|             6------7------------9-----0------1----2|
|             6------7-----8------------0------1     |
|       5-----6------7-----8------9-----------------2|
|       5-----6-------------------9                  |
|4------5-------------------------9------------1----2|
|       5-----6------------8------9-----------------2|
|4-------------------------8------9-----0            |
|       5------------7                               |
|4-------------------------8------9-----0------1----2|
|4--------------------------------9-----0-----------2|
|4-------------------------8------9-----0-----------2|
|4------5------------7-----8------9-----0------1----2|
|                    7-----8------------0------1----2|
|4------------6------------8------9-----0------1----2|
|4-------------------7-----8------------0-----------2|
|4------5-----6------7-----8------9-----0------1----2|
|4------5-----6------------8------9------------1     |
|4------5-----6-------------------9-----0------1----2|
|                    7-----8------9------------1----2|
|4-------------------------8------------0------1     |
|                    7-----8------9-----0            |
*----------------------------------------------------*
```

G. Summary and Recommendations

The analyses conducted so far represent an initial attempt to identify relationships between function and intake. The models reported here are limited in that data files are partially complete. Further work using different dependent variables, and different time intervals is needed and on-going. In addition, other analysis strategies should be developed and pursued. Models that emerge from these analyses should be examined for other variables. Many assumptions have been made in fitting the models presented previously, and the examination should determine whether the models themselves are sensitive to these assumptions. Firm conclusions based on the auto-regressive modeling strategy are not yet possible. In the Mexico data, there is the possibility that Kcal may be a statistically significant predictor of weight, controlling for illness and other SES variables. However, the current evidence is for this association is weak. Some of the problems in analyzing these data will occur in any analysis strategy. One major problem is missing data. Every analysis will have to assess the impact that missing data has on interpreting the results.

Recommendations for future work based on experience in the Mexico project are two fold. First, the necessary evaluations need to be performed with the present regression models to determine if such models are sensitive to missing data, unequal spacing, subject effects, unequal variances, and other variables (such as seasonality). If the regression models are robust to these problems, then the auto-regressive strategy should be pursued. Attempts to use indicator varibles to include more data in the regression equations need to be interpretable, or not used. A clear understanding of the model and the results has to be reached by all principal investigators and statisticians alike.

Second, other analysis strategies need to be pursued. For morbitidy data, the possibility of logistic regression analyses based on monthly data should be pursued. Other modeling attempts based on growth rate, or based on a 3 month time period should be attempted. Cross-sectional analyses that retain longitudinal variables (like rate of change) should be considered. In summary, although the auto-regressive modeling strategy is a useful starting point for data analysis and insights from such models will be of use in other analyses, these other analysis strategies should be pursued in parallel.

VI. Future Areas of Investigation

Introduction

Although progress has been made using the auto-regressive models, these models are far from satisfactory at present. This section describes efforts that are planned to examine the robustness of the auto-regressive models developed. This section does not comment on other lines of investigation that are currently being pursued. The present analysis philosophy is to bring the auto-regression models to some conclusion prior to extensively adopting another strategy.

A. Test for Community effects, cohort effects

In the Mexico project, five communities are studied. If the regression models summarize valid base relationships, then these relationships should be evident in different communities. The regression models lend themselves naturally to investigating the possiblity of community effects. Cohort effects (ie. when the toddler entered the study) should also be considered. This effect is not anticipated, but is possible if data collection procedures changed signi..icantly over the project.

B. Investigate unequal spacing

In each of the CRSP projects, data was not collected strictly every 30 days. Operational considerations contributed to variability in the number of days between measurements. The auto regressive models are meaningful when time points represent equal intervals. In creating the structure for the models, the interval betwen measures was retained. This variable will be considered in attempting to evaluate the effect of equal spacing. Two methods are planned. First, person-months will be divided into 3 groups according to the interval between months. Separate regressions will be ı n for these three groups of data, and differences between the models will be tested. Second, variables representing the interval between months will be added directly to the regression equation.

C. Weighted Analysis

Frequently, more than one measure of weight or Kcal is available in a given month. The existance of multiple measures per month will create heterogeneous variance. The effect of this heterogeneity is to increase the residual variance for a model. Weighted least squares models will be fit to evaluate this effect.

D. Examine models accounting for subject effects

As noted in the Auto-regressive results, variability due to subjects effects is not removed explicitly from the model. However, the baseline variables serve to remove part of this variability. Subject effects will be added to the model, and the resulting models compared with models without subject effects.

E. Residual Analyses

As in all regression modeling, residual analyses will be used to identify lack of fit for particular variables, or other possible variables that should be included in the model. These analyses will be conducted only for models that emerge as interesting from the regression analyses based on complete data.

APPENDIX A:

SAS Output
for
Regression Models with Complete Data

Model: MODEL1
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	442.34603	221.17302	308.808	0.0001
Error	442	316.56723	0.71622		
C Total	444	758.91326			

Root MSE	0.84630	R-Square	0.5829
Dep Mean	10.88876	Adj R-Sq	0.5810
C.V.	7.77219		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.700026	1.01551574	-0.689	0.4910
BWT	1	0.865344	0.05702475	15.175	0.0001
BHT	1	0.040607	0.01783114	2.277	0.0232

Model: MODEL2
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	3	567.64436	189.21479	436.264	0.0001
Error	441	191.26890	0.43372		
C Total	444	758.91326			

Root MSE	0.65857	R-Square	0.7480
Dep Mean	10.88876	Adj R-Sq	0.7463
C.V.	6.04817		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.106809	0.79102615	-0.135	0.8927
BWT	1	0.298453	0.05551208	5.376	0.0001
BHT	1	0.012946	0.01397097	0.927	0.3546
LWT	1	0.661056	0.03889274	16.997	0.0001

Model: MODEL3
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	564.37991	141.09498	319.986	0.0001
Error	429	189.16389	0.44094		
C Total	433	753.54380			

Root MSE	0.66403	R-Square	0.7490
Dep Mean	10.89032	Adj R-Sq	0.7466
C.V.	6.09747		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.085527	0.83317601	-0.103	0.9183
BWT	1	0.297297	0.05622449	5.288	0.0001
BHT	1	0.013735	0.01428987	0.961	0.3370
LWT	1	0.658280	0.03958594	16.629	0.0001
BKCAL	1	-0.045341	0.09474662	-0.479	0.6325

Model: MODEL4
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	5	355.30004	71.06001	159.235	0.0001
Error	245	109.33337	0.44626		
C Total	250	464.63341			

Root MSE	0.66803	R-Square	0.7647
Dep Mean	10.82722	Adj R-Sq	0.7599
C.V.	6.16987		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.119420	1.04775085	-0.114	0.9093
LWT	1	0.615679	0.05493792	11.207	0.0001
BWT	1	0.357238	0.07956679	4.490	0.0001
BHT	1	0.011636	0.01834336	0.634	0.5264
LKCAL	1	0.091819	0.05728679	1.603	0.1103
BKCAL	1	-0.141073	0.13146296	-1.073	0.2843

Dep Variable: WT
Test lkcal,bkcal

Numerator:	0.6667	DF:	2	F value:	1.4939
Denominator:	0.4463	DF:	245	Prob >F:	0.2265

Model: MODEL5
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	8	356.95858	44.61982	100.283	0.0001
Error	242	107.67483	0.44494		
C Total	250	464.63341			

Root MSE	0.66704	R-Square	0.7683
Dep Mean	10.82722	Adj R-Sq	0.7606
C.V.	6.16073		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.630114	1.13897803	-0.553	0.5806
LWT	1	0.604453	0.05530189	10.930	0.0001
BWT	1	0.374622	0.08351707	4.486	0.0001
BHT	1	0.016928	0.01972075	0.858	0.3915
LKCAL	1	0.093562	0.05811432	1.610	0.1087
BKCAL	1	-0.138530	0.13162539	-1.052	0.2936
BSICK	1	0.053666	0.02869579	1.870	0.0627
BFEVR	1	-0.037490	0.04712162	-0.796	0.4270
BDIAR	1	-0.038071	0.02705337	-1.407	0.1606

Dep Variable: WT
Test bfevr,bsick,bdiar

Numerator:	0.5528	DF:	3	F value:	1.2425
Denominator:	0.4449	DF:	242	Prob >F:	0.2949

Model: MODEL6
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	8	361.27375	45.15922	105.483	0.0001
Error	241	103.17641	0.42812		
C Total	249	464.45016			

Root MSE	0.65431	R-Square	0.7779
Dep Mean	10.82893	Adj R-Sq	0.7705
C.V.	6.04221		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.387128	1.03585200	-0.374	0.7089
LWT	1	0.613618	0.05444337	11.271	0.0001
BWT	1	0.351566	0.07911975	4.443	0.0001
BHT	1	0.017239	0.01818682	0.948	0.3441
LKCAL	1	0.072985	0.05754349	1.268	0.2059
BKCAL	1	-0.160810	0.12932161	-1.243	0.2149
LSICK	1	0.000166	0.01482406	0.011	0.9911
LFEVR	1	0.001390	0.03464321	0.040	0.9680
LDIAR	1	-0.103843	0.03159464	-3.287	0.0012

Dep Variable: WT
Test lsick, lfevr, ldiar

Numerator:	1.9664	DF:	3	F value:	4.5931
Denominator:	0.4281	DF:	241	Prob >F:	0.0038

Model: MODEL7
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	11	362.90722	32.99157	77.327	0.0001
Error	238	101.54294	0.42665		
C Total	249	464.45016			

Root MSE	0.65319	R-Square	0.7814
Dep Mean	10.82893	Adj R-Sq	0.7713
C.V.	6.03185		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-1.019782	1.13591769	-0.898	0.3702
LWT	1	0.605472	0.05465872	11.077	0.0001
BWT	1	0.358858	0.08274417	4.337	0.0001
BHT	1	0.024957	0.01968542	1.268	0.2061
LKCAL	1	0.074460	0.05830548	1.277	0.2028
BKCAL	1	-0.151258	0.12954206	-1.168	0.2441
BSICK	1	0.055844	0.02902614	1.924	0.0556
BFEVR	1	-0.040964	0.04632547	-0.884	0.3775
BDIAR	1	-0.036140	0.02684444	-1.346	0.1795
LSICK	1	-0.007451	0.01534740	-0.485	0.6278
LFEVR	1	0.008501	0.03483492	0.244	0.8074
LDIAR	1	-0.095668	0.03187795	-3.001	0.0030

Dep Variable: WT
Test bfevr,bsick,bdiar,lsick,lfevr,ldiar

Numerator:	1.2554	DF:	6	F value:	2.9425
Denominator:	0.4267	DF:	238	Prob >F:	0.0087

A-9

Model: MODEL8
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	12	362.91324	30.24277	70.590	0.0001
Error	237	101.53692	0.42843		
C Total	249	464.45016			

Root MSE	0.65454	R-Square	0.7814
Dep Mean	10.82893	Adj R-Sq	0.7703
C.V.	6.04439		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-1.058428	1.18402933	-0.894	0.3723
LWT	1	0.605218	0.05481427	11.041	0.0001
BWT	1	0.359656	0.08318893	4.323	0.0001
BHT	1	0.024722	0.01982578	1.247	0.2136
LKCAL	1	0.073530	0.05895115	1.247	0.2135
BKCAL	1	-0.155593	0.13486310	-1.154	0.2498
BSICK	1	0.056195	0.02923726	1.922	0.0558
BFEVR	1	-0.040976	0.04642183	-0.883	0.3783
BDIAR	1	-0.036667	0.02726447	-1.345	0.1800
LSICK	1	-0.007303	0.01542948	-0.473	0.6364
LFEVR	1	0.008666	0.03493516	0.248	0.8043
LDIAR	1	-0.095814	0.03196779	-2.997	0.0030
HHSIZE	1	0.027668	0.23336526	0.119	0.9057

Model: MODEL9
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	16	324.18276	20.26142	45.521	0.0001
Error	212	94.36050	0.44510		
C Total	228	418.54326			

Root MSE	0.66716	R-Square	0.7746
Dep Mean	10.85124	Adj R-Sq	0.7575
C.V.	6.14820		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.703475	1.54218305	-0.456	0.6487
BWT	1	0.322549	0.09229640	3.495	0.0006
BHT	1	0.025143	0.02435326	1.032	0.3030
LWT	1	0.604534	0.05877850	10.285	0.0001
BKCAL	1	-0.208128	0.14685405	-1.417	0.1579
LKCAL	1	0.069292	0.06190772	1.119	0.2643
BSICK	1	0.074730	0.04097624	1.824	0.0696
BFEVR	1	-0.063034	0.06015129	-1.048	0.2959
BDIAR	1	-0.045264	0.03353572	-1.350	0.1785
HHSIZE	1	-0.036510	0.28348995	-0.129	0.8976
LSICK	1	-0.015680	0.01650815	-0.950	0.3433
LFEVR	1	0.010061	0.03679443	0.273	0.7848
LDIAR	1	-0.098694	0.03490921	-2.827	0.0051
SES1	1	0.010458	0.02210050	0.473	0.6365
SES2	1	-0.007604	0.06284670	-0.121	0.9038
SES3	1	-0.022913	0.04192862	-0.546	0.5853
SES4	1	0.021076	0.05789089	0.364	0.7162

Dep Variable: WT
Test of ses1,ses2,ses3,ses4

Numerator:	0.1262	DF:	4	F value:	0.2836
Denominator:	0.4451	DF:	212	Prob >F:	0.8864

Model: MODEL10
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	17	324.23225	19.07249	42.670	0.0001
Error	211	94.31102	0.44697		
C Total	228	418.54326			

Root MSE	0.66856	R-Square	0.7747
Dep Mean	10.85124	Adj R-Sq	0.7565
C.V.	6.16113		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.578365	1.59050838	-0.364	0.7165
BWT	1	0.327980	0.09391992	3.492	0.0006
BHT	1	0.023334	0.02500298	0.933	0.3518
LWT	1	0.604491	0.05890231	10.263	0.0001
BKCAL	1	-0.200681	0.14885532	-1.348	0.1791
LKCAL	1	0.067694	0.06222356	1.088	0.2779
BSICK	1	0.074680	0.04106273	1.819	0.0704
BFEVR	1	-0.058411	0.06185821	-0.944	0.3461
BDIAR	1	-0.046578	0.03383772	-1.377	0.1701
HHSIZE	1	-0.047536	0.28601264	-0.166	0.8682
LSICK	1	-0.016000	0.01657080	-0.966	0.3354
LFEVR	1	0.009454	0.03691693	0.256	0.7981
LDIAR	1	-0.096990	0.03535529	-2.743	0.0066
SES1	1	0.011469	0.02235421	0.513	0.6085
SES2	1	-0.005421	0.06331950	-0.085	0.9319
SES3	1	-0.022057	0.04209543	-0.524	0.6008
SES4	1	0.020668	0.05802563	0.356	0.7221
SEX	1	-0.034076	0.10240821	-0.333	0.7397

Model: MODEL1
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	Value	Prob>F
Model	8	356.46337	44.55792	99.686	0.0001
Error	242	108.17004	0.44698		
C Total	250	464.63341			

Root MSE	0.66857	R-Square	0.7672
Dep Mean	10.82722	Adj R-Sq	0.7595
C.V.	6.17488		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.183144	1.19146105	-0.154	0.8780
BWT	1	0.388288	0.08614525	4.507	0.0001
BHT	1	0.008538	0.02038383	0.419	0.6757
LWT	1	0.608545	0.05561069	10.943	0.0001
BKCAL	1	-0.134280	0.13240246	-1.014	0.3115
LKCAL	1	0.094930	0.05878519	1.615	0.1076
BSICK01	1	0.171114	0.13093972	1.307	0.1925
BFEVR01	1	0.012192	0.12327803	0.099	0.9213
BDIAR01	1	-0.135323	0.12401349	-1.091	0.2763

Dep Variable: WT
Test: bsick01,bfevr01,bdiar01

Numerator:	0.3878	DF:	3	F value:	0.8675
Denominator:	0.4470	DF:	242	Prob >F:	0.4585

Model: MODEL12
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	8	359.67893	44.95987	103.419	0.0001
Error	241	104.77123	0.43474		
C Total	249	464.45016			

Root MSE	0.65934	R-Square	0.7744
Dep Mean	10.82893	Adj R-Sq	0.7669
C.V.	6.08873		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.468540	1.04538908	-0.448	0.6544
BWT	1	0.346966	0.07872178	4.408	0.0001
BHT	1	0.019212	0.01831669	1.049	0.2953
LWT	1	0.609286	0.05459271	11.161	0.0001
BKCAL	1	-0.131023	0.13012684	-1.007	0.3150
LKCAL	1	0.070595	0.05807429	1.216	0.2253
LSICK01	1	-0.013456	0.12104663	-0.111	0.9116
LFEVR01	1	0.078869	0.26407116	0.299	0.7655
LDIAR01	1	-0.567333	0.20885618	-2.716	0.0071

Dep Variable: WT
Test: lsick01,lfevr01,ldiar01

Numerator:	1.4348	DF:	3	F value:	3.3003
Denominator:	0.4347	DF:	241	Prob >F:	0.0211

Model: MODEL13
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	11	360.79733	32.79976	75.312	0.0001
Error	238	103.65283	0.43552		
C Total	249	464.45016			

Root MSE	0.65994	R-Square	0.7768
Dep Mean	10.82893	Adj R-Sq	0.7665
C.V.	6.09420		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.619938	1.20183190	-0.516	0.6065
BWT	1	0.369535	0.08560125	4.317	0.0001
BHT	1	0.017930	0.02054261	0.873	0.3836
LWT	1	0.605389	0.05526195	10.955	0.0001
BKCAL	1	-0.123478	0.13124376	-0.941	0.3477
LKCAL	1	0.071386	0.05930172	1.204	0.2299
BSICK01	1	0.158681	0.13158641	1.206	0.2291
BFEVR01	1	0.033590	0.12369654	0.272	0.7862
BDIAR01	1	-0.109846	0.12410903	-0.885	0.3770
LSICK01	1	-0.044546	0.12353064	-0.361	0.7187
LFEVR01	1	0.084049	0.26917654	0.312	0.7551
LDIAR01	1	-0.533775	0.21056403	-2.535	0.0119

Dep Variable: WT
test of bfevr01,bsick01,bdiar01,lsick01,lfevr01,ldiar01

Numerator:	0.9038	DF: 6		F value:	2.0752
Denominator:	0.4355	DF: 238		Prob >F:	0.0569

Model: MODEL14
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	12	360.79799	30.06650	68.747	0.0001
Error	237	103.65217	0.43735		
C Total	249	464.45016			

Root MSE	0.66133	R-Square	0.7768
Dep Mean	10.82893	Adj R-Sq	0.7655
C.V.	6.10702		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.631133	1.23834289	-0.510	0.6108
BWT	1	0.369885	0.08625150	4.288	0.0001
BHT	1	0.017821	0.02077641	0.858	0.3919
LWT	1	0.605279	0.05545009	10.916	0.0001
BKCAL	1	-0.124831	0.13605507	-0.918	0.3598
LKCAL	1	0.071151	0.05973239	1.191	0.2348
BSICK01	1	0.159219	0.13258851	1.201	0.2310
BFEVR01	1	0.032973	0.12496803	0.264	0.7921
BDIAR01	1	-0.110721	0.12639104	-0.876	0.3819
LSICK01	1	-0.044036	0.12448393	-0.354	0.7238
LFEVR01	1	0.085357	0.27183574	0.314	0.7538
LDIAR01	1	-0.534519	0.21187343	-2.523	0.0123
HHSIZE	1	0.009228	0.23748891	0.039	0.9690

Model: MODEL15
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	16	322.19783	20.13736	44.311	0.0001
Error	212	96.34543	0.45446		
C Total	228	418.54326			

Root MSE	0.67414	R-Square	0.7698
Dep Mean	10.85124	Adj R-Sq	0.7524
C.V.	6.21253		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.094565	1.47149245	-0.064	0.9488
BWT	1	0.354739	0.09315702	3.808	0.0002
BHT	1	0.014356	0.02338558	0.614	0.5399
LWT	1	0.612602	0.05877457	10.423	0.0001
BKCAL	1	-0.159562	0.14583980	-1.094	0.2752
LKCAL	1	0.074555	0.06314934	1.181	0.2391
BSICK01	1	0.186594	0.15169093	1.230	0.2200
BFEVR01	1	0.023259	0.13545943	0.172	0.8638
BDIAR01	1	-0.090557	0.13977621	-0.648	0.5178
LSICK01	1	-0.124890	0.13551558	-0.922	0.3578
LFEVR01	1	0.091982	0.28449921	0.323	0.7468
LDIAR01	1	-0.513724	0.23110060	-2.223	0.0273
HHSIZE	1	-0.120758	0.28291263	-0.427	0.6699
SES1	1	0.010285	0.02217823	0.464	0.6433
SES2	1	0.020498	0.06250470	0.328	0.7433
SES3	1	-0.019850	0.04408095	-0.450	0.6529
SES4	1	-0.026135	0.05033615	-0.519	0.6042

Dep Variable: WT
Test of SES1,SES2,SES3,SES4

Numerator:	0.0650	DF:	4	F value:	0.1431
Denominator:	0.4545	DF:	212	Prob >F:	0.9659

Model: MODEL16
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	17	322.39803	18.96459	41.620	0.0001
Error	211	96.14524	0.45566		
C Total	228	418.54326			

Root MSE	0.67503	R-Square	0.7703
Dep Mean	10.85124	Adj R-Sq	0.7518
C.V.	6.22076		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	0.144155	1.51681936	0.095	0.9244
BWT	1	0.359162	0.09351880	3.841	0.0002
BHT	1	0.012035	0.02367703	0.508	0.6118
LWT	1	0.614039	0.05889235	10.426	0.0001
BKCAL	1	-0.144052	0.14789603	-0.974	0.3312
LKCAL	1	0.071093	0.06344839	1.120	0.2638
BSICK01	1	0.176126	0.15271073	1.153	0.2501
BFEVR01	1	0.062865	0.14821704	0.424	0.6719
BDIAR01	1	-0.085983	0.14013140	-0.614	0.5401
LSICK01	1	-0.130952	0.13600294	-0.963	0.3367
LFEVR01	1	0.062453	0.28833851	0.217	0.8287
LDIAR01	1	-0.494127	0.23328803	-2.118	0.0353
HHSIZE	1	-0.159407	0.28922604	-0.551	0.5821
SES1	1	0.012259	0.02240637	0.547	0.5849
SES2	1	0.024674	0.06290385	0.392	0.6953
SES3	1	-0.018248	0.04420549	-0.413	0.6802
SES4	1	-0.027477	0.05044349	-0.545	0.5865
SEX	1	-0.070867	0.10691552	-0.663	0.5082

APPENDIX B:

SAS Output
for
Regression Models with Indicator Variables

Model: MODEL1
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	3	567.64436	189.21479	436.264	0.0001
Error	441	191.26890	0.43372		
C Total	444	758.91326			

Root MSE	0.65857	R-Square	0.7480
Dep Mean	10.88876	Adj R-Sq	0.7463
C.V.	6.04817		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.106809	0.79102615	-0.135	0.8927
BWT	1	0.298453	0.05551208	5.376	0.0001
LWT	1	0.661056	0.03889274	16.997	0.0001
BHT	1	0.012946	0.01397097	0.927	0.3546

Model: MODEL2
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	5	567.87760	113.57552	260.997	0.0001
Error	439	191.03567	0.43516		
C Total	444	758.91326			

Root MSE	0.65967	R-Square	0.7483
Dep Mean	10.88876	Adj R-Sq	0.7454
C.V.	6.05824		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.023745	0.82445250	-0.029	0.9770
BWT	1	0.299045	0.05563673	5.375	0.0001
BHT	1	0.012425	0.01411136	0.881	0.3791
LWT	1	0.660244	0.03899827	16.930	0.0001
BKCAL	1	-0.046108	0.09411917	-0.490	0.6245
DBKCAL	1	0.065307	0.22152516	0.295	0.7683

Dep Variable: WT
test of bkcal,dbkcal;

Numerator:	0.1166	DF:	2	F value:	0.2680
Denominator:	0.4352	DF:	439	Prob >F:	0.7650

Model: MODEL3
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	7	568.69695	81.24242	186.645	0.0001
Error	437	190.21631	0.43528		
C Total	444	758.91326			

Root MSE	0.65976	R-Square	0.7494
Dep Mean	10.88876	Adj R-Sq	0.7453
C.V.	6.05905		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.034026	0.83094202	-0.041	0.9674
BWT	1	0.307455	0.05599284	5.491	0.0001
BHT	1	0.010974	0.01428297	0.768	0.4427
LWT	1	0.655244	0.03923252	16.702	0.0001
BKCAL	1	-0.070724	0.09637164	-0.734	0.4634
DBKCAL	1	0.049616	0.22186435	0.224	0.8231
LKCAL	1	0.070990	0.05490750	1.293	0.1967
DLKCAL	1	0.059475	0.06828531	0.871	0.3842

Dep Variable: WT
test of lkcal,dlkcal

Numerator:	0.4097	DF:	2	F value:	0.9412
Denominator:	0.4353	DF:	437	Prob >F:	0.3910

Dep Variable: WT
test of bkcal,dbkcal

Numerator:	0.1889	DF:	2	F value:	0.4340
Denominator:	0.4353	DF:	437	Prob >F:	0.6482

Model: MODEL4
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	569.35921	56.93592	130.360	0.0001
Error	434	189.55406	0.43676		
C Total	444	758.91326			

Root MSE	0.66088	R-Square	0.7502
Dep Mean	10.88876	Adj R-Sq	0.7445
C.V.	6.06936		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	0.004137	0.86673868	0.005	0.9962
BWT	1	0.321315	0.05788511	5.551	0.0001
LWT	1	0.651171	0.03945718	16.503	0.0001
BHT	1	0.009018	0.01482600	0.608	0.5433
BKCAL	1	-0.066749	0.09732639	-0.686	0.4932
DBKCAL	1	0.075146	0.22614191	0.332	0.7398
LKCAL	1	0.065469	0.05559682	1.178	0.2396
DLKCAL	1	0.057726	0.06895936	0.837	0.4030
BSICK	1	0.016957	0.01968414	0.861	0.3895
BFEVR	1	0.007346	0.03400296	0.216	0.8291
BDIAR	1	-0.017185	0.02071463	-0.830	0.4072

Dep Variable: WT
test of lkcal,dlkcal

Numerator:	0.3494	DF:	2	F value:	0.7999
Denominator:	0.4368	DF:	434	Prob >F:	0.4500

Dep Variable: WT
test of bkcal,dbkcal

Numerator:	0.2052	DF:	2	F value:	0.4698
Denominator:	0.4368	DF:	434	Prob >F:	0.6254

Model: MODEL5
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	11	572.01066	52.00097	120.471	0.0001
Error	433	186.90260	0.43165		
C Total	444	758.91326			

Root MSE	0.65700	R-Square	0.7537
Dep Mean	10.88876	Adj R-Sq	0.7475
C.V.	6.03372		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.147214	0.83372048	-0.177	0.8599
BWT	1	0.317630	0.05668897	5.603	0.0001
LWT	1	0.651855	0.03916061	16.646	0.0001
BHT	1	0.011927	0.01438438	0.829	0.4075
BKCAL	1	-0.071841	0.09614793	-0.747	0.4554
DBKCAL	1	0.088628	0.22285140	0.398	0.6910
LKCAL	1	0.064298	0.05493312	1.170	0.2425
DLKCAL	1	0.062823	0.06822916	0.921	0.3577
LSICK	1	0.001614	0.01140697	0.141	0.8876
LFEVR	1	-0.002439	0.01161100	-0.210	0.8337
LDIAR	1	-0.050778	0.02106710	-2.410	0.0164
DLSICK	1	0.490601	0.66121438	0.742	0.4585

test lkcal,dlkcal

Numerator:	0.3618	DF:	2	F value:	0.8383
Denominator:	0.4316	DF:	433	Prob >F:	0.4332

test bkcal,dbkcal

Numerator:	0.2493	DF:	2	F value:	0.5775
Denominator:	0.4316	DF:	433	Prob >F:	0.5617

test of lsick,dlsick

Numerator:	0.1227	DF:	2	F value:	0.2842
Denominator:	0.4316	DF:	433	Prob >F:	0.7528

test of lfevr,dlsick

Numerator:	0.1276	DF:	2	F value:	0.2957
Denominator:	0.4316	DF:	433	Prob >F:	0.7442

test of ldiar,dlsick

Numerator:	1.3746	DF:	2	F value:	3.1847
Denominator:	0.4316	DF:	433	Prob >F:	0.0424

B-7

Model: MODEL6
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	14	572.60865	40.90062	94.401	0.0001
Error	430	186.30462	0.43327		
C Total	444	758.91326			

Root MSE	0.65823	R-Square	0.7545
Dep Mean	10.88876	Adj R-Sq	0.7465
C.V.	6.04504		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.134624	0.87293600	-0.154	0.8775
BWT	1	0.328755	0.05852917	5.617	0.0001
LWT	1	0.648436	0.03936800	16.471	0.0001
BHT	1	0.010562	0.01497265	0.705	0.4809
BKCAL	1	-0.066335	0.09727506	-0.682	0.4956
DBKCAL	1	0.119290	0.22820194	0.523	0.6014
LKCAL	1	0.058894	0.05562776	1.059	0.2903
DLKCAL	1	0.061303	0.06888845	0.890	0.3740
LSICK	1	-0.000349	0.01162983	-0.030	0.9760
LFEVR	1	-0.000449	0.01184518	-0.038	0.9698
LDIAR	1	-0.048572	0.02121276	-2.290	0.0225
DLSICK	1	0.506857	0.66389553	0.763	0.4456
BSICK	1	0.016558	0.01985402	0.834	0.4048
BFEVR	1	0.007074	0.03387715	0.209	0.8347
BDIAR	1	-0.015619	0.02065557	-0.756	0.4500

test of lkcal,dlkcal

Numerator:	0.3106	DF:	2	F value:	0.7169
Denominator:	0.4333	DF:	430	Prob >F:	0.4889

test of bkcal,dbkcal

Numerator:	0.2756	DF:	2	F value:	0.6360
Denominator:	0.4333	DF:	430	Prob >F:	0.5299

test of lsick,dlsick

Numerator:	0.1265	DF:	2	F value:	0.2919
Denominator:	0.4333	DF:	430	Prob >F:	0.7470

test of lfevr,dlsick

Numerator:	0.1266	DF:	2	F value:	0.2922
Denominator:	0.4333	DF:	430	Prob >F:	0.7468

test of ldiar,dlsick

Numerator:	1.2676	DF:	2	F value:	2.9258
Denominator:	0.4333	DF:	430	Prob >F:	0.0547

Model: MODEL7
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	12	568.89855	47.40821	107.783	0.0001
Error	432	190.01471	0.43985		
C Total	444	758.91326			

Root MSE	0.66321	R-Square	0.7496
Dep Mean	10.88876	Adj R-Sq	0.7427
C.V.	6.09078		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	0.068537	0.88275673	0.078	0.9382
BWT	1	0.317094	0.05910333	5.365	0.0001
BHT	1	0.009153	0.01516997	0.603	0.5466
LWT	1	0.654146	0.03951112	16.556	0.0001
BKCAL	1	-0.072355	0.09960865	-0.726	0.4680
DBKCAL	1	0.029881	0.22879493	0.131	0.8962
LKCAL	1	0.073531	0.05548573	1.325	0.1858
DLKCAL	1	0.062841	0.06886558	0.913	0.3620
SES1	1	-0.003961	0.01206290	-0.328	0.7428
SES2	1	0.004410	0.04126905	0.107	0.9150
SES3	1	0.006541	0.02820891	0.232	0.8168
SES4	1	-0.002624	0.02716948	-0.097	0.9231
DSES1	1	-0.101377	0.23351084	-0.434	0.6644

test of ses1,dses1

Numerator:	0.0420	DF:	2	F value:	0.0955
Denominator:	0.4398	DF:	432	Prob >F:	0.9090

test of ses2,dses1

Numerator:	0.0490	DF:	2	F value:	0.1114
Denominator:	0.4398	DF:	432	Prob >F:	0.8946

test of ses3,dses1

Numerator:	0.0509	DF:	2	F value:	0.1157
Denominator:	0.4398	DF:	432	Prob >F:	0.8908

test of ses4,dses1

Numerator:	0.0440	DF:	2	F value:	0.1000
Denominator:	0.4398	DF:	432	Prob >F:	0.9049

test of ses1,ses2,ses3,ses4,dses1

Numerator:	0.0403	DF:	5	F value:	0.0917
Denominator:	0.4398	DF:	432	Prob >F:	0.9935

Model: MODEL8
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	13	568.94721	43.76517	99.296	0.0001
Error	431	189.96606	0.44076		
C Total	444	758.91326			

Root MSE	0.66389	R-Square	0.7497
Dep Mean	10.88876	Adj R-Sq	0.7421
C.V.	6.09706		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.042059	0.94428815	-0.045	0.9645
BWT	1	0.317896	0.05921352	5.369	0.0001
BHT	1	0.009128	0.01518580	0.601	0.5481
LWT	1	0.653704	0.03957421	16.518	0.0001
BKCAL	1	-0.079468	0.10198387	-0.779	0.4363
DBKCAL	1	0.023446	0.22984834	0.102	0.9188
LKCAL	1	0.071697	0.05581671	1.285	0.1997
DLKCAL	1	0.062897	0.06893681	0.912	0.3621
SES1	1	-0.004116	0.01208439	-0.341	0.7336
SES2	1	0.002387	0.04175774	0.057	0.9544
SES3	1	0.007112	0.02829034	0.251	0.8016
SES4	1	-0.003163	0.02724596	-0.116	0.9076
DSES1	1	-0.093788	0.23486518	-0.399	0.6899
HHSIZE	1	0.062672	0.18863700	0.332	0.7399

test of ses1,dses1

Numerator:	0.0374	DF:	2	F value:	0.0848
Denominator:	0.4408	DF:	431	Prob >F:	0.9187

test of ses2,dses1

Numerator:	0.0384	DF:	2	F value:	0.0871
Denominator:	0.4408	DF:	431	Prob >F:	0.9166

test of ses3,dses1

Numerator:	0.0469	DF:	2	F value:	0.1065
Denominator:	0.4408	DF:	431	Prob >F:	0.8990

test of ses4,dses1

Numerator:	0.0387	DF:	2	F value:	0.0879
Denominator:	0.4408	DF:	431	Prob >F:	0.9159

test of ses1,ses2,ses3,ses4,dses1

Numerator:	0.0315	DF:	5	F value:	0.0714
Denominator:	0.4408	DF:	431	Prob >F:	0.9964

test of lkcal,dlkcal

Numerator:	0.4199	DF:	2	F value:	0.9527
Denominator:	0.4408	DF:	431	Prob >F:	0.3865

test of bkcal,dbkcal

Numerator:	0.1759	DF:	2	F value:	0.3991
Denominator:	0.4408	DF:	431	Prob >F:	0.6712

Model: MODEL9
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	15	572.81393	38.18760	88.031	0.0001
Error	429	186.09934	0.43380		
C Total	444	758.91326			

Root MSE	0.65863	R-Square	0.7548
Dep Mean	10.88876	Adj R-Sq	0.7462
C.V.	6.04874		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.290252	0.90229373	-0.322	0.7479
BWT	1	0.333284	0.05893393	5.655	0.0001
BHT	1	0.009283	0.01509676	0.615	0.5389
LWT	1	0.646861	0.03945857	16.393	0.0001
BKCAL	1	-0.085720	0.10133196	-0.846	0.3981
DBKCAL	1	0.105198	0.22925897	0.459	0.6466
LKCAL	1	0.055035	0.05594387	0.984	0.3258
DLKCAL	1	0.061315	0.06893068	0.890	0.3742
BSICK	1	0.018719	0.02011303	0.931	0.3525
BFEVR	1	0.007394	0.03390111	0.218	0.8275
BDIAR	1	-0.018489	0.02108508	-0.877	0.3810
LSICK	1	-0.000340	0.01163696	-0.029	0.9767
LFEVR	1	-0.000466	0.01185247	-0.039	0.9687
LDIAR	1	-0.048282	0.02122995	-2.274	0.0234
DLSICK	1	0.502713	0.66432988	0.757	0.4496
HHSIZE	1	0.121148	0.17611199	0.688	0.4919

test of bkcal,dbkcal							
	Numerator:	0.3364	DF:	2	F value:	0.7755
	Denominator:	0.4338	DF:	429	Prob >F:	0.4611
test of lkcal,dlkcal							
	Numerator:	0.2849	DF:	2	F value:	0.6567
	Denominator:	0.4338	DF:	429	Prob >F:	0.5191
test of lsick,dlsick							
	Numerator:	0.1244	DF:	2	F value:	0.2868
	Denominator:	0.4338	DF:	429	Prob >F:	0.7508
test of lfevr,dlsick							
	Numerator:	0.1245	DF:	2	F value:	0.2871
	Denominator:	0.4338	DF:	429	Prob >F:	0.7506
test of ldiar,dlsick							
	Numerator:	1.2514	DF:	2	F value:	2.8847
	Denominator:	0.4338	DF:	429	Prob >F:	0.0570

Model: MODEL10
Dep Variable: WT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	16	572.90736	35.80671	82.391	0.0001
Error	428	186.00590	0.43459		
C Total	444	758.91326			

Root MSE	0.65924	R-Square	0.7549
Dep Mean	10.88876	Adj R-Sq	0.7457
C.V.	6.05429		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.156237	0.94824228	-0.165	0.8692
BWT	1	0.338255	0.05995444	5.642	0.0001
BHT	1	0.007869	0.01541530	0.510	0.6100
LWT	1	0.646145	0.03952495	16.348	0.0001
BKCAL	1	-0.083799	0.10150939	-0.826	0.4095
DBKCAL	1	0.126001	0.23381410	0.539	0.5902
LKCAL	1	0.054403	0.05601171	0.971	0.3320
DLKCAL	1	0.059644	0.06908791	0.863	0.3885
BSICK	1	0.019772	0.02025916	0.976	0.3296
BFEVR	1	0.010134	0.03444297	0.294	0.7687
BDIAR	1	-0.019424	0.02120042	-0.916	0.3601
LSICK	1	-0.000643	0.01166589	-0.055	0.9561
LFEVR	1	-0.000124	0.01188625	-0.010	0.9917
LDIAR	1	-0.048197	0.02125018	-2.268	0.0238
DLSICK	1	0.484253	0.66612933	0.727	0.4676
HHSIZE	1	0.109782	0.17796949	0.617	0.5377
SEX	1	-0.031926	0.06885434	-0.464	0.6431

test of bkcal,dbkcal

Numerator:	0.3620	DF:	2	F value:	0.8329
Denominator:	0.4346	DF:	428	Prob >F:	0.4355

test of lkcal,dkcal

Numerator:	0.2741	DF:	2	F value:	0.6307
Denominator:	0.4346	DF:	428	Prob >F:	0.5327

test of lsick,dlsick

Numerator:	0.1156	DF:	2	F value:	0.2659
Denominator:	0.4346	DF:	428	Prob >F:	0.7666

test of lfevr,dlsick

Numerator:	0.1149	DF:	2	F value:	0.2643
Denominator:	0.4346	DF:	428	Prob >F:	0.7679

test of ldiar,dlsick

Numerator:	1.2374	DF:	2	F value:	2.8473
Denominator:	0.4346	DF:	428	Prob >F:	0.0591

APPENDIX VIII:

Social Data

SOCIAL DATA

Social data were collected for both individuals and households, using several different interview schedules. The data collectior instruments were:

1) Socio-economic characteristics of the household, including migration activities of household members

2) Socio-cultural characteristics, including social activities and behaviors, as well as attitudes and knowledge, involving both household-level and individual level measures

3) Agricultural productivity and activities of the household

Description of the Instruments

Socioeconomic Characteristics

This interview consists of two parts. The first part concerns characteristics of the dwelling, including the flooring, roof materials, walls, etc., as well ownership of household and agricultural goods. The second part of the interview focusses on migration and wage labor of household members.

Socio-cultural Characteristics

This interview is for the purpose of gathering information on social behavior, values, and aspirations, as well as knowledge, media exposure and related features. The sections of the interview include the following types of questions:

i) Aspirations for children's education and occupation

ii) Frequency of travel outside the community

iii) Radio and television exposure

iv) Participation in family and community social activities

230

v) Extent of utilization of social programs

vi) Knowledge of Community and External Affairs

Agricultural Activities and Productivity

This protocol was designed to collect information on farming practices and productivity. It includes information on land holdings, types of crops planted, labor and cash inputs into planting, field maintenance and harvesting, and harvest yields. It also includes information on non-farm income-earning activities of the household head and other household members.

As described below, there are two versions of this data collection instrument. The first version was administered during 1984; the second during 1985.

SCHEDULE OF ADMINSTRATION

Socio-economic Characteristics

This interview was administered twice to families, once at entry into the study and once at exit from the study or after one year in the study, which ever event occurred first. The initial round of interviewing was carried out in November, 1983 with the first set of families recruited into the study. In November, 1984 a second round of interviews was carried out. For the initial households who remained in the study this interview represented the second data collection; for many households (those who entered the study between January, 1984 and November, 1984) this was the first interview. When households from two additional communities -- Calderas and San Jose -- were added to

231

the sample, an initial round of interviews was carried out. As families left the study, because they had completed one year or more with the full set of protocols, a final interview with the SES instrument was completed.

The female household head (the lead female) was the primary informant for this interview. In many cases it was also necessary to interview the male household head (the lead male) to obtain data on economic resources and migration activities.

Socio-cultural Characteristics

This interview was administered once to the lead female and once to the lead male. As with the socio-economic interview, the initial set of families recruited in November, 1983 were interviewed during the first month of the study. A number of the male household heads who migrated to work outside the valley were interviewed somewhat later.

After the initial set of interviews, individuals were interviewed as time and the scheduling of other data collection activities permitted. Therefore, some interviews took place in 1984 and others in 1985. In the opinion of the Area Chief, the effect of the time differences in administration of the protocol on individual's responses mainly reflects the impact of the study on the population rather than differences in willingness to discuss social matters with an interviewer. In other words, she feels that the stage of participation in the project did not affect the validity of the responses, given the social mores in the community and the nature of the questions.

232

Agricultural Activities and Productivity

In 1984 the first interview covered the harvest of the previous agricultural season, which took place in October through December of 1983. In most cases the interview was conducted with the male household head. Occasionally, when the lead male was a migrant, the female household head provided the information. The second interview, which covered information on preparation of the field and planting, was conducted in May, 1984. The third interview, on the subject of weeding and irrigation, was carried out in August, 1984.

The revised version of the agricultural activities interview was first administered in January and February, 1985, covering the harvest of 1984. The second interview, conducted in July, 1985, contained information on planting for the current year. The final interview, on harvest activities and results of the 1984 agricultural cycle, was conducted in January and February, 1986.

233

PERSONNEL

In the division of labor among the three principal investigators Dr. Gretel H. Pelto had primary responsibility for the area of social data. The development of the interview schedules, and the preliminary ethnography that preceeded their development was carried out by co-investigator, Pertti J. Pelto, as well as Gretel H. Pelto, with the assistance of Mr. Peter Guarnaccia and Ms. Luz Maria Meneses.

During the second phase of the project Ms. Meneses was appointed Area Chief for all social data, as well as for maintenance of the census. Her academic background included Secondary training in the city of Toluca (state of Mexico), followed by three years of technical training in the Toluca school of social work. Prior to beginning her work in the Solis area, she worked for a public health program in a crowded inner city neighborhood. At the time the project began, she had worked as a medical social worker in the Solis Valley for four years and had gained wide experience in the communities in which the project was carried out.

RECRUITMENT AND TRAINING OF INTERVIEWERS

In the planning phase of the project their was general agreement among the project staff that the social data could all be collected by individuals with secondary or high-school level training. It was felt that it would be best not to use interviewers from the villages to gather economic information but that it was important for interviewers to be familiar with the local culture. Young people from the nearby municipal center seemed appropriate because many of them had experience with life in the villages (through friends and relatives) but they were not directly neighbors of the families they were to interview.

In September, 1983 the Area Chief contacted the faculty of the secondary school and the preparatory (high school) to announce the availability of employment in the project. Ten students, male and female, ranging in age from 16 to 21 years of age, responded to the request for field assistants.

The training of the fieldworkers, which was under the direction of the area chief, with the assistance of the Field Director and other senior staff, took place at the project headquarters in Solis. The first training sessions occured in October, 1983. The area chief gave a series of classes that included description of the goals, purposes, and form of the project, interviewing techniques, and review of the interview forms.

The second stage of training involved practice sessions at the center in which the fieldworkers took turns interviewing each other in front of the group. One individual was designated as the interviewer, another as interviewee, while the rest were observors who also filled in the interview forms as they listened. After each interview, the style of questioning was discussed and criticized and the recorded answers of everyone were compared. This training procedure was carried out initially with the socio-economic interview schedule. Prior to the first administration of the socio-cultural and agricultural activity interviews later in the year, this aspect of training was repeated.

The third step in training was introducing the fieldworkers to the community. They toured each community, learning the system of sectors and household mapping that was devised to assist project personnel in identifying study households.

The final step in training was learning to use the tape recorder to record an interview in a fashion that didn't disrupt the flow of the interview.

The team of social data fieldworkers was extremely stable throughout the project. Of the original ten recruited in 1983, only one person left prior to the completion of data collection in 1986. He was replaced by another young man from the municipal center who received an individualized course of training by the Area Chief. Apart from their interviews with social data instruments, this group of fieldworkers also worked in the area of activity recall and dietary data collection during 1984. In 1985 they worked as assistants in data checking and management except during the periods of social data collection.

DATA COLLECTION PROCEDURES

Socio-economic Characteristics

Before the interviewer went to the house, the area chief filled out the front page of the form with the identification number of the family and the identification number of the interviewer. The socio-economic interview was carried out without prior arrangement with the family.

In the Solis Valley it is not customary to invite visitors into the house unless one knows them quite well. Thus, most of the socio-economic interviews were carried out in the patio of the house. The interviewers were instructed to ask the questions standing with their back to the house. This was done to avoid the possibility that the interviewer would fill out items, such as characteristics of house construction, by observation rather than verbal report. At the completion of the interview, the fieldworker observed the house and yard and questioned any inconsistencies. For example, if a woman reported that she didn,t own a gas stove but gas tanks were visible in the yard, the interviewer questioned the purpose of the tanks.

A fieldworker was usually able to carry out between eight and ten interviews per day, depending on the distance between houses and the number of households in which no lead female was home at the time of the initial visit.

As part of data quality control procedures, each interviewer tape recorded two interviews per day and returned the tape, together with the completed interviews at the end of each work day.

The fieldworkers for this interview were young men and women with either secondary school or high school-level training, all of whom came from the Temascalcingo, the administrative center of the district.

With the first round of interviews in November, 1983, the team of interviewers worked in one community at a time, completing all the households in the sample before moving as a group to the next village.

Socio-cultural Interview

In parallel with the socio-economic interview, the Area Chief filled out the identification numbers of the individuals to be interviewed for the fieldworkers prior to the daily round of interviews. Since it was preferable to interview an individual without the presence of the spouse, fieldworkers attempted to construct some measure of privacy. Interviewing women in the morning when their husbands were away, and men in the afternoon when their wives were busy with household chores was common.

Each interviewer tape recorded two of every ten interviews and returned the tape, together with the completed forms at the end of each day. The team of fieldworkers who conducted the socio-economic interviews also conducted the socio-cultural interviews. The initial round of these interviews was conducted by moving the team of interviewers from one community to the next, as with the socio-economic data collection.

Agricultural Activities and Productivity

The productivity interviews were quite time-consuming for respondents, and, in most households the information was mainly the provience of the lead male, so with this interview the family was usually contacted a day or more before the interview was scheduled. The more compact version, administered in 1985, was often conducted without prior arrangement.

The agricultural activity interview was conducted by a small team of fieldworkers, a subgroup of those who were trained to conduct the socio-economic and socio-cultural interviews. While many of these interviews were conducted in the respondent's house or patio, they were occasionally carried out in the agricultural fields. In either location fieldworkers were instructed to look for observable features to confirm the respondents' answers. As with the other social data collection procedures, a sample of each fieldworkers' interviews were tape recorded to permit checking the interviewer's questioning procedures and the correctness of his recording of responses.

QUALITY CONTROL OF DATA COLLECTION

The three areas of social data were subject to the same procedures of data quality control in data collection. At the end of each day the interviewers returned their completed forms to the Area Chief. In the evening she reviewed the completed forms, checking for two problems:

1) Missing data (items that were not filled in)

2) Extreme values

For the sample of tape recorded interviews the Area Chief also checked respondents replies against the filled-out form. The following day problems of missing data, highly unusual values or other apparent errors were discussed with the fieldworkers

251

individually. The fieldworkers then returned to the respondents to obtain the information or make the corrections. In some cases, for example when the area chief felt there might be a problem of rapport between the interviewer and the respondent the Area Chief went back herself to collect the correct information. The following example illustrates this process:

> Households normally have only a small number of draught animals, When an interview returned with a report of 42 oxen the Area Chief questioned the interviewer, who insisted that 42 was the number the informant gave. The area chief then went to the family for an explanation. The result was that the family was not the owner of the animals, but was maintaining them for the regional agricultural bank. This was a unique case as this type of arrangement was rare in the Solis area. The socio-economic interview form was corrected to show that the household owned no oxen.

In the early months of the study, another method of quality control, in addition to tape recording a sample of interviews, was direct observation of the interviews by the Area Chief. For several weeks she accompanied the fieldworkers on interviews, usually observing at least 3 - 4 interviews per week for each fieldworker. Any problems with an interviewer's style, interpretation of questions and responses, or method of recording were discussed immediately after the interview.

240

CODING THE SOCIAL DATA SETS

The data from the three social data instruments (socio-economic characteristics, socio-cultural characteristics, and agricultural activities/productivity) were transferred to code sheets in a process that involved the first step in data analysis. The decision to use an intermediate coding procedure was based on several characteristics of the interview forms themselves and the nature of the data being collected:

1) Although the general format of the social data collection instruments was based on categorical responses, many questions included an option to record an alternative answer.

2) Since the distribution of responses could not always be anticipated, inspite of the considerable information available from the ethnographic study, the decision in the design of the questions was to maximize detail, with the expectation that the first level of data reduction would occur in transferring the responses to code sheets.

Designing the coding categories and testing coding reliability was a joint activity of one of the principal investigators and the Area Chief. To accomplish this, a large sample of completed interviews, for each area, was reviewed and frequencies of responses were hand tabulated. Decisions about combining items into a single code were based partly on frequencies and partly on logical or cultural considerations. To preserve richness of information combining items into a single code was kept to a minimum.

Portions of the socio-cultural interview required further

241

work. A number of the questions were open-ended. Coding categories for these items were developed after reviewing a large number of completed interviews in order to assure that the categories covered the range of possible responses. Answers to a set of questions on "knowledge" (of local issues and the wider world) was coded in terms of the "correctness" of the responses. Since some of the local items changed over time (eg. "Who is the municipal president?") the coding instructions were revised, as necessary, to reflect such changes.

The coding for all three of the social data forms was done by the Area Chief. Approximately 50% of the socio-cultural interviews, 25% of the socio-economic and 10% of the agricultural interviews were also coded by principal investigators. There were virtually no coding disagreements between the coders.

DATA ENTRY AND CLEANING

The coded data for the three social data sets were all entered on to tape at the Computer Center at Salud Publica (Public Health) in Mexico City. The Area Chief was present at the data entry session to assist the computer center personnel chief in training the data entry clerks. All entry was screen prompted, and there was duplicate entry of every code sheet.

242

Printouts of the raw (coded) data were sent back to Solis for hand checking against the original data. After correction of identified errors, the data were sent to Connecticut for range checking. (See appendix for range check values.) Items that failed to meet the qualifications were returned to the Area Chief for further checking against the original interview schedule, rather than the code sheet. Errors were corrected or, very rarely, the value of an item had to be "flagged" as a questionable or bad value.

Socio-economic data

VARIABLE	COL.	DESCRIPTION	VALUES
Com_id	1-2	Community ID	2.
Fam_id	3-5	Family ID	3.
Ind_id	6-9	Individual ID	4.
IId	2-9	Unique individual ID	$8.
Seintid	10-11	Interviewer ID	
Se_date	12-17	Interview Date	DDMMYY6.
Ses_Heal	18	Subject's health	1=Well 2=Ill
Floor	19-20	Composition of House Floor	17=Earth 27=Cement 37=Ladrillo 47=Tile 57=Tabicon 67=Wood 12=Earth & Cement 13=Earth & Ladr. 14=Earth & Tile 15=Earth & Tabicon 16=Earth & Wood 21=Cement & Earth 23=Cement & Ladr. 24=Cement & Tile 25=Cement & Tabicon 26=Cement & Wood 31=Ladr. & Earth 32=Ladr. & Cement 34=Ladr. & Tile 35=Ladr. & Tabicon 36=Ladr. & Wood 41=Tile & Earth 42=Tile & Cement 43=Tile & Ladr. 45=Tile & Tabicon 46=Tile & Wood 51=Tabicon & Earth 52=Tabicon & Cement 53=Tabicon & Ladr. 54=Tabicon & Tile 56=Tabicon & Wood 61=Wood & Earth 62=Wood & Cement 63=Wood & Ladr. 64=Wood & Tile 65=Wood & Tabicon

Roof	21-22	Composition of Roof	17=Earth 27=Asbestos Sheets 37=Cardboard/Metal Sheets 47=Roof Tile 57=Wood 12=Concrete & Asbestos 13=Concrete & Cardboard/Metal 14=Concrete & Tile 15=Concrete & Wood 21=Asbestos & Concrete 23=Asbestos & Cardboard/Metal 24=Asbestos & Tile 25=Asbestos & Wood 31=Cardboard/Metal & Concrete 32=Card./Metal & Wood 34=Card./Metal & Tile 35=Card./Metal & Wood 41=Tile & Concrete 42=Tile & Asbestos 43=Tile & Card./Metal 45=Tile & Wood 51=Wood & Concrete 52=Wood & Asbestos 53=Wood & Card./Metal 54=Wood & Tile
Walls	23-24	Composition of Walls	17=Adobe 27=Tabicon 37=Wood 47=Stone 57=Ladrillo 12=Adobe & Tabicon 13=Adobe & Wood 14=Adobe & Stone 15=Adobe & Ladrillo 21=Tabicon & Adobe 23=Tabicon & Wood 24=Tabicon & Stone 25=Tabicon & Ladr. 31=Wood & Adobe 32=Wood & Tabicon 34=Wood & Stone 35=Wood & Ladrillo 41=Stone & Adobe

245

			42=Stone & Tabicon 43=Stone & Wood 45=Stone & Ladrillo 51=Ladrillo & Adobe 52=Ladr. & Tabicon 53=Ladrillo & Wood 54=Ladrillo & Stone
Plaster	25	Are the Walls Mostly Plastered	1=No 2=Yes
Paint	26-29	Year Last Painted House	
Rooms	30	Number of Rooms	
Windows	31-32	Number of Windows	
Glass	33-34	Number of Windows with Glass	
Doors	35-36	Number of Doors	
Door_i	37-38	Number of Iron Doors	
Door_w	39-40	Number of Wooden Doors	
Bed_d	41	Number of Double Beds	
Bed_s	42	Number of Single Beds	
N_ind	43-44	Number of Persons in House	
Stove	45	Number of Gas Stoves	
Tv	46	Number of Televisions	
Radio	47	Number of Radios	
Tape	48	Number of Tape Recorders	
Record	49	Number of Record Players	
Blender	50	Number of Blenders	
Irons	51	Number of Electric Irons	
Sew	52	Number of Sewing Machines	
Clothes	53	Number of Wardrobes	
Kitchen	54	Number of Kitchen Sets	
Cabinet	55	Number of Dish Cabinets	
Frig	56	Number of Refrigerators	
Autos	57	Number of Trucks/Cars	
Expend	58-61	Weekly Expenditures on Purchased Food	
Mules	62-63	Number of Mules Owned	
Oxen	64-65	Number of Oxen	
Cows	66-67	Number of Cows	
Horses	68-69	Number of Horses	
Pigs	70-71	Number of Pigs	
Burros	72-73	Number of Burros	
Goats	74-75	Number of Goats	
Sheep	76-77	Number of Sheep	
Turkeys	78-79	Number of Turkeys	
Chickens	1-3	Number of Chickens	
Machetes	4	Number of Machetes	
Shovels	5	Number of Shovels	
Pforks	6	Number of Pitchforks	
Harrows	7	Number of Harrows	
Hoes	8	Number of Hoes	
Picks	9	Number of Picks	
Sickles	10	Number of Sickles	
Scythes	11	Number of Scythes	

E_plows	12	Number of Plows for Breaking Earth
S_plows	13	Number of Seeding Plows
Yokes	14	Number of Yokes
F_pumps	15	Number of Fumigating Pumps
W_pumps	16	Number of Water Pumps
Carts	17	Number of Carts
Tractors	18	Number of Tractors
Rakes	19	Number of Rakes

Migration data

VARIABLE	COL.	DESCRIPTION	VALUES
Com_id	1-2	Community ID	2.
Fam_id	3-5	Family ID	3.
Ind_id	6-9	Individual ID of person interviewed	4.
IID	2-9	Unique individual ID	$8.
Mgintid	10-11	Interviewer ID	2.
Mi_Date	12-17	Interview date	DDMMYY6.
Mig_heal	18	Subject's health	1=Well 2=Ill
P_id	19-22	Individual Id of padre	
P_Migr	23	Padre migrate	1=No 2=Yes
P_Mon	24-25	Month emmigrated	01 to 12
P_Dest	26-28	Place migrated to	1=Other comm. in valley 2=Temascalcingo 3=Other municipio in state of Mexico 4=Toluca 5=Mexico city 6=Other state 7=Other country
P_Work	29-31	Type of work	1=Mason,servant 2=Agriculture 3=Artist 4=Mechanic 5=Office work 6=Driver 7=Professional 8=Comercial
P_Sea	32-35	Season of migration	1 to 4
P_Cont	36	Contribute to family income	1=No 2=Yes
C1_id	37-40	Individual ID of first migrant child	
C1_Sex	41	Sex of first child	1=Male 2=Female
C1_Migr	42	Child migrate	1=No 2=Yes
C1_Mon	43-44	Month emmigrated	01 to 12
C1_Dest	45-47	Place migrated to	1=Other comm. in valley 2=Temascalcingo 3=Other municipio in state of Mexico 4=Toluca 5=Mexico city 6=Other state 7=Other country
C1_Work	48-50	Type of work	1=Mason,servant 2=Agriculture 3=Artist

			4=Mechanic 5=Office work 6=Driver 7=Professional 8=Comercial
C1_Sea	51-54	Season of migration	1 to 4
C1_Cont	55	Contribute to family income	1=No 2=Yes
C2_id	56-59	Individual ID of second migrant child	
C2_Sex	60	Sex of second child	1=Male 2=Female
C2_Migr	61	Child migrate	1=No 2=Yes
C2_Mon	62-63	Month emmigrated	01 to 12
C2_Dest	64-66	Place migrated to	1=Other comm. in valley 2=Temascalcingo 3=Other municipio in state of Mexico 4=Toluca 5=Mexico city 6=Other state 7=Other country
C2_Work	67-69	Type of work	1=Mason,servant 2=Agriculture 3=Artist 4=Mechanic 5=Office work 6=Driver 7=Professional 8=Comercial
C2_Sea	70-73	Season of migration	1 to 4
C2_Cont	74	Contribute to family income	1=No 2=Yes
O1_id	75-78	Other person (1) ID	
O1_Sex	79	Sex of other person 1	1=Male 2=Female
O1_Rel	1	Relation to Jefe of family	01=Jefe 02=Wife of Jefe 03=Child of Jefe/Wife 04=Grandchild of Jefe/Wife 05=Father or Mother of Jefe/Wife 06=Son-in-Law of Jefe/Wife 07=Daughter-in-Law of Jefe/Wife 08=Sibling of Jefe/Wife 09=Nephew/Niece of Jefe/Wife 10=Others
O1_Dest	2	Place migrated to	1=Other comm. in valley 2=Temascalcingo 3=Other municipio in state of Mexico

			4=Toluca 5=Mexico city 6=Other state 7=Other country
01_Work	3	Type of work	1=Mason,servant 2=Agriculture 3=Artist 4=Mechanic 5=Office work 6=Driver 7=Professional 8=Comercial
01_Cont	4	Contribute to family income	1=No 2=Yes
02_id	5-8	Other person (2) ID	
02_Sex	9	Sex of other person 2	1=Male 2=Female
02_Rel	10	Relation to Jefe of family	01=Jefe 02=Wife of Jefe 03=Child of Jefe/Wife 04=Grandchild of Jefe/Wife 05=Father or Mother of Jefe/Wife 06=Son-in-Law of Jefe/Wife 07=Daughter-in-Law of Jefe/Wife 08=Sibling of Jefe/Wife 09=Nephew/Niece of Jefe/Wife 10=Others
02_Dest	11	Place migrated to	1=Other comm. in valley 2=Temascalcingo 3=Other municipio in state of Mexico 4=Toluca 5=Mexico city 6=Other state 7=Other country
02_Work	12	Type of work	1=Mason,servant 2=Agriculture 3=Artist 4=Mechanic 5=Office work 6=Driver 7=Professional 8=Comercial
02_Cont	13	Contribute to family income	1=No 2=Yes
03_id	14-17	Other person (3) ID	
03_Sex	18	Sex of other person 3	1=Male 2=Female

03_Rel	19	Relation to Jefe of family	01=Jefe 02=Wife of Jefe 03=Child of Jefe/Wife 04=Grandchild of Jefe/Wife 05=Father or Mother of Jefe/Wife 06=Son-in-Law of Jefe/Wife 07=Daughter-in-Law of Jefe/Wife 08=Sibling of Jefe/Wife 09=Nephew/Niece of Jefe/Wife 10=Others
03_Dest	20	Place migrated to	1=Other comm. in valley 2=Temascalcingo 3=Other municipio in state of Mexico 4=Toluca 5=Mexico city 6=Other state 7=Other country
03_Work	21	Type of work	1=Mason,servant 2=Agriculture 3=Artist 4=Mechanic 5=Office work 6=Driver 7=Professional 8=Comercial
03_Cont	22	Contribute to family income	1=No 2=Yes
04_id	23-26	Other person (4) ID	
04_Sex	27	Sex of other person 4	1=Male 2=Female
04_Rel	28	Relation to Jefe of family	01=Jefe 02=Wife of Jefe 03=Child of Jefe/Wife 04=Grandchild of Jefe/Wife 05=Father or Mother of Jefe/Wife 06=Son-in-Law of Jefe/Wife 07=Daughter-in-Law of Jefe/Wife 08=Sibling of Jefe/Wife 09=Nephew/Niece of Jefe/Wife 10=Others
04_Dest	29	Place migrated to	1=Other comm. in valley 2=Temascalcingo 3=Other municipio in state of Mexico 4=Toluca 5=Mexico city

			6=Other state 7=Other country
O4_Work	30	Type of wor	1=Mason,servant 2=Agriculture 3=Artist 4=Mechanic 5=Office work 6=Driver 7=Professional 8=Comercial
O4_Cont	31	Contribute to family income	1=No 2=Yes
O5_id	32-35	Other person (5) ID	
O5_Sex	36	Sex of other person 5	1=Male 2=Female
O5_Rel	37	Relation to Jefe of family	01=Jefe 02=Wife of Jefe 03=Child of Jefe/Wife 04=Grandchild of Jefe/Wife 05=Father or Mother of Jefe/Wife 06=Son-in-Law of Jefe/Wife 07=Daughter-in-Law of Jefe/Wife 08=Sibling of Jefe/Wife 09=Nephew/Niece of Jefe/Wife 10=Others
O5_Dest	38	Place migrated to	1=Other comm. in valley 2=Temascalcingo 3=Other municipio in state of Mexico 4=Toluca 5=Mexico city 6=Other state 7=Other country
O5_Work	39	Type of work	1=Mason,servant 2=Agriculture 3=Artist 4=Mechanic 5=Office work 6=Driver 7=Professional 8=Comercial
O5_Cont	40	Contribute to family income	1=No 2=Yes
D_82	41	Destination of Jefe's migration in 1982	(See O5_Dest)
T_82	42	Type of Jefe's work, 1982	(See O5_Work)
M_82	43-44	Months Jefe migrated, 1982	01 to 12

S_82	45-48	Seasons Jefe migrated, 1982	1 to 4
D_81	49	Destination of Jefe's migration in 1981	(See 05_Dest)
T_81	50	Type of Jefe's work, 1981	(See 05_Work)
M_81	51-52	Months Jefe migrated, 1981	01 to 12
S_81	53-56	Seasons Jefe migrated, 1981	1 to 4
D_80	57	Destination of Jefe's migration in 1980	(See 05_Dest)
T_80	58	Type of Jefe's work, 1980	(See 05_Work)
M_80	59-60	Months Jefe migrated, 1980	01 to 12
S_80	61-64	Seasons Jefe migrated, 1980	1 to 4
D_79	65	Destination of Jefe's migration in 1979	(See 05_Dest)
T_79	66	Type of Jefe's work, 1979	(See 05_Work)
M_79	67-68	Months Jefe migrated, 1979	01 to 12
S_79	69-72	Seasons Jefe migrated, 1979	1 to 4
D_78	73	Destination of Jefe's migration in 1978	(See 05_Dest)
T_78	74	Type of Jefe's work, 1978	(See 05_Work)
M_78	75-76	Months Jefe migrated, 1978	01 to 12
S_78	77-80	Seasons Jefe migrated, 1978	1 to 4

SOCIO-CULTURAL
(Received in Connecticut Sept. 1985)

VARIABLE	COL.	DESCRIPTION	FORMAT
Com_id	1-2	Community ID	2.
Fam_id	3-5	Family ID	3.
Ind_id	6-9	Individual ID	4.
IId	2-9	Unique individual ID	$8.
Scintid	10-11	Interviewer ID	2.
Su_Date	12-17	Interview date	DDMMYY6.
Sc_sex	18	Sex (Based on indtype)	
M_Sch	19	Level of School,Males	1=LT Primary 2=Primary 3=Secondary 4=Career,Tech., Teaching 5=College Prep. 6=University,Prof. 9=No Answer
F_Sch	20	Level of School,Females	(Same as M_Sch)
M_Occ	21	Occupation,Males	1=Farm Worker 2=Bricklayer 3=Factory Worker 4=Office Worker 5=Business Person 6=Teacher 7=Doctor 8=Prof.,Engineer, Lawyer 9=Can't Code/ No Answer
F_Occ	22	Occupation,Females	1=Housewife 2=Farm Worker 3=Factory Worker/ Maid 4=Secretary 5=Business Person 6=Nurse 7=Teacher 8=Prof.,Doctor 9=Can't Code/ No Answer
M_Live	23	Where Do You Want To Live,Males	1=This Community 2=Temascalcingo 3=Central Region 4=Mexico City 5=Outside of Mexico City 6=Where They Want 9=No Answer
F_Live	24	Where Do You Want To Live,Females	(Same as M_Live)

Noschl	25	Reason For Not Going To School,Males: First Response	1=Illness 2=Needed at Home 3=Needed on Farm 4=Lack of School Necessities 5=Doesn't Want To Go 6=No Answer
Nosch2	26	Reason For Not Going To School,Males: Second Response	(Same as Noschl)
Atlaco	27-28	Number of Times in Past Year Goto Atlacomulco	
Toluca	29-30	Number of Times in Past Year Goto Toluca	
Mexcity	31-32	Number of Times in Past Year Goto Mexico	
Outside	33-34	Number of Times ir Past Year Go Outside of Region	
Sc_Read	35	Do You Know How to Read?	1=No 2=Yes
R_whatl	36	What Do You Read: First Response	1=Nothing 2=Newspaper 3=Magazine 4=Book 5=Other 9=Can't Read/ No Answer
R_What2	37	What Do You Read: Second Response	(Same as R_Whatl)
Q_Radio	38	Do You Have a Radio?	1=No 2=Yes
R_Comedy	39	Number of Times a Week Listen to: Comedy	
R_Drama	40	Number of Times a Week Listen to: Drama	
R_News	41	Number of Times a Week Listen to: News	
R_Music	42	Number of Times a Week Listen to: Music	
Church	43	Participation in Church Organizations	1=No 2=Yes
Fathers	44	Participation in Society of Family Fathers	(Same as Church)
Union	45	Participation in Union of Land Owners	(Same as Church)
Healcom	46	Participation in Health Committee	(Same as Church)
Watcom	47	Participation in Water Committee	(Same as Church)
Litcom	48	Participation in Light Committee	(Same as Church)

T_Assoc	49	Total Number of Assoc.s (If 'Other' put in Total as +1)	
Duties1	50	Duties in Association: First Response	1=Committee Member 2=Delegate (in the Community) 3=Delegate (Outside the Community) 4=Treasurer 5=President 6=Other 9=No Answer
Duties2	51	Duties in Association: Second Response	(Same as Duties1)
Help_Sch	52	Helped in School Festivities	1=No 2=Yes, once 3=Yes, two or more times
Help_Vil	53	Helped in Village Festivities	(Same as Help_Sch)
Help_Tem	54	Helped in Temascalcingo Festivities	"
Temas	55-56	Number of Times per Month Goto Temascalcingo	
P_Live	57	Where Do Your Parents Live?	1=This Community 2=Solis Valley 3=Temascalcingo 4=In the Region 5=Mexico City 6=Other Places in Mexico 7=Outside of Mexico 9=No Answer (Died)
Sc_Age1	58-59	Sibling 1: Age	99=No Answer
Sc_Sex1	60	Sibling 1: Sex	1=Male 2=Female
Sc_live1	61	Sibling 1: Where Lives?	(Same as P_Live)
Sc_vist1	62	Sibling 1: Frequency of Visits	1=Daily 2=More Than Once Per Week 3=Each Week 4=Every Two Weeks 5=Once a Month 6=Every 2-6 Months 7=LT 6 Months-Once a Year 8=LT Once a Year 9=Never
Sc_Ocvs1	63	Sibling 1: Occasion for Visits	1=Social Reasons 2=To Work Together 3=To Ask Help 4=Business

			5=Live Together 6=Other 9=No Answer
Sc_Age2	64-65	Sibling 2: Age	(Same as Sc_Age1)
Sc_Sex2	66	Sibling 2: Sex	(Same as Sc_Sex1)
Sc_Live2	67	Sibling 2: Where Live?	(Same as Sc_Live1)
Sc_Vist2	68	Sibling 2: Frequency of Visits	(Same as Sc_Vist1)
Sc_Ocvs2	69	Sibling 2: Occasion for Visits	(Same as Sc_Ocvs1)
Sc_Age3	70-71	Sibling 3: Age	"
Sc_Sex3	72	Sibling 3: Sex	"
Sc_Live3	73	Sibling 3: Where Live?	"
Sc_Vist3	74	Sibling 3: Frequency of Visits	"
Sc_Ocvs3	75	Sibling 3: Occasion for Visits	"
Sc_Age4	76-77	Sibling 4: Age	"
Sc_Sex4	78	Sibling 4: Sex	"
Sc_Live4	79	Sibling 4: Where Live?	"
Sc_Vist4	80	Sibling 4: Frequency of Visits	"
Sc_Ocvs4	81	Sibling 4: Occasion for Visits	"
Sc_Age5	82-83	Sibling 5: Age	"
Sc_Sex5	84	Sibling 5: Sex	"
Sc_Live5	85	Sibling 5: Where Live?	"
Sc_vist5	86	Sibling 5: Frequency of Visits	"
Sc_Ocvs5	87	Sibling 5: Occasion for Visits	"
L_Food1	88	Loan Food: First Response	1=Parents 2=Parents-in-law 3=Neighbors, Friends 4=Brothers 5=Uncles 6=Sisters 7=Brother or Sister-in-law 8=Relatives 9=No one
L_Food2	89	Loan Food: Second Response	(Same as L_Food1)
L_Food3	90	Loan Food: Third Response	"
L_Mony1	91	Loan Money: First Response	"
L_Mony2	92	Loan Money: Second Response	"
L_Mony3	93	Loan Money: Third Response	"
Hh_Ill1	94	Who Helps When Husband Is Ill: First Response	"
Hh_Ill2	95	Who Helps When Husband Is Ill: Second Response	"
Hh_Ill3	96	Who Helps When Husband Is Ill: Third Response	"

259

Hw_Ill1	97	Who Helps When Wife Is Ill: First Response	"
Hw_Ill2	98	Who Helps When Wife Is Ill: Second Response	"
Hw_Ill3	99	Who Helps When Wife Is Ill: Third Response	"
L_Burro1	100	Loan Burro: First Response	"
L_Burro2	101	Loan Burro: Second Response	"
L_Burro3	102	Loan Burro: Third Response	"
Party	103	When Was Last Party	1=Never 2=2-5 Years Ago 3=LT 2 Years Ago 9=No Answer
P_Reason	104	Reason for Party	1=Family Cele-bration 2=Religious Cele-bration 3=Personal Religious Celebration 4=Personal Party 5=Other 9=No Answer
Hp_Food1	105	Who Helped With Food at Party: First Response	(Same as L_Food1)
Hp_Food2	106	Who Helped With Food at Party: Second Response	"
Hp_Hous1	107	Who Helped With House at Party: First Response	"
Hp_Hous2	108	Who Helped With House at Party: Second Response	"
Hp_Gues1	109	Who Helped With Guests at Party: First Response	"
Hp_Gues2	110	Who Helped With Guests at Party: Second Response	"
A_Loan	111	Do You Loan Animals?	1=No 2=Yes
L_Anim1	112	Loan Animals to Whom: First Response	(Same as L_Food1)
L_Anim2	113	Loan Animals to Whom: Second Response	"
Dif	114	Heard of DIF Program	1=No 2=Yes
Banrural	115	Heard of BANRURAL Program	(Same as Dif)
Codagem	116	Heard of CODAGEM Program	"
Iman	117	Heard of IMAN Program	"
Inn	118	Heard of INN Program	"
Huerto	119	Heard of Huerto Families Program	"
R_Serv1	120	Received Services: First Response	1=From DIF 2=From BANRURAL 3=From CODAGEM 4=From IMAN 5=From INN

			6=From Huerto Families 9=No Answer
T_Servl	121	Type of Services Received: First Response	1=Medical Attention 2=Family Planning 3=Economic Help 4=Agricultural Help 5=Education 6=Milk, Sweets, Dishes 8=Nothing 9=Not Applicable
R_Serv2	122	Received Services: Second Response	(Same as R_Servl)
T_Serv2	123	Type of Services Received: Second Response	(Same as T_Servl)
R_Serv3	124	Received Services: Third Response	(Same as R_Servl)
T_Serv3	125	Type of Services Received: Third Response	(Same as T_Servl)
R_Serv4	126	Received Services: Fourth Response	(Same as R_Servl)
T_Serv4	127	Type of Services Received: Fourth Response	(Same as T_Servl)
R_Serv5	128	Received Services: Fifth Response	(Same as R_Servl)
T_Serv5	129	Type of Services Received: Fifth Response	(Same as T_Servl)
Q_TV	130	Do You Have a TV?	1=No 2=Yes
		Is It a Sony?	
T_Comedy	131	Number of Times a Week Watch: Comedy	9=No Answer
T_Drama	132	Number of Times a Week Watch: Drama	9=No Answer
T_News	133	Number of Times a Week Watch: News	9=No Answer
T_Music	134	Number of Times a Week Watch: Music	9=No Answer
W_Clothl	135	Where Do You Buy Clothes: First Response	1=This Community 2=Solis 3=Temascalcingo 4=Central Region 5=Mexico City 6=Non-commercial (neighbors) 9=No Answer
W_Cloth2	136	Where Do You Buy Clothes: Second Response	(Same as W_Clothl)

Buyl	137	What Would You Buy With $50,000 Pesos: First Response	1=Food 2=Clothes 3=Furniture 4=Improve House, Materials for New House 5=Agricultural Improvement 6=Animals 7=Stores 8=Save 9=Can't Code/No Answer
Buy2	138	What Would You Buy With $50,000 Pesos: Second Response	(Same as Buyl)
Capitol	139	What is the Capitol of the State of Mexico?	1=Doesn't Know 2=Incomplete Answer 3=Response is Correct
Pres	140	Who is the President of the Republic?	(Same as Capitol
Passage	141	How Much is Passage to Mexico City?	"
Country	142	What Countries Border Mexico?	"
Commisar	143	Who is the Common Land Commissariat?	"
Cardenas	144	Who is Lazaro Cardenas?	"
Governor	145	Who is the Governor?	"
Pr_Temas	146	Who is the President of Temascalcingo?	"

2260

-----LIST OF VARIABLES AND ATTRIBUTES BY POSITION-----

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
1	SUBAREA	CHAR	4	4			SUBAREA CODE
2	SNUM	NUM	8	8			STUDY NUMBER
3	STATE	NUM	8	16			STATE OF MEXICO
4	ZONE	NUM	8	24			
5	COM_ID	NUM	8	32			COMMUNITY
6	DAREA	CHAR	1	40			DATA AREA
7	PERIOD	NUM	8	41			PERIOD OF STUDY
8	FORM	NUM	8	49			
9	INTERV	NUM	8	57			INTERVIEWER
10	EXAM	NUM	8	65			EXAMINER
11	FAM_ID	NUM	8	73			FAMILY NUMBER
12	IND_ID	NUM	8	81			INDIVIDUAL NUMBER
13	LOC	NUM	8	89			LOCATION
14	HNUM	NUM	8	97			HOUSE NUMBER
15	DATE	NUM	8	105			DATE
16	HEALTH	NUM	8	113			STATE OF SUBJECTS HEALTH
17	ADINTV	NUM	8	121			ADMINI. OF INTERVIEW
18	INTNUM	NUM	8	129			INTERVIEW NUMBER
19	FLOOR	NUM	8	137			FLOOR OF THE HOUSE
20	ROOF	NUM	8	145			ROOF
21	WALLS	NUM	8	153			WALLS
22	PLASTER	NUM	8	161			PLASTERED WALLS
23	PAINT	NUM	8	169			YEAR LAST PAINTED HOUSE
24	ROOMS	NUM	8	177			NO. OF ROOMS IN HOUSE
25	WINDOWS	NUM	8	185			NO. OF WINDOWS
26	GLASS	NUM	8	193			NO. OF WINDOWS W/ GLASS
27	DOORS	NUM	8	201			NO. OF DOORS
28	D_IRON	NUM	8	209			NO. OF IRON DOORS
29	D_WOOD	NUM	8	217			NO. OF WOODEN DOORS
30	BED_D	NUM	8	225			NO. OF DOUBLE BEDS
31	BED_S	NUM	8	233			NO. OF SINGLE BEDS
32	N_IND	NUM	8	241			NO. OF PERSONS IN HOUSE
33	STOVE	NUM	8	249			NO. OF GAS STOVES
34	TV	NUM	8	257			NO. OF TELEVISIONS
35	RADIO	NUM	8	265			NO. OF RADIOS
36	TAPE	NUM	8	273			NO. OF TAPE RECORDERS
37	RECORD	NUM	8	281			NO. OF RECORD PLAYERS
38	BLENDER	NUM	8	289			NO. OF BLENDERS
39	IRONS	NUM	8	297			NO. OF ELECTRIC IRONS
40	SEW	NUM	8	305			NO. OF SEWING MACHINES
41	CLOTHES	NUM	8	313			NO. OF WARDROBES
42	KITCHEN	NUM	8	321			NO. OF KITCHEN SETS
43	CABINET	NUM	8	329			NO. OF DISH CABINETS
44	FRIG	NUM	8	337			NO. OF REFRIGERATORS

CONTENTS OF DATASET SOCEC.MEX.NOV83 ON TAPE OS0001 14:09 WEDNESDAY, AUGUST 6, 1986

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
45	AUTOS	NUM	8	345			NO. OF TRUCKS/CARS
46	SPEND	NUM	8	353			WEEKLY EXPEND. ON PURCH. FOOD
47	MULES	NUM	8	361			NO. OF MULES OWNED
48	OXEN	NUM	8	369			NO. OF OXEN
49	COWS	NUM	8	377			NO. OF COWS
50	HORSES	NUM	8	385			NO. OF HORSES
51	PIGS	NUM	8	393			NO. OF PIGS
52	BURROS	NUM	8	401			NO. OF BURROS
53	GOATS	NUM	8	409			NO. OF GOATS
54	SHEEP	NUM	8	417			NO. OF SHEEP
55	TURKEYS	NUM	8	425			NO. OF TURKEYS
56	CHICKENS	NUM	8	433			NO. OF CHICKENS
57	MACHETES	NUM	8	441			NO. OF MACHETES
58	SHOVELS	NUM	8	449			NO. OF SHOVELS
59	PFORKS	NUM	8	457			NO. OF PITCH FORKS
60	HARROWS	NUM	8	465			NO. OF HARROWS
61	RAKES	NUM	8	473			NO. OF RAKES
62	HOES	NUM	8	481			NO. OF HOES
63	PICKS	NUM	8	489			NO. OF PICKS
64	SICKLES	NUM	8	497			NO. OF SICKLES
65	SCYTHES	NUM	8	505			NO. OF SCYTHES
66	E_PLOWS	NUM	8	513			NO. OF PLOWS FOR BREAKING EARTH
67	S_PLOWS	NUM	8	521			NO. OF SEEDING PLOWS
68	YOKES	NUM	8	529			NO. OF YOKES OF ANIMALS
69	F_PUMPS	NUM	8	537			NO. OF FUMIGATING PUMPS
70	W_PUMPS	NUM	8	545			NO. OF WATER PUMPS
71	CARTS	NUM	8	553			NO. OF CARTS
72	TRACTORS	NUM	8	561			NO. OF TRACTORS
73	PISO	NUM	8	569			
74	TECHO	NUM	8	577			
75	PAREDES	NUM	8	585			
76	APLANA	NUM	8	593			
77	PINTURA	NUM	8	601			
78	QUARTOS	NUM	8	609			
79	WINDOW	NUM	8	617			
80	VENTANAS	NUM	8	625			
81	PUERTAS	NUM	8	633			
82	CAMAS	NUM	8	641			
83	CASA_1	NUM	8	649			
84	RV34	NUM	8	657			
85	RV35	NUM	8	665			
86	RV36	NUM	8	673			
87	RV37	NUM	8	681			
88	RV38	NUM	8	689			
89	RV39	NUM	8	697			
90	RV40	NUM	8	705			
91	RV41	NUM	8	713			
92	RV42	NUM	8	721			
93	RV43	NUM	8	729			
94	RV44	NUM	8	737			
95	RV45	NUM	8	745			
96	MSL_1	NUM	8	753			
97	RV48	NUM	8	761			
98	RV49	NUM	8	769			
99	RV50	NUM	8	777			
100	RV51	NUM	8	785			
101	RV52	NUM	8	793			
102	RV53	NUM	8	801			
103	RV54	NUM	8	809			
104	RV55	NUM	8	817			

262

PSYCHOLOGICAL DATA IN THE SOLIS PROJECT

Introduction

The large body of psychological data on infants, preschoolers, school-age children, and adults was obtained using a variety of testing instruments and observational protocols. By subject type, these were as follows:

INFANT: Brazelton Neonatal Assessment
Bayley Mental and Motor Scales of Infant Development
Observational study of mother-infant interaction

PRESCHOOLER: Bayley Mental and Motor Scales of Infant Development
Observational study of child behavior and mother-child interaction

SCHOOL AGE CHILD: Cognitive development measures
Observational study in school yard and classroom
Teacher Assessment
Self Drawing

ADULT: Cognitive development measures

PERSONNEL

The development, pre-testing and supervision of data collection on cognitive performance in adults and school children was under the direction of Dr. Gordon Finley, Professor, Florida International University. Dr. Tiffany Field, Professor, University of Miami, had parallel responsibilities for the observational components of school child testing, and all aspects of infant and preschool testing, including observation of mother-infant interactions.

The Area Chief

In July, 1983 Ms. Eulalia Martinez joined the project staff as the Area Chief for psychology. Ms. Martinez received her *licenciatura* in psychology from the University of Morelos, and did a year of postgraduate work at the Universidad Nacional Autonoma de Mexico (UNAM).

Prior to joining the CRSP project she worked for two years as a field psychologist in a nutrition and child development project under the direction of Dr. Joachim Cravioto. In addition to training by project co-investigators, she also received specialized training in the administration of the Brazelton Neonatal Assessent Exam at a short course at the Children's Hospital in Mexico City.

Fieldworkers: Recruitment and Training

Ms. Martinez had the primary responsibility for recruiting and training the staff for the psychological training. In September, 1983 she contacted the technical school for training social workers in the town of Acambay, a municipal center in a region close to Solis. From this school five staff members (three men and two women) were recruited. Their educational background consisted of 3 years of secondary school training and 3 years in the social work technical school. A local school teacher was also recruited. His prior education included secondary school, four years of normal school and summer courses to qualify as a secondary school teacher. Three high school students from Temascalcingo were also hired, bringing the initial staff of the psychology group to nine.

A North American graduate student in psychology, Mr. Todd Walker, who had been hired by Dr. Field to help Ms. Martinez in the early phase of testing and training, arrived in Solis in the late summer of 1983. He and Ms. Martinez began training the fieldworkers with the cognitive tests for school age children in September, 1983. Children from Solis, not from the study communities, participated as subjects for the training.

The training procedure was as follows:

1. Ms. Martinez administered the test to a school child while the fieldworkers watched and filled out (coded) the examination sheet.

2. The coding was reviewed and problems were discussed in the full group.

3. One at a time, each fieldworker administered the test to a school age subject, while the others watched and filled in their code sheets. The coding was then reviewed and discussed.

4. Mr. Walker took the fieldworkers (in smaller groups) to learn the procedures for the observational study of schoolyard activity. Comparison of coding was the main way in which problems

265

were discussed and observations standardized.

In October, 1983 the fieldworkers did trial studies of cognitive testing of school age children and school yard observations in another community in the Solis region, which was not one of the study communities.

In January, 1984 Ms. Martinez went to Miami to work with Dr. Field and her assistant, Ms. Nitza Varga, on administration of the Brazelton examination on newborns and the Bayley in infants and preschoolers. After her return, in February, 1984 Ms. Martinez began training several of the fieldworkers in the application of tests for preschoolers. However, in March these fieldworkers, together with the other social workers who had been trained in the psychologic testing procedures left the project. Ms. Martinez took over the preschooler testing for several months.

In August, 1984 three psychologists from the University of Morelos joined the project as fieldworkers. They had completed all of their formal training for the licenciatura, except for the thesis and social service internship. After a brief period of training (following the procedure described above) they began testing preschool and school-age children.

Two of the three psychologists left in December, 1984 and in January, 1985 two psychologists, one from UNAM and the other from the University of Morelos were recruited. Ms. Martinez made a second trip to Miami to review the previously collected data and data collection procedures. In her absence the new psychologists were trained by the fieldworker who remained with the project. A third university-trained student was recruited in

266

March, bringing the staff to 6, three of whom had university training and three with secondary school training. In the final months of data collection a psychologist trained at the Universidad Autonoma Metropolitana (UAM) in Mexico City joined the staff, when one of the other psychologists indicated he would be unable to remain through the end of the project.

DEVELOPING AND PRETESTING THE PSYCHOLOGICAL INSTRUMENTS

In June, 1983 Dr. Gordon Finley spent several weeks in Solis designing a pilot study and pretesting several instruments. A battery of cognitive measurement techniques was administered to school age children (seven to nine years old) from the town of Solis. These included several components of the WISC: arithmetic, repetition of digits, repetition of a story, information, cubes and mazes. Other measurements that were also pretested were the Raven's Matrix Test, the Peabody Vocabulary test, and an attention span test. From this pretesting the decision was made to drop two tests from the battery. The information component of the WISC appeared to be heavily influenced by amount of schooling, and the story repetition was cut simply because the battery was too long.

During this same period pretesting several components of the WAIS, an attention span measure, and the Porteus Maze test were carried out with adults from the town of Solis. This testing went smoothly and no further modifications were made.

In September and October, 1983 a pilot study was carried out in San Francisco, one of the valley communities that would not be used in the longitudinal study. In addition to the cognitive

267

measurements on school-age subjects, the pilot study included anthropometry, food intake and morbidity measurements. Based on this pilot the decision was made to retain the battery of tests developed and modified during the summer.

The first pretesting of the mother-child observations took place in the clinic at the project headquarters in Solis, under the direction of Dr. Field. Later the instrument was piloted in one of the valley communities. Apart from some initial shyness on the part of mothers, the results of the pretesting indicated that the observational studies could be carried out in subjects' homes.

Cognitive measurement in the preschoolers proved to be the most difficult component to put into place. Pretesting the Uzgiris Hunt instrument in early 1984 demonstrated the difficulty of eliciting responses from young children in this cultural setting. The Bayley Scales were more easily administered, so the decision was made to use these as the primary measures of mental and motor development.

Pretesting the Brazelton Neonatal Assessment in the Solis clinic presented no unusual problems. However, the nature of the test made it virtually impossible to administer in subjects' homes. After one or two attempts to do in-home testing on the newborn, the decision was reached to carry out Brazelton examinations only on infants born in the clinic.

QUALITY CONTROL OF DATA COLLECTION

For several of the testing procedures -- the cognitive tests on preschool, school-age and adult subjects and the mother-child

263

observation studies -- tape recording the interviews was an appropriate means of assessing quality of data collection. As each new procedure was put into place, or as new fieldworkers began working independently, tape recordings of every interview were made for at least two months. In the case of mother-child interactions, all interviews were taped-recorded throughout the project in order to code verbal behavior.

The Area Chief, Ms. Martinez, reviewed each tape, checking the manner in which fieldworkers gave instructions and asked questions. To the extent possible, the coded responses were also checked.

A primary mode of maintaining data quality was observation of testing by the Area Chief. Throughout the study she regularly attended testing situations, including the playground and classroom observations. In turn, she reviewed her own testing procedures by comparison with Dr. Field's assistant, both in Miami and in Solis. When problems were identified, the issues were discussed with the individual fieldworkers or, as relevant, in group meetings of the psychology field team.

DATA MANAGEMENT: CODING, ENTRY AND CHECKING

The specific procedures for coding, data entry and checking are described separately for each of the areas, by subject type. described in the sections on tests for subject types. Data entry for all psychological measures was done at the Public Health Data Center, using the standard project procedures, as described in the General Data Management section. Data cleaning and correction also followed the standard routine of: 1) visual checking of raw

264

data printout against the original coding forms; followed by correction of errors; 2) range checks for illegal and out-of-range values; and 3) range checks for 5th and 95%, followed by correction from original data or flagging of bad or suspicious values, as necessary.

PSYCHOLOGICAL DATA ON THE PRESCHOOL CHILD

The psychological data on the preschool child involves two broad categories -- cognitive performance and social-emotional characteristics and behaviors. These data were collected by means of a series of instruments, as follows:

1) The Bayley Scale of Infant Development: Mental Scale

2) The Bayley Scale of Infant Development: Motor Scale

3) The Infant Behavior Record (a checklist filled out by the examiner, based on behavior during the administration of the Bayley scales)

4) Observation of Behavior in a standardized play situation, which yields measures of affect, activity and verbal behavior of the child, as well as parallel measures on the mother.

THE BAYLEY SCALES OF INFANT DEVELOPMENT

Description of the Instrument

I. The Mental Scale

The Bayley Mental Scale is "designed to assess sensory-perceptual acuities, discriminations, and the ability to respond to these; the early acquisition of 'object constancy' and memory, learning and problem solving ability; vocalizations and the beginnings of verbal communication and early evidence of the ability of form generalizations and classifications, which is the basis for abstract thinking. (N. Bayley, New York: The Psychological Corporation. 1969: 3)

The complete scale, for use from birth to 30 months of age, consists of 163 individual items, graduated from most simple to

271

increasingly more complex or advanced responses. The ordering of items by level of difficulty is based on a large, standardized, US sample. The child's score is based on the level of difficulty of the "highest" item successfully passed.

The child's ability to respond to the test items provides the basis for determining the "basal" and "ceiling" levels of performance. These, in turn, are the basis for scoring the test. Basal level is defined as " the item preceding the earliest failure (earliest in terms of age placement" and ceiling is "the item representing the most difficult success" (Bayley, 1969:29).

Since the scale includes items for testing very young infants, there were many items that all 18 month old children would be expected to pass. Therefore, for greater efficiency of test administration and recording, Dr. Field, the co-investigator in the area of preschooler psychological testings (see below) eliminated the simplest items, selecting 54 consecutive items for use in testing the preschoolers at 18 months and adding an additional 10 to the test for children of 24 and 30 months. In the Bayley Scale format these are items numbered 100 to 153 and 100 to 163 respectively.

Administering the test calls for flexibility on the part of the tester, so that the order of presentation to the child is individualized. However, to facilitate standardization in recording responses, the recording format is identifical for all subjects. In this study, the recording format grouped items by type of object used to elicit responses, such as "cubes," "cup," etc. and by type of behavior. To illustrate: the recording format for the test of 18 month olds was as follows: (In consecutive order of original Bayley Mental Scale item number):

100, 114, 131, 111, 119, 143, 105, 112, 125, 135, 147, 108, 118, 123, 134, 102, 107, 115, 103, 104, 109, 110, 121, 129, 142, 120, 137, 151, 122, 101, 106, 113, 116, 117, 124, 138, 146, 126, 128, 130, 141, 149, 132, 139, 148, 133, 140, 153, 144, 152, 145, 150, 127, 136.

II. The Motor Scale

The Bayley Motor Scale is "designed to provide a measure of the degree of control of the body, coordination of the large muscles and finer manipulatory skills of the hands and fingers. As the Motor Scale is specifically directed toward behaviors reflecting motor coordination and skills, it is not concerned with functions that are commonly thought of as 'mental' or intelligent' in nature" (Bayley, 1969:3).

However, there is a relationship between mental and motor functioning, as noted in the following commentary in the Bayley manual. "Motor abilities play important roles in the development of the child's orientation toward his environment, and they influence the quality of his interactions with his environment. Locomotion and control of the body serve to enlarge the potential sphere for new and varied experiences and for individual choices in seeking or avoiding different kinds of experience. The development of manipulatory skills...facilitates the development and employment of the various basic mental processes" (p.3).

In exact parallel to the Mental Scale, the items of the motor scale are structured in increasing order of difficulty, based on developmental norms established with a large U.S.

272

sample. Basal and ceiling levels are defined, as above. The full battery, applicable from birth to 30 months consists of 81 items. For the application in the Solis sample, Dr. Field reduced the total number of items, selecting those that are appropriate for the 18 - 30 month pre-schooler. For the 18 month old, the exam included 12 items (Numbers 47-52,and 57-65 in the original Bayley format. At 24 months an additional 5 items were added, including Numbers 47-52, 57-61, 65, 68, 70, 71, 73 and 75 of the original format. At 30 months, 22 items were included in the examination, using 47-52, 57-61, 65, 68, 70, 71, 73, 75-79, and 81 from the original format.

Like the mental scale, the administration of the motor scale is tailored to the individual child, while the order of recording the child's ability to complete (or "pass") the specific items is standardized.

III. The Infant Behavior Record

The Infant Behavior Record, which is completed by the examiner after the Mental and Motor Scales have been administered, provides an assessment of "the nature of the child's social and objective orientations toward his environment a expressed in attitudes, interests, emotions, energy, activity and tendencies to approach or withdraw from stimulation" (Bayley, 1969:4).

The assessment is based on both specific observations and qualitative judgments on the part of the examiner. Each dimension or quality is rated on a scale, which in the case of the dimensions used in the Solis study, are either a five-point or a

274

nine-point scale. In our study the dimensions are grouped into two main scales representing two broad categories: a "cognitive behavior rating," and an "extroversion behavior rating." (See below under scoring for description of the individual items.)

Schedule of Administration

Project design calls for the administration of the Bayley Examination to preschool subjects at three ages: 18 months, 24 months and 30 months. Modifications of the examination for different ages are described above.

A number of factors affected the date of testing. Children were not tested when they were ill, as judged by fever or the mother's report that the child was sick to the point that activity was altered. This delayed testing in some cases. The most common reason for a testing delay was the temporary absence of the family from the house or community. A third factor was non-availability of a trained examiner.

Data Collection Procedures

The full battery of testing procedures on the preschoolers were scheduled to be administered in a single session. Prior to the test day the mothers were contacted by the psychologists, the testing procedure was explained and a time for the test was set up. An effort was made to schedule the testing session for the morning, particularly in households with older children. In the morning older children and adults other than the mother were usually away from the house, making it easier to obtain a quiet setting for the testing.

275

For most families the outside patio is a primary living area, and it was usually in the patio that the testing was conducted. In bad weather the testing took place inside.

Typically, the preschoolers, especially at 18 months, were extremely shy. Frequently they hid behind their mothers, and they often cried. Sometimes the examiners needed a first visit simply to establish rapport with the child, and testing would be delayed for a few days. More often, the test could be administered at the first visit.

The examiner began with the items of the Bayley Mental Scale and then proceeded to the Motor Scale Items. If the child was cooperative, the testing then proceeded to the Observation of Mother-Child Interaction. If the child was tired, cross or otherwise not cooperative, the examiner stopped the testing procedure and returned on another day.

Many of the test items require the tester to interact with the child about an object, such as a cup, colored boxes, rings, cubes, a doll, and so on. The objects are all included in the standard Bayley tester's kit, which resembles a large briefcase. The testing kit, with its standard items, was used by the examiners for all of the subjects in the Solis sample.

<u>Coding the Bayley Examination</u>

Test results on both the Mental Scale and Motor Scale of the Bayley are expressed as standard scores. Since they measure developmental processes of normal human maturation, the assessment of an individual child's performance can be expressed as his/her achievement (at a given age) of behaviors that are

276

normatively characteristically achieved by children of a given age. Population distributions are thus the yardstick of measurement, in a manner that parallels the use of percentiles of weight-for age or height-for-age to assess anthropometric performance.

The sample on which the current Bayley Scales are standardized, consisted of 1,262 children in the United States, ranging in age from 2 to 30 months (Bayley, 1969). To derive the standard scores, "the distribution of raw scores at each age level was converted to a set of normalized standard scores have a mean value of 100 and a standard deviation of, in the following manner. A cumulative frequency distribution of raw scores was prepared and the appropriate standard score value was assigned to each raw score on the basis of its position on a theoretical normal curve. Minor irregularities in the distributions of the resulting standard scores...were eliminated by smoothing" (p. 15).

The standard scores range from 50 to 150, a span of more than three standard deviations on either side of the mean value for each age. As discussed by Bayley and associates, "...standard scores permit ready comparison of the performance of an infant with the performance of his age peers" (Bayley, 1969:15). It should be noted that since the same "standard" is used for all children within the Solis sample, the comparison of children <u>within</u> the study population is not compromised by the fact that the standardization yardstick is based on a U.S. rather than a Mexican sample.

277

Bayley Mental Scale

The Mental Scale standard score is referred to as the Mental Development Index (MDI). The recommended procedure for scoring is as follows:

1. Obtain the raw score by counting the total number of items the child has passed. This is readily accomplished by counting the number of check marks in the "pass" column of the recording sheet and adding it to the item number of the basal item.

2. Compute the child's age at the time the test is administered by subtracting the birth date from the test date.

3. Convert the raw score to its MDI equivalent by referring to the standardization tables, which list the MDI equivalents for each raw score by age, in one month age divisions.

Ms. Nitza Vega Lahr, Dr. Field's assistant at the University of Miami, prepared the Spanish instructions on scoring and trained Ms. Martinez in their use. In January, 1985 Ms. Martinez brought a sample of raw data protocols and her conversion calculations to Dr. Field in Miami to assure that they were being correctly done.

The calculation of MDI scores was made at the fieldsite by the examiners, after training by Ms. Martinez. All scores were then recalculated by Ms. Martinez prior to data entry.

Bayley Motor Scale

The standardized score on the Bayley Motor Scale is referred to as the Psychomotor Development Index (PDI). The procedures for deriving the PDI are identical to the MDI. As with the MDI, the

218

calculation of scores was first carried out by the examiner and then recalculated by Ms. Martinez, to ensure accuracy. Dr. Field also reviewed PDI calculations when Ms. Martinez visited the University of Miami in 1985.

Infant Behavior Record

The IBR is completed by the examiner, following the administration of the mental and motor scale items. From the full set of possible ratings, Dr. Field selected nine components as relevant for the study, given the age range of the children and the other behaviors being measured. These dimensions, identified by their name and number in the Bayley manual, and their associated rating scales are as follows:

(2) Responsiveness to Examiner

- rated on a scale from 1 (avoids response) to 5 (invites response)

(4) Cooperativeness

- rated on a scale from 1 (none) to 9 (much)

(7) General Emotional Tone

- rated on a scale from a (unhappy) to 9 (happy)

(8) Responsiveness to Objects

- rated on a scale from 1 (no responsiveness) to 9 (much responsiveness)

(11) Goal Directedness

- rated on a scale from 1 (no goal directedness) to 9 (much goal directedness)

(12) Attention Span

- rated on a scale from 1(short) to 9 (long)

(25) Reactivity

- rated on a scale from 1 (no reactivity) to 9 (much)

(26) Large Motor Coordination

- rated on a scale from 1 (poor) to 5 (excellent)

(27) Fine Motor Coordination

- rated on a scale from 1 (poor) to 5 (excellent)

DATA ENTRY AND CHECKING

Separate code sheets were used to record the scores for the three components of the examination. These forms were then given to the Computer Center at Public Health, for entry on to tape. The entry was screen-assisted, and the Area Chief was present to answer questions and assist in training the data entry personnel on the specific details of the sheets.

The tape of raw (coded) data was then taken to the IBM Scientific Center, where a printout was made. This was sent back to Solis for visual checking against the code sheets. Corrections were made before the tape was sent to Connecticut. At the project office in Connecticut, the data were subjected to range checks (see appendix). Incorrect or questionable values were returned to the Area Chief and checked against the original, uncoded data. At that point further corrections were made or data were flagged as "bad values."

280

Infant Psychology: Brazelton Exam
(May 14, 1986)

Variable	Col.	Label	Value
COM_ID	1-2	Community ID	
FAM_ID	3-5	Family ID	
IND_ID	6-9	Individual ID of person interviewed	
BZ_ITYPE	10	Individual Type	
BZINT_ID	11-12	Interviewer ID	
BZ_DATE	13-18	Date of Observation	DDMMYY6.
BZ_HABIT	19-21	Habituation score (Lester)	(#.#)
BZ_ORIEN	22-24	Orientation score (Lester)	(#.#)
BZ_MOTOR	25-27	Motor score (Lester)	(#.#)
BZ_RANGE	28-30	Range of states (Lester)	(#.#)
BZ_1	31-33	Regulation of states (Lester)	(#.#)
BZ_2	34-36	Autonomic stability (Lester)	(#.#)
BZ_3	37	Reflex score (Lester)	1= low 2= medium 3= high
BZ_4	38-40	Processes of interaction (a priori)	(#.#)
BZ_5	41-43	Motor processes (a priori)	(#.#)
BZ_6	44-46	Control of states (a priori)	(#.#)
BZ_7	47	Response to stress (a priori)	

Infant Psychology (3 Months)
(May 14, 1986)

Variable	Col.	Label	Value
COM_ID	1-2	Community ID	
FAM_ID	3-5	Family ID	
IND_ID	6-9	Individual ID of person interviewed	
P03ITYPE	10	Individual Type	
P03INTID	11-12	Interviewer ID	
T03_DATE	13-18	Date of Observation	DDMMYY6.
T03_POBS	19-20	Number of observations (scheduled)	
T03_SOBS	21-22	Number of observations (actual)	
T03_I1	23-24	Looks at mother (infant)	
T03_I2	25-26	Smiles (infant)	
T03_I3	27-28	Coos or vocalizes (infant)	
T03_I4	29-30	Laughs (infant)	
T03_I5	31-32	Yawns (infant)	
T03_I6	33-34	Knitted brow (infant)	
T03_I7	35-36	Fussing (infant)	
T03_I8	37-38	Moves limbs (infant)	
T03_I9	39-40	Squirms (infant)	
T03_M1	41-42	Looks at infant (mother)	
T03_M2	43-44	Smiles (mother)	
T03_M3	45-46	Vocalizes (mother)	
T03_M4	47-48	Touches infant (mother)	
T03_M5	49-50	Moves infant's body and limbs (mother)	
T03_M6	51-52	Imitates (mother)	
T03_M7	53-54	Plays (mother)	
T03_M6	55-56	Shows infantized behavior (mother)	
T03_ITOT	57-60	Total score for infant	(#.##)
T03_MTOT	61-64	Total score for mother	(#.##)

Toddler Psychology (18 Months)
(May 14, 1986)

Variable	Col.	Label	Value
COM_ID	1-2	Community ID	
FAM_ID	3-5	Family ID	
IND_ID	6-9	Individual ID of person interviewed	
P18ITYPE	10	Individual Type	
P18INTID	11-12	Interviewer ID	
B18DATE1	13-18	Date of Observation (Mental)	DDMMYY6.
B18_MENT	19-21	Mental scale	
B18DATE2	22-27	Date of Observation (Motor)	DDMMYY6.
B18_MOTR	28-30	Motor scale	
B18_COGN	31-32	Cognitive factor	
B18_EXTR	33-34	Extraversion factor	
T18_DATE	35-40	Date of observation of mother-child	DDMMYY6.
T18_POBS	41-42	Number of observations (actual)	
T18_SOBS	43-44	Number of observations (scheduled)	
T18_C1	45-46	Constructive play (child)	
T18_C2	47-48	Fantasy play (child)	
T18_C3	49-50	Looks at mother (child)	
T18_C4	51-52	Talks (child)	
T18_C5	53-54	Smiles (child)	
T18_C6	55-56	Playing together (child)	
T18_C7	57-58	Seeks help or instructions (child)	
T18_C8	59-60	Fussing and crying (child)	
T18_M1	61-62	Constructive play (mother)	
T18_M2	63-64	Fantasy play (mother)	
T18_M3	65-66	Contingent responsivity (mother)	
T18_M4	67-68	Looks at child (mother)	
T18_M5	69-70	Talks (mother)	
T18_M6	71-72	Smiles (mother)	
T18_M7	73-74	Demonstration with verbalization (mother)	
T18_M8	75-76	Coaxes child to try (mother)	
T18_M9	77-78	Gives commands (mother)	
T18_MAFF	79	Affect of mother	
T18_CAFF	80	Affect of child	
T18_MACT	81	Activity of mother	
T18_CACT	82	Activity of child	
T18_MVBC	83	Verbal conduct of mother	
T18_CWD1	84-86	Total words on tape (child)	
T18_CTST	88-90	Total times spoke on tape (child)	
T18_CWD2	91-93	Total words (child)	
T18_CDWD	94-95	Total different words	

283

		(child)
T18_MWRD	96-98	Total words on tape (mother)
T18_MTST	100-102	Total times spoke on tape (mother)
T18_MTPH	103-105	Total phrases (mother)
T18_MCOM	106-108	Total commands (mother)
B18_ID	109-110	Bayley mental ID

284

Toddler Psychology (24 Months)
(May 14, 1986)

Variable	Col.	Label	Value
COM_ID	1-2	Community ID	
FAM_ID	3-5	Family ID	
IND_ID	6-9	Individual ID of person interviewed	
P24ITYPE	10	Individual Type	
P24INTID	11-12	Interviewer ID	
B24DATE1	13-18	Date of Observation (Mental)	DDMMYY6.
B24_MENT	19-21	Mental scale	
B24DATE2	22-27	Date of Observation (Motor)	DDMMYY6.
B24_MOTR	28-30	Motor score	
B24_LANG	31-32	Language index	
B24_COGN	33-34	Cognitive factor	
B24_EXTR	35-36	Extraversion factor	
B24_DATE	37-42	Date of observation of mother-child	DDMMYY6.
B24_POBS	43-44	Number of observations (actual)	
B24_SOBS	45-46	Number of observations (scheduled)	
T24_C1	47-48	Constructive play (child)	
T24_C2	49-50	Fantasy play (child)	
T24_C3	51-52	Looks at mother (child)	
T24_C4	53-54	Talks (child)	
T24_C5	55-56	Smiles (child)	
T24_C6	57-58	Playing together (child)	
T24_C7	59-60	Seeks help or instructions (child)	
T24_C8	61-62	Fussing and crying (child)	
T24_M1	63-64	Constructive play (mother)	
T24_M2	65-66	Fantasy play (mother)	
T24_M3	67-68	Contingent responsivity (mother)	
T24_M4	69-70	Looks at child (mother)	
T24_M5	71-72	Talks (mother)	
T24_M6	73-74	Smiles (mother)	
T24_M7	75-76	Demonstration with verbalization (mother)	
T24_M8	77-78	Coaxes child to try (mother)	
T24_M9	79-80	Gives commands (mother)	
T24_MAFF	81	Affect of mother	
T24_CAFF	82	Affect of child	
T24_MACT	83	Activity of mother	
T24_CACT	84	Activity of child	
T24_MVBC	85	Verbal conduct of mother	
T24_CWD1	86-88	Total words on tape (child)	
T24_CTST	90-92	Total times spoke on tape (child)	
T24_CWD2	93-95	Total words (child)	

T24_CDWD	96-97	Total different words (child)
T24_MWRD	98-100	Total words on tape (mother)
T24_MTST	102-104	Total times spoke on tape (mother)
T24_MTPH	105-107	Total phrases (mother)
T24_MCOM	108-110	Total commands (mother)
B24_ID	111-112	Bayley mental ID

Toddler Psychology (30 Months)
(May 14, 1986)

Variable	Col.	Label	Value
COM_ID	1-2	Community ID	
FAM_ID	3-5	Family ID	
IND_ID	6-9	Individual ID of person interviewed	
P30ITYPE	10	Individual type	
P30INTID	11-12	Interviewer ID	
B30DATE1	13-18	Date of observation (Mental)	DDMMYY6.
B30_MENT	19-21	Total mental score	
B30DATE2	22-27	Date of observation (Motor)	DDMMYY6.
B30_MOTR	28-30	Total motor score	
B30_LANG	31-32	Language index	
B30_COGN	33-34	Total cognitive factor	
B30_EXTR	35-36	Total extraversion factor	
T30_DATE	37-42	Date of observation of mother-child	DDMMYY6.
T30_POBS	43-44	Number of observations (actual)	
T30_SOBS	45-46	Number of observations (scheduled)	
T30_C1	47-48	Constructive play (child)	
T30_C2	49-50	Fantasy play (child)	
T30_C3	51-52	Looks at mother(child)	
T30_C4	53-54	Talks (child)	
T30_C5	55-56	Smiles (child)	
T30_C6	57-58	Playing together (child)	
T30_C7	59-60	Seeks help or instructions (child)	
T30_C8	61-62	Fussing and crying (child)	
T30_M1	63-64	Constructive play (mother)	
T30_M2	65-66	Fantasy play (mother)	
T30_M3	67-68	Contingent responsivity (mother)	
T30_M4	69-70	Looks at child (mother)	
T30_M5	71-72	Talks (mother)	
T30_M6	73-74	Smiles (mother)	
T30_M7	75-76	Demonstration with verbalization (mother)	
T30_M8	77-78	Coaxes child to try (mother)	
T30_M9	79-80	Gives commands (mother)	
T30_MAFF	81	Affect of mother	
T30_CAFF	82	Affect of child	
T30_MACT	83	Activity of mother	
T30_CACT	84	Activity of child	
T30_MVBC	85	Verbal conduct of mother	
T30_CWD1	86-88	Total words on tape (child)	
T30_CTST	90-92	Total times spoke on tape	

287

		(child)
T30_CW~~R~~D2	93-95	Total words (child)
T30_CDWD	96-97	Total different words (child)
T30_MWRD	98-100	Total words on tape (mother)
T30_MTST	102-104	Total times spoke on tape (mother)
T30_MTPH	105-107	Total phrases (mother)
T30_MCOM	108-110	Total commands (mother)
B30_ID	111-112	Bayley mental ID

Cognitive Tests (Schoolers)
(May 14, 1986)

Variable	Col.	Label	Value
COM_ID	1-2	Community ID	
FAM_ID	3-5	Family ID	
IND_ID	6-9	Individual ID of person	
CS_ITYPE	10	Individual Type	
CS_INTID	11-12	Interviewer ID	
CS_DATE	13-18	Date of observation	DDMMYY6.
CS_ID	19	Number of questionnaire	
CS_TIME	20-21	Minutes elapsed in administering tests	
CS_RDWT	22	Reads and writes	1= No 2=Yes
CS_GRADE	23	Grade in school	
CS_YRSCH	24	Number of years in school	
CS_WRITE	25	Able to write name	
CS_CROSS	26-28	Total lines (Crosses)	
CS_RAVEN	29-30	Color progression (Raven's matrices)	
CS_DIGF	31-32	Digits repeated forward	
CS_DIGR	33-34	Digits repeated in reverse	
CS_DIGT	35-36	Total digits repeated	
CS_VOCAB	37-38	Vocabulary score	
CS_BLOCK	39-40	Designs with blocks	
CS_ARITH	41-42	Arithmatic score	
CS_MAZE	43-44	Mazes score	

284

Classroom Observation (Schoolers)
(May 14, 1986)

Variable	Col.	Label	Value
COM_ID	1-2	Community ID	
FAM_ID	3-5	Family ID	
IND_ID	6-9	Individual ID of person	
CL_ITYPE	10	Individual type	
CL_INTID	11-12	Interviewer ID	
CL_DATE	13-18	Date of observation	DDMMYY6.
CL_POBS	19-20	Number of observations (actual)	00-60
CL_SOBS	21-22	Number of observations (possible)	60
CL_ID	23	Number of questionnaire	
CL_SPEAK	24-25	Observed speaking	00-60
CL_PLAY	26-27	Observed playing	"
CL_OFTSK	28-29	Observed in off-task behavior	"
CL_OUTRM	30-31	Observed out-of-classroom behavior	"

290

Playground Observations (Schoolers)
(May 14, 1986)

Variable	Col.	Label	Value
COM_ID	1-2	Community ID	
FAM_ID	3-5	Family ID	
IND_ID	6-9	Individual ID of person interviewed	
PG_ITYPE	10	Individual type	
PG_INTID	11-12	Interviewer ID	
PG_DATE	13-18	Date of observation	DDMMYY6.
PG_POBS	19-20	Number of observations (actual)	
PG_SOBS	21-22	Number of observations (possible)	Always 60
PG_ID	23	Number of questionnaire	
PG_1	24-25	Friendly interaction	00-60
PG_2	26-27	Help/aid	"
PG_3	28-29	Physical aggressiveness	"
PG_4	30-31	Verbal aggressiveness	"
PG_5	32-33	Aggressive play	"
PG_6	34-35	Meddling	"
PG_7	36-37	Domination	"
PG_8	38-39	Asks for help or attention	"
PG_9	40-41	Defends self	"
PG_10	42-43	Submission/obedience	"
PG_11	44-45	Positive response to a request	"
PG_12	46-47	Negative response to a request	"
PG_13	48-49	No behavior	"
PG_14	50-51	Seeks adults	"
PG_15	52-53	Does not seek adults	"
PG_16	54-55	Seeks physical contact	"
PG_17	56-57	Involved in activity	"
PG_18	58-59	Plays with objects	"
PG_19	60-61	Destroys objects	"
PG_20	62-63	Wanders/Roams	"
PG_21	64-65	Isolated physical play	"
PG_22	66-67	Imaginative play	"
PG_23	68-69	Distracted by outside events	"
PG_24	70-71	Just observes	"
PG_25	72-73	Inactive	"
PG_26	74-75	Low activity level	"
PG_27	76-77	Normal activity level	"
PG_28	78-79	Very high activity level	"
PG_29	80-81	Hyperactive/agitated	"
PG_30	82-83	Very happy, laughing	"
PG_31	84-85	Very timid, anxious	"
PG_32	86-87	Irritable, angry, hostile	"
PG_33	88-89	Cries, sad	"
PG_34	90-91	Loses control	"
PG_35	92-93	Content, normal affect	"
PG_36	94-95	Animated	"

Cognitive Tests (Adults)
(May 14, 1986)

Variable	Col.	Label	Value
COM_ID	1-2	Community ID	
FAM_ID	3-5	Family ID	
IND_ID	6-9	Individual ID of parson	
CA_ITYPE	10	Individual Type	
CA_INTID	11-12	Interviewer ID	
CA_DATE	13-18	Date of observation	DDMMYY6.
CA_YRSCH	19-20	Number of years in school	
CA_TIME	21-23	Minutes elapsed in administering tests	
CA_WRITE	24	Able to write name	
CA_CROSS	25-27	Total lines (Crosses)	
CA_RAVEN	28-29	Color progression (Raven's matrices)	
CA_DIGF	30-31	Digits repeated forward	
CA_DIGR	32-33	Digits repeated in reverse	
CA_DIGT	34-35	Total digits repeated	
CA_VOCAB	36-37	Vocabulary score	
CA_BLOCK	38-39	Designs with blocks	
CA_ARITH	40-41	Arithmatic score	
CA_MAZE	42-45	Mazes score	(##.#)

292

CONTENTS PROCEDURE
CONTENTS OF SAS MEMBER DISK.PSYCH

CREATED BY OS JOB TAD ON CPUID FF-3084-124257 AT 16:29 TUESDAY, MAY 27, 1986 BY SAS RELEASE 5.08
DSNAME=PSYCH.INFANT.MEX2B.MAY86 OBSERVATIONS PER TRACK =78 BLKSIZE=22975 LRECL=589 GENERATED BY DATA
NUMBER OF OBSERVATIONS: 109 NUMBER OF VARIABLES: 73
MEMTYPE: DATA

-----ALPHABETIC LIST OF VARIABLES AND ATTRIBUTES-----

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
7	BZ_DATE	NUM	8	53			DATE OF OBSERVATION
8	BZ_HABIT	NUM	8	61			HABITUATION SCORE (LESTER)
5	BZ_ITYPE	NUM	8	37			INDIVIDUAL TYPE
10	BZ_MOTOR	NUM	8	77			MOTOR SCORE (LESTER)
9	BZ_ORIEN	NUM	8	69			ORIENTATION SCORE (LESTER)
11	BZ_RANGE	NUM	8	85			RANGE OF STATES (LESTER)
12	BZ_1	NUM	8	93			REGULATION OF STATES (LESTER)
13	BZ_2	NUM	8	101			AUTONOMIC STABILITY (LESTER)
14	BZ_3	NUM	8	109			REFLEX SCORE (LESTER)
15	BZ_4	NUM	8	117			PROCESSES OF INTERACTION (A PRIORI)
16	BZ_5	NUM	8	125			MOTOR PROCESSES (A PRIORI)
17	BZ_6	NUM	8	133			CONTROL OF STATES (A PRIORI)
18	BZ_7	NUM	8	141			RESPONSE TO STRESS (A PRIORI)
6	BZINT_ID	NUM	8	45			INTERVIEWER ID
49	B06_COGN	NUM	8	389			COGNITIVE FACTOR
50	B06_EXTR	NUM	8	397			EXTRAVERSION FACTOR
73	B06_ID	NUM	8	581			PSYCHOLOGICAL TEST ID
46	B06_MENT	NUM	8	365			MENTAL SCALE
48	B06_MOTR	NUM	8	381			MOTOR SCALE
45	B06DATE1	NUM	8	357			DATE OF OBSERVATION
47	B06DATE2	NUM	8	373			DATE OF MOTOR EXAM
1	COM_ID	NUM	8	4			COMMUNITY ID
2	FAM_ID	NUM	8	12			FAMILY ID
4	IID	CHAR	9	28			UNIQUE (9) INDIVIDUAL ID
3	IND_ID	NUM	8	20			INDIVIDUAL ID
20	P03INTID	NUM	8	157			INTERVIEWER ID
19	P03ITYPE	NUM	8	149			INDIVIDUAL TYPE
44	P06INTID	NUM	8	349			INTERVIEWER ID
43	P06ITYPE	NUM	8	341			INDIVIDUAL TYPE
21	T03_DATE	NUM	8	165			DATE OF OBSERVATION
41	T03_ITOT	NUM	8	325			TOTAL SCORE FOR INFANT
24	T03_I1	NUM	8	189			LOOKS AT MOTHER (INFANT)
25	T03_I2	NUM	8	197			SMILES (INFANT)
26	T03_I3	NUM	8	205			COOS OR VOCALIZES (INFANT)
27	T03_I4	NUM	8	213			LAUGHS (INFANT)
28	T03_I5	NUM	8	221			YAWNS (INFANT)
29	T03_I6	NUM	8	229			KNITTED BROW (INFANT)
30	T03_I7	NUM	8	237			FUSSING (INFANT)
31	T03_I8	NUM	8	245			MOVES LIMBS (INFANT)
32	T03_I9	NUM	8	253			SQUIRMS (INFANT)
42	T03_MTOT	NUM	8	333			TOTAL SCORE FOR MOTHER
33	T03_M1	NUM	8	261			LOOKS AT INFANT (MOTHER)
34	T03_M2	NUM	8	269			SMILES (MOTHER)
35	T03_M3	NUM	8	277			VOCALIZES (MOTHER)
36	T03_M4	NUM	8	285			TOUCHES INFANT (MOTHER)
37	T03_M5	NUM	8	293			MOVES INFANT'S BODY AND LIMBS (MOTHER)
38	T03_M6	NUM	8	301			IMITATES (MOTHER)
39	T03_M7	NUM	8	309			PLAYS (MOTHER)
40	T03_M8	NUM	8	317			SHOWS INFANTIZED BEHAVIOR (MOTHER)
22	T03_POBS	NUM	8	173			NUMBER OF ACTUAL OBSERVATIONS

243

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
23	T03_SOBS	NUM	8	181			NUMBER OF SCHEDULED OBSERVATIONS
51	T06_DATE	NUM	8	405			DATE OF OBSERVATION OF MOTHER-INFANT
71	T06_ITOT	NUM	8	565			TOTAL SCORE FOR INFANT
54	T06_I1	NUM	8	429			LOOKS AT MOTHER (INFANT)
55	T06_I2	NUM	8	437			SMILES (INFANT)
56	T06_I3	NUM	8	445			COOS OR VOCALIZES (INFANT)
57	T06_I4	NUM	8	453			LAUGHS (INFANT)
58	T06_I5	NUM	8	461			YAWNS (INFANT)
59	T06_I6	NUM	8	469			KNITTED BROW (INFANT)
60	T06_I7	NUM	8	477			FUSSING (INFANT)
61	T06_I8	NUM	8	485			MOVES LIMBS (INFANT)
62	T06_I9	NUM	8	493			SQUIRMS (INFANT)
72	T06_MTOT	NUM	8	573			TOTAL SCORE FOR MOTHER
63	T06_M1	NUM	8	501			LOOKS AT INFANT (MOTHER)
64	T06_M2	NUM	8	509			SMILES (MOTHER)
65	T06_M3	NUM	8	517			VOCALIZES (MOTHER)
66	T06_M4	NUM	8	525			TOUCHES INFANT (MOTHER)
67	T06_M5	NUM	8	533			MOVES INFANT'S BODY AND LIMBS (MOTHER)
68	T06_M6	NUM	8	541			IMITATES (MOTHER)
69	T06_M7	NUM	8	549			PLAYS (MOTHER)
70	T06_M8	NUM	8	557			SHOWS INFANTIZED BEHAVIOR (MOTHER)
52	T06_POBS	NUM	8	413			NUMBER OF ACTUAL OBSERVATIONS
53	T06_SOBS	NUM	8	421			NUMBER OF SCHEDULED OBSERVATIONS

----LIST OF VARIABLES AND ATTRIBUTES BY POSITION----

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
1	COM_ID	NUM	8	4			COMMUNITY ID
2	FAM_ID	NUM	8	12			FAMILY ID
3	IND_ID	NUM	8	20			INDIVIDUAL ID
4	IID	CHAR	9	28			UNIQUE ($) INDIVIDUAL ID
5	BZ_ITYPE	NUM	8	37			INDIVIDUAL TYPE
6	BZINT_ID	NUM	8	45			INTERVIEWER ID
7	BZ_DATE	NUM	8	53			DATE OF OBSERVATION
8	BZ_HABIT	NUM	8	61			HABITUATION SCORE (LESTER)
9	BZ_ORIEN	NUM	8	69			ORIENTATION SCORE (LESTER)
10	BZ_MOTOR	NUM	8	77			MOTOR SCORE (LESTER)
11	BZ_RANGE	NUM	8	85			RANGE OF STATES (LESTER)
12	BZ_1	NUM	8	93			REGULATION OF STATES (LESTER)
13	BZ_2	NUM	8	101			AUTONOMIC STABILITY (LESTER)
14	BZ_3	NUM	8	109			REFLEX SCORE (LESTER)
15	BZ_4	NUM	8	117			PROCESSES OF INTERACTION (A PRIORI)
16	BZ_5	NUM	8	125			MOTOR PROCESSES (A PRIORI)
17	BZ_6	NUM	8	133			CONTROL OF STATES (A PRIORI)
18	BZ_7	NUM	8	141			RESPONSE TO STRESS (A PRIORI)
19	P03ITYPE	NUM	8	149			INDIVIDUAL TYPE
20	P03INTID	NUM	8	157			INTERVIEWER ID
21	T03_DATE	NUM	8	165			DATE OF OBSERVATION
22	T03_POBS	NUM	8	173			NUMBER OF ACTUAL OBSERVATIONS
23	T03_SOBS	NUM	8	181			NUMBER OF SCHEDULED OBSERVATIONS
24	T03_I1	NUM	8	189			LOOKS AT MOTHER (INFANT)
25	T03_I2	NUM	8	197			SMILES (INFANT)
26	T03_I3	NUM	8	205			COOS OR VOCALIZES (INFANT)
27	T03_I4	NUM	8	213			LAUGHS (INFANT)
28	T03_I5	NUM	8	221			YAWNS (INFANT)
29	T03_I6	NUM	8	229			KNITTED BROW (INFANT)
30	T03_I7	NUM	8	237			FUSSING (INFANT)
31	T03_I8	NUM	8	245			MOVES LIMBS (INFANT)
32	T03_I9	NUM	8	253			SQUIRMS (INFANT)
33	T03_M1	NUM	8	261			LOOKS AT INFANT (MOTHER)
34	T03_M2	NUM	8	269			SMILES (MOTHER)

294

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
35	T03_M3	NUM	8	277			VOCALIZES (MOTHER)
36	T03_M4	NUM	8	285			TOUCHES INFANT (MOTHER)
37	T03_M5	NUM	8	293			MOVES INFANT'S BODY AND LIMBS (MOTHER)
38	T03_M6	NUM	8	301			IMITATES (MOTHER)
39	T03_M7	NUM	8	309			PLAYS (MOTHER)
40	T03_M8	NUM	8	317			SHOWS INFANTIZED BEHAVIOR (MOTHER)
41	T03_ITOT	NUM	8	325			TOTAL SCORE FOR INFANT
42	T03_MTOT	NUM	8	333			TOTAL SCORE FOR MOTHER
43	P06ITYPE	NUM	8	341			INDIVIDUAL TYPE
44	P06INTID	NUM	8	349			INTERVIEWER ID
45	B06DATE1	NUM	8	357			DATE OF OBSERVATION
46	B06_MENT	NUM	8	365			MENTAL SCALE
47	B06DATE2	NUM	8	373			DATE OF MOTOR EXAM
48	B06_MOTR	NUM	8	381			MOTOR SCALE
49	B06_COGN	NUM	8	389			COGNITIVE FACTOR
50	B06_EXTR	NUM	8	397			EXTRAVERSION FACTOR
51	T06_DATE	NUM	8	405			DATE OF OBSERVATION OF MOTHER-INFANT
52	T06_POBS	NUM	8	413			NUMBER OF ACTUAL OBSERVATIONS
53	T06_SOBS	NUM	8	421			NUMBER OF SCHEDULED OBSERVATIONS
54	T06_I1	NUM	8	429			LOOKS AT MOTHER (INFANT)
55	T06_I2	NUM	8	437			SMILES (INFANT)
56	T06_I3	NUM	8	445			COOS OR VOCALIZES (INFANT)
57	T06_I4	NUM	8	453			LAUGHS (INFANT)
58	T06_I5	NUM	8	461			YAWNS (INFANT)
59	T06_I6	NUM	8	469			KNITTED BROW (INFANT)
60	T06_I7	NUM	8	477			FUSSING (INFANT)
61	T06_I8	NUM	8	485			MOVES LIMBS (INFANT)
62	T06_I9	NUM	8	493			SQUIRMS (INFANT)
63	T06_M1	NUM	8	501			LOOKS AT INFANT (MOTHER)
64	T06_M2	NUM	8	509			SMILES (MOTHER)
65	T06_M3	NUM	8	517			VOCALIZES (MOTHER)
66	T06_M4	NUM	8	525			TOUCHES INFANT (MOTHER)
67	T06_M5	NUM	8	533			MOVES INFANT'S BODY AND LIMBS (MOTHER)
68	T06_M6	NUM	8	541			IMITATES (MOTHER)
69	T06_M7	NUM	8	549			PLAYS (MOTHER)
70	T06_M8	NUM	8	557			SHOWS INFANTIZED BEHAVIOR (MOTHER)
71	T06_ITOT	NUM	8	565			TOTAL SCORE FOR INFANT
72	T06_MTOT	NUM	8	573			TOTAL SCORE FOR MOTHER
73	B06_ID	NUM	8	581			PSYCHOLOGICAL TEST ID

CONTENTS OF DATASET PSYCH.TODDLER.MEX2B.MAY86 ON USR040 9:45 WEDNESDAY, MAY 28, 1986 1

CONTENTS PROCEDURE
CONTENTS OF SAS MEMBER DISK.PSYCH

CREATED BY OS JOB TAD ON CPUID FF-3084-124257 AT 16:30 TUESDAY, MAY 27, 1986 BY SAS RELEASE 5.08
DSNAME=PSYCH.TODDLER.MEX2B.MAY86 OBSERVATIONS PER TRACK =44 BLKSIZE=23346 LRECL=1061 GENERATED BY DATA
NUMBER OF OBSERVATIONS: 133 NUMBER OF VARIABLES: 132
MEMTYPE: DATA

-----ALPHABETIC LIST OF VARIABLES AND ATTRIBUTES-----

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
97	B18_COGN	NUM	8	773			TOTAL COGNITIVE FACTOR
98	B18_EXTR	NUM	8	781			TOTAL EXTRAVERSION FACTOR
132	B18_ID	NUM	8	1053			BAYLEY MENTAL ID
94	B18_MENT	NUM	8	749			TOTAL MENTAL SCORE
96	B18_MOTR	NUM	8	765			TOTAL MOTOR SCORE
93	B18DATE1	NUM	8	741			DATE OF MENTAL OBSERVATION
95	B18DATE2	NUM	8	757			DATE OF MOTOR OBSERVATION
55	B24_COGN	NUM	8	437			TOTAL COGNITIVE FACTOR
56	B24_EXTR	NUM	8	445			TOTAL EXTRAVERSION FACTOR
90	B24_ID	NUM	8	717			BAYLEY MENTAL ID
54	B24_LANG	NUM	8	429			LANGUAGE INDEX
51	B24_MENT	NUM	8	405			TOTAL MENTAL SCORE
53	B24_MOTR	NUM	8	421			TOTAL MOTOR SCORE
50	B24DATE1	NUM	8	397			DATE OF MENTAL OBSERVATION
52	B24DATE2	NUM	8	413			DATE OF MOTOR OBSERVATION
12	B30_COGN	NUM	8	93			TOTAL COGNITIVE FACTOR
13	B30_EXTR	NUM	8	101			TOTAL EXTRAVERSION FACTOR
47	B30_ID	NUM	8	373			BAYLEY MENTAL ID
11	B30_LANG	NUM	8	85			LANGUAGE INDEX
8	B30_MENT	NUM	8	61			TOTAL MENTAL SCORE
10	B30_MOTR	NUM	8	77			TOTAL MOTOR SCORE
7	B30DATE1	NUM	8	53			DATE OF MENTAL OBSERVATION
9	B30DATE2	NUM	8	69			DATE OF MOTOR OBSERVATION
1	COM_ID	NUM	8	4			COMMUNITY ID
2	FAM_ID	NUM	8	12			FAMILY ID
4	IID	CHAR	9	28			UNIQUE ($) INDIVIDUAL ID
3	IND_ID	NUM	8	20			INDIVIDUAL ID
92	P18INTID	NUM	8	733			INTERVIEWER ID
91	P18ITYPE	NUM	8	725			INDIVIDUAL TYPE
49	P24INTID	NUM	8	389			INTERVIEWER ID
48	P24ITYPE	NUM	8	381			INDIVIDUAL TYPE
6	P30INTID	NUM	8	45			INTERVIEWER ID
5	P30ITYPE	NUM	8	37			INDIVIDUAL TYPE
122	T18_CACT	NUM	8	973			ACTIVITY OF CHILD
120	T18_CAFF	NUM	8	957			AFFECT OF CHILD
127	T18_CDWD	NUM	8	1013			TOTAL DIFFERENT WORDS
125	T18_CTST	NUM	8	997			TOTAL TIMES SPOKE ON TAPE (CHILD)
124	T18_CWD1	NUM	8	989			TOTAL WORDS ON TAPE (CHILD)
126	T18_CWD2	NUM	8	1005			TOTAL WORDS (CHILD)
102	T18_C1	NUM	8	813			CONSTRUCTIVE PLAY (CHILD)
103	T18_C2	NUM	8	821			FANTASY PLAY (CHILD)
104	T18_C3	NUM	8	829			LOOKS AT MOTHER (CHILD)
105	T18_C4	NUM	8	837			TALKS (CHILD)
106	T18_C5	NUM	8	845			SMILES (CHILD)
107	T18_C6	NUM	8	853			PLAYING TOGETHER (CHILD)
108	T18_C7	NUM	8	861			SEEKS HELP OR INSTRUCTION (CHILD)
109	T18_C8	NUM	8	869			FUSSING AND CRYING (CHILD)
99	T18_DATE	NUM	8	789			DATE OF MOTHER-CHILD OBSERVATION
121	T18_MACT	NUM	8	965			ACTIVITY OF MOTHER
119	T18_MAFF	NUM	8	949			AFFECT OF MOTHER

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
131	T18_MCOM	NUM	8	1045			TOTAL COMMANDS (MOTHER)
130	T18_MTPH	NUM	8	1037			TOTAL PHRASES (MOTHER)
129	T18_MTST	NUM	8	1029			TOTAL TIMES SPOKE ON TAPE (MOTHER)
123	T18_MVBC	NUM	8	961			VERBAL CONDUCT OF MOTHER
128	T18_MWRD	NUM	8	1021			TOTAL WORDS ON TAPE (MOTHER)
110	T18_M1	NUM	8	877			CONSTRUCTIVE PLAY (MOTHER)
111	T18_M2	NUM	8	885			FANTASY PLAY (MOTHER)
112	T18_M3	NUM	8	893			CONTINGENT RESPONSIVITY (MOTHER)
113	T18_M4	NUM	8	901			LOOKS AT CHILD (MOTHER)
114	T18_M5	NUM	8	909			TALKS (MOTHER)
115	T18_M6	NUM	8	917			SMILES (MOTHER)
116	T18_M7	NUM	8	925			DEMONSTRATES VERBALIZATION (MOHTER)
117	T18_M8	NUM	8	933			COAXES CHILD TO TRY (MOTHER)
118	T18_M9	NUM	8	941			GIVES COMMANDS (MOTHER)
100	T18_POBS	NUM	8	797			NUMBER OF OBSERVATIONS COMPLETED
101	T18_SOBS	NUM	8	805			NUMBER OF OBSERVATIOS SCHEDULED
80	T24_CACT	NUM	8	637			ACTIVITY OF CHILD
78	T24_CAFF	NUM	8	621			AFFECT OF CHILD
85	T24_CDWD	NUM	8	677			TOTAL DIFFERENT WORDS (CHILD)
83	T24_CTST	NUM	8	661			TOTAL TIMES SPOKE ON TAPE (CHILD)
82	T24_CWD1	NUM	8	653			TOTAL WORDS ON TAPE (CHILD)
84	T24_CWD2	NUM	8	669			TOTAL WORDS (CHILD)
60	T24_C1	NUM	8	477			CONSTRUCTIVE PLAY (CHILD)
61	T24_C2	NUM	8	485			FANTASY PLAY (CHILD)
62	T24_C3	NUM	8	493			LOOKS AT MOTHER (CHILD)
63	T24_C4	NUM	8	501			TALKS (CHILD)
64	T24_C5	NUM	8	509			SMILES (CHILD)
65	T24_C6	NUM	8	517			PLAYING TOGETHER (CHILD)
66	T24_C7	NUM	8	525			SEEKS HELP OR INSTRUCTION (CHILD)
67	T24_C8	NUM	8	533			FUSSING AND CRYING (CHILD)
57	T24_DATE	NUM	8	453			DATE OF MOTHER-CHILD OBSERVATION
79	T24_MACT	NUM	8	629			ACTIVITY OF MOTHER
77	T24_MAFF	NUM	8	613			AFFECT OF MOTHER
89	T24_MCOM	NUM	8	709			TOTAL COMMANDS (MOTHER)
88	T24_MTPH	NUM	8	701			TOTAL PHRASES (MOTHER)
87	T24_MTST	NUM	8	693			TOTAL TIMES SPOKE ON TAPE (MOTHER)
81	T24_MVBC	NUM	8	645			VERBAL CONDUCT OF MOTHER
86	T24_MWRD	NUM	8	685			TOTAL WORDS ON TAPE (MOTHER)
68	T24_M1	NUM	8	541			CONSTRUCTIVE PLAY (MOTHER)
69	T24_M2	NUM	8	549			FANTASY PLAY (MOTHER)
70	T24_M3	NUM	8	557			CONTINGENT RESPONSIVITY (MOTHER)
71	T24_M4	NUM	8	565			LOOKS AT CHILD (MOTHER)
72	T24_M5	NUM	8	573			TALKS (MOTHER)
73	T24_M6	NUM	8	581			SMILES (MOTHER)
74	T24_M7	NUM	8	589			DEMONSTRATES VERBALIZATION (MOHTER)
75	T24_M8	NUM	8	597			COAXES CHILD TO TRY (MOTHER)
76	T24_M9	NUM	8	605			GIVES COMMANDS (MOTHER)
58	T24_POBS	NUM	8	461			NUMBER OF OBSERVATIONS COMPLETED
59	T24_SOBS	NUM	8	469			NUMBER OF OBSERVATIOS SCHEDULED
37	T30_CACT	NUM	8	293			ACTIVITY OF CHILD
35	T30_CAFF	NUM	8	277			AFFECT OF CHILD
42	T30_CDWD	NUM	8	333			TOTAL DIFFERENT WORDS
40	T30_CTST	NUM	8	317			TOTAL TIMES SPOKE ON TAPE (CHILD)
39	T30_CWD1	NUM	8	309			TOTAL WORDS ON TAPE (CHILD)
41	T30_CWD2	NUM	8	325			TOTAL WORDS (CHILD)
17	T30_C1	NUM	8	133			CONSTRUCTIVE PLAY (CHILD)
18	T30_C2	NUM	8	141			FANTASY PLAY (CHILD)
19	T30_C3	NUM	8	149			LOOKS AT MOTHER (CHILD)
20	T30_C4	NUM	8	157			TALKS (CHILD)
21	T30_C5	NUM	8	165			SMILES (CHILD)

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
22	T30_C6	NUM	8	173			PLAYING TOGETHER (CHILD)
23	T30_C7	NUM	8	181			SEEKS HELP OR INSTRUCTION (CHILD)
24	T30_C8	NUM	8	189			FUSSING AND CRYING (CHILD)
14	T30_DATE	NUM	8	109			DATE OF MOTHER-CHILD OBSERVATION
36	T30_MACT	NUM	8	285			ACTIVITY OF MOTHER
34	T30_MAFF	NUM	8	269			AFFECT OF MOTHER
46	T30_MCOM	NUM	8	365			TOTAL COMMANDS (MOTHER)
45	T30_MTPH	NUM	8	357			TOTAL PHRASES (MOTHER)
44	T30_MTST	NUM	8	349			TOTAL TIMES SPOKE ON TAPE (MOTHER)
38	T30_MVBC	NUM	8	301			VERBAL CONDUCT OF MOTHER
43	T30_MWRD	NUM	8	341			TOTAL WORDS ON TAPE (MOTHER)
25	T30_M1	NUM	8	197			CONSTRUCTIVE PLAY (MOTHER)
26	T30_M2	NUM	8	205			FANTASY PLAY (MOTHER)
27	T30_M3	NUM	8	213			CONTINGENT RESPONSIVITY (MOTHER)
28	T30_M4	NUM	8	221			LOOKS AT CHILD (MOTHER)
29	T30_M5	NUM	8	229			TALKS (MOTHER)
30	T30_M6	NUM	8	237			SMILES (MOTHER)
31	T30_M7	NUM	8	245			DEMONSTRATES VERBALIZATION (MOHTER)
32	T30_M8	NUM	8	253			COAXES CHILD TO TRY (MOTHER)
33	T30_M9	NUM	8	261			GIVES COMMANDS (MOTHER)
15	T30_POBS	NUM	8	117			NUMBER OF OBSERVATIONS COMPLETED
16	T30_SOBS	NUM	8	125			NUMBER OF OBSERVATIOS SCHEDULED

-----LIST OF VARIABLES AND ATTRIBUTES BY POSITION-----

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
1	COM_ID	NUM	8	4			COMMUNITY ID
2	FAM_ID	NUM	8	12			FAMILY ID
3	IND_ID	NUM	8	20			INDIVIDUAL ID
4	IID	CHAR	9	28			UNIQUE ($) INDIVIDUAL ID
5	P30ITYPE	NUM	8	37			INDIVIDUAL TYPE
6	P30INTID	NUM	8	45			INTERVIEWER ID
7	B30DATE1	NUM	8	53			DATE OF MENTAL OBSERVATION
8	B30_MENT	NUM	8	61			TOTAL MENTAL SCORE
9	B30DATE2	NUM	8	69			DATE OF MOTOR OBSERVATION
10	B30_MOTR	NUM	8	77			TOTAL MOTOR SCORE
11	B30_LANG	NUM	8	85			LANGUAGE INDEX
12	B30_COGN	NUM	8	93			TOTAL COGNITIVE FACTOR
13	B30_EXTR	NUM	8	101			TOTAL EXTRAVERSION FACTOR
14	T30_DATE	NUM	8	109			DATE OF MOTHER-CHILD OBSERVATION
15	T30_POBS	NUM	8	117			NUMBER OF OBSERVATIONS COMPLETED
16	T30_SOBS	NUM	8	125			NUMBER OF OBSERVATIOS SCHEDULED
17	T30_C1	NUM	8	133			CONSTRUCTIVE PLAY (CHILD)
18	T30_C2	NUM	8	141			FANTASY PLAY (CHILD)
19	T30_C3	NUM	8	149			LOOKS AT MOTHER (CHILD)
20	T30_C4	NUM	8	157			TALKS (CHILD)
21	T30_C5	NUM	8	165			SMILES (CHILD)
22	T30_C6	NUM	8	173			PLAYING TOGETHER (CHILD)
23	T30_C7	NUM	8	181			SEEKS HELP OR INSTRUCTION (CHILD)
24	T30_C8	NUM	8	189			FUSSING AND CRYING (CHILD)
25	T30_M1	NUM	8	197			CONSTRUCTIVE PLAY (MOTHER)
26	T30_M2	NUM	8	205			FANTASY PLAY (MOTHER)
27	T30_M3	NUM	8	213			CONTINGENT RESPONSIVITY (MOTHER)
28	T30_M4	NUM	8	221			LOOKS AT CHILD (MOTHER)
29	T30_M5	NUM	8	229			TALKS (MOTHER)
30	T30_M6	NUM	8	237			SMILES (MOTHER)
31	T30_M7	NUM	8	245			DEMONSTRATES VERBALIZATION (MOHTER)
32	T30_M8	NUM	8	253			COAXES CHILD TO TRY (MOTHER)
33	T30_M9	NUM	8	261			GIVES COMMANDS (MOTHER)
34	T30_MAFF	NUM	8	269			AFFECT OF MOTHER
35	T30_CAFF	NUM	8	277			AFFECT OF CHILD

280

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
36	T30_MACT	NUM	8	285			ACTIVITY OF MOTHER
37	T30_CACT	NUM	8	293			ACTIVITY OF CHILD
38	T30_MVBC	NUM	8	301			VERBAL CONDUCT OF MOTHER
39	T30_CWD1	NUM	8	309			TOTAL WORDS ON TAPE (CHILD)
40	T30_CTST	NUM	8	317			TOTAL TIMES SPOKE ON TAPE (CHILD)
41	T30_CWD2	NUM	8	325			TOTAL WORDS (CHILD)
42	T30_CDWD	NUM	8	333			TOTAL DIFFERENT WORDS
43	T30_MWRD	NUM	8	341			TOTAL WORDS ON TAPE (MOTHER)
44	T30_MTST	NUM	8	349			TOTAL TIMES SPOKE ON TAPE (MOTHER)
45	T30_MTPH	NUM	8	357			TOTAL PHRASES (MOTHER)
46	T30_MCOM	NUM	8	365			TOTAL COMMANDS (MOTHER)
47	B30_ID	NUM	8	373			BAYLEY MENTAL ID
48	P24ITYPE	NUM	8	381			INDIVIDUAL TYPE
49	P24INTID	NUM	8	389			INTERVIEWER ID
50	B24DATE1	NUM	8	397			DATE OF MENTAL OBSERVATION
51	B24_MENT	NUM	8	405			TOTAL MENTAL SCORE
52	B24DATE2	NUM	8	413			DATE OF MOTOR OBSERVATION
53	B24_MOTR	NUM	8	421			TOTAL MOTOR SCORE
54	B24_LANG	NUM	8	429			LANGUAGE INDEX
55	B24_COGN	NUM	8	437			TOTAL COGNITIVE FACTOR
56	B24_EXTR	NUM	8	445			TOTAL EXTRAVERSION FACTOR
57	T24_DATE	NUM	8	453			DATE OF MOTHER-CHILD OBSERVATION
58	T24_POBS	NUM	8	461			NUMBER OF OBSERVATIONS COMPLETED
59	T24_SOBS	NUM	8	469			NUMBER OF OBSERVATIOS SCHEDULED
60	T24_C1	NUM	8	477			CONSTRUCTIVE PLAY (CHILD)
61	T24_C2	NUM	8	485			FANTASY PLAY (CHILD)
62	T24_C3	NUM	8	493			LOOKS AT MOTHER (CHILD)
63	T24_C4	NUM	8	501			TALKS (CHILD)
64	T24_C5	NUM	8	509			SMILES (CHILD)
65	T24_C6	NUM	8	517			PLAYING TOGETHER (CHILD)
66	T24_C7	NUM	8	525			SEEKS HELP OR INSTRUCTION (CHILD)
67	T24_C8	NUM	8	533			FUSSING AND CRYING (CHILD)
68	T24_M1	NUM	8	541			CONSTRUCTIVE PLAY (MOTHER)
69	T24_M2	NUM	8	549			FANTASY PLAY (MOTHER)
70	T24_M3	NUM	8	557			CONTINGENT RESPONSIVITY (MOTHER)
71	T24_M4	NUM	8	565			LOOKS AT CHILD (MOTHER)
72	T24_M5	NUM	8	573			TALKS (MOTHER)
73	T24_M6	NUM	8	581			SMILES (MOTHER)
74	T24_M7	NUM	8	589			DEMONSTRATES VERBALIZATION (MOTHER)
75	T24_M8	NUM	8	597			COAXES CHILD TO TRY (MOTHER)
76	T24_M9	NUM	8	605			GIVES COMMANDS (MOTHER)
77	T24_MAFF	NUM	8	613			AFFECT OF MOTHER
78	T24_CAFF	NUM	8	621			AFFECT OF CHILD
79	T24_MACT	NUM	8	629			ACTIVITY OF MOTHER
80	T24_CACT	NUM	8	637			ACTIVITY OF CHILD
81	T24_MVBC	NUM	8	645			VERBAL CONDUCT OF MOTHER
82	T24_CWD1	NUM	8	653			TOTAL WORDS ON TAPE (CHILD)
83	T24_CTST	NUM	8	661			TOTAL TIMES SPOKE ON TAPE (CHILD)
84	T24_CWD2	NUM	8	669			TOTAL WORDS (CHILD)
85	T24_CDWD	NUM	8	677			TOTAL DIFFERENT WORDS (CHILD)
86	T24_MWRD	NUM	8	685			TOTAL WORDS ON TAPE (MOTHER)
87	T24_MTST	NUM	8	693			TOTAL TIMES SPOKE ON TAPE (MOTHER)
88	T24_MTPH	NUM	8	701			TOTAL PHRASES (MOTHER)
89	T24_MCOM	NUM	8	709			TOTAL COMMANDS (MOTHER)
90	B24_ID	NUM	8	717			BAYLEY MENTAL ID
91	P18ITYPE	NUM	8	725			INDIVIDUAL TYPE
92	P18INTID	NUM	8	733			INTERVIEWER ID
93	B18DATE1	NUM	8	741			DATE OF MENTAL OBSERVATION
94	B18_MENT	NUM	8	749			TOTAL MENTAL SCORE
95	B18DATE2	NUM	8	757			DATE OF MOTOR OBSERVATION

245

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
96	B18_MOTR	NUM	8	765			TOTAL MOTOR SCORE
97	B18_COGN	NUM	8	773			TOTAL COGNITIVE FACTOR
98	B18_EXTR	NUM	8	781			TOTAL EXTRAVERSION FACTOR
99	T18_DATE	NUM	8	789			DATE OF MOTHER-CHILD OBSERVATION
100	T18_POBS	NUM	8	797			NUMBER OF OBSERVATIONS COMPLETED
101	T18_SOBS	NUM	8	805			NUMBER OF OBSERVATIOS SCHEDULED
102	T18_C1	NUM	8	813			CONSTRUCTIVE PLAY (CHILD)
103	T18_C2	NUM	8	821			FANTASY PLAY (CHILD)
104	T18_C3	NUM	8	829			LOOKS AT MOTHER (CHILD)
105	T18_C4	NUM	8	837			TALKS (CHILD)
106	T18_C5	NUM	8	845			SMILES (CHILD)
107	T18_C6	NUM	8	853			PLAYING TOGETHER (CHILD)
108	T18_C7	NUM	8	861			SEEKS HELP OR INSTRUCTION (CHILD)
109	T18_C8	NUM	8	869			FUSSING AND CRYING (CHILD)
110	T18_M1	NUM	8	877			CONSTRUCTIVE PLAY (MOTHER)
111	T18_M2	NUM	8	885			FANTASY PLAY (MOTHER)
112	T18_M3	NUM	8	893			CONTINGENT RESPONSIVITY (MOTHER)
113	T18_M4	NUM	8	901			LOOKS AT CHILD (MOTHER)
114	T18_M5	NUM	8	909			TALKS (MOTHER)
115	T18_M6	NUM	8	917			SMILES (MOTHER)
116	T18_M7	NUM	8	925			DEMONSTRATES VERBALIZATION (MOHTER)
117	T18_M8	NUM	8	933			COAXES CHILD TO TRY (MOTHER)
118	T18_M9	NUM	8	941			GIVES COMMANDS (MOTHER)
119	T18_MAFF	NUM	8	949			AFFECT OF MOTHER
120	T18_CAFF	NUM	8	957			AFFECT OF CHILD
121	T18_MACT	NUM	8	965			ACTIVITY OF MOTHER
122	T18_CACT	NUM	8	973			ACTIVITY OF CHILD
123	T18_MVBC	NUM	8	981			VERBAL CONDUCT OF MOTHER
124	T18_CWD1	NUM	8	989			TOTAL WORDS ON TAPE (CHILD)
125	T18_CTST	NUM	8	997			TOTAL TIMES SPOKE ON TAPE (CHILD)
126	T18_CWD2	NUM	8	1005			TOTAL WORDS (CHILD)
127	T18_CDWD	NUM	8	1013			TOTAL DIFFERENT WORDS
128	T18_MWRD	NUM	8	1021			TOTAL WORDS ON TAPE (MOTHER)
129	T18_MTST	NUM	8	1029			TOTAL TIMES SPOKE ON TAPE (MOTHER)
130	T18_MTPH	NUM	8	1037			TOTAL PHRASES (MOTHER)
131	T18_MCOM	NUM	8	1045			TOTAL COMMANDS (MOTHER)
132	B18_ID	NUM	8	1053			BAYLEY MENTAL ID

300

CONTENTS PROCEDURE
CONTENTS OF SAS MEMBER DISK.PSYCH

REATED BY OS JOB TAD ON CPUID FF-3084-124257 AT 16:23 TUESDAY, MAY 27, 1986 BY SAS RELEASE 5.08
SNAME=PSYCH.SCHOOLER.MEX2B.MAY86 OBSERVATIONS PER TRACK =78 BLKSIZE=23287 LRECL=597 GENERATED BY DATA
UMBER OF OBSERVATIONS: 299 NUMBER OF VARIABLES: 74
EMTYPE: DATA

-----ALPHABETIC LIST OF VARIABLES AND ATTRIBUTES-----

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
31	CG_ARITH	NUM	8	245			ARITHMATIC SCORE
30	CG_BLOCK	NUM	8	237			DESIGNS WITH BLOCKS
24	CG_CROSS	NUM	8	189			TOTAL LINES (CROSSES)
17	CG_DATE	NUM	8	133			DATE OF OBSERVATION
26	CG_DIGF	NUM	8	205			DIGITS REPEATED FORWARD
27	CG_DIGR	NUM	8	213			DIGITS REPEATED IN REVERSE
28	CG_DIGT	NUM	8	221			TOTAL DIGITS REPEATED
21	CG_GRADE	NUM	8	165			GRADE IN SCHOOL
18	CG_ID	NUM	8	141			NUMBER OF QUESTIONNAIRE
16	CG_INTID	NUM	8	125			INTERVIEWER ID
15	CG_ITYPE	NUM	8	117			INDIVIDUAL TYPE
32	CG_MAZE	NUM	8	253			MAZES SCORE
25	CG_RAVEN	NUM	8	197			COLOR PROGRESSION (RAVEN'S MATRICES)
20	CG_RDWT	NUM	8	157			READS AND WRITES
19	CG_TIME	NUM	8	149			MINUTES ELAPED IN ADMIN. TESTS
29	CG_VOCAB	NUM	8	229			VOCABULARY SCORE
23	CG_WRITE	NUM	8	181			ABLE TO WRITE NAME
22	CG_YRSCH	NUM	8	173			NUMBER OF YEARS IN SCHOOL
7	CL_DATE	NUM	8	53			DATE OF OBSERVATION
10	CL_ID	NUM	8	77			NUMBER OF QUESTIONNAIRE
6	CL_INTID	NUM	8	45			INTERVIEWER ID
5	CL_ITYPE	NUM	8	37			INDIVIDUAL TYPE
13	CL_OFTSK	NUM	8	101			OBSERVED IN OFF-TASK BEHAVIOR
14	CL_OUTRM	NUM	8	109			OBSERVED OUT-OF-CLASSROOM BEHAVIOR
12	CL_PLAY	NUM	8	93			OBSERVED PLAYING
8	CL_POBS	NUM	8	61			NUMBER OF ACTUAL OBSERVATIONS
9	CL_SOBS	NUM	8	69			NUMBER OF SCHEDULED OBSERVATIONS
11	CL_SPEAK	NUM	8	85			OBSERVED SPEAKING
1	COM_ID	NUM	8	4			COMMUNITY ID
2	FAM_ID	NUM	8	12			FAMILY ID
4	IID	CHAR	9	28			UNIQUE ($) INDIVIDUAL ID
3	IND_ID	NUM	8	20			INDIVIDUAL ID
35	PG_DATE	NUM	8	277			DATE OF OBSERVATION
38	PG_ID	NUM	8	301			NUMBER OF QUESTIONNAIRE
34	PG_INTID	NUM	8	269			INTERVIEWER ID
33	PG_ITYPE	NUM	8	261			INDIVIDUAL TYPE
36	PG_POBS	NUM	8	285			NUMBER OF ACTUAL OBSERVATIONS
37	PG_SOBS	NUM	8	293			NUMBER OF SCHEDULED OBSERVATIONS
39	PG_1	NUM	8	309			FRIENDLY INTERACTION
40	PG_2	NUM	8	317			HELP/AID
41	PG_3	NUM	8	325			PHYSICAL AGGRESSIVENESS
42	PG_4	NUM	8	333			VERBAL AGRESSIVENESS
43	PG_5	NUM	8	341			AGRESSIVE PLAY
44	PG_6	NUM	8	349			MEDDLING
45	PG_7	NUM	8	357			DOMINATION
46	PG_8	NUM	8	365			ASKS FOR HELP OR ATTENTION
47	PG_9	NUM	8	373			DEFENDS SELF
48	PG_10	NUM	8	381			SUBMISSION/OBEDIENCE
49	PG_11	NUM	8	389			POSITIVE RESPONSE TO A REQUEST
50	PG_12	NUM	8	397			NEGATIVE RESPONSE TO A REQUEST

301

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
51	PG_13	NUM	8	405			NO BEHAVIOR
52	PG_14	NUM	8	413			SEEKS ADULTS
53	PG_15	NUM	8	421			DOES NOT SEEK ADULTS
54	PG_16	NUM	8	429			SEEKS PHYSICAL CONTACT
55	PG_17	NUM	8	437			INVOLVED IN ACTIVITY
56	PG_18	NUM	8	445			PLAYS WITH OBJECTS
57	PG_19	NUM	8	453			DESTROYS OBJECTS
58	PG_20	NUM	8	461			WANDERS/ROAMS
59	PG_21	NUM	8	469			ISOLATED PHYSICAL PLAY
60	PG_22	NUM	8	477			IMAGINATIVE PLAY
61	PG_23	NUM	8	485			DISTRACTED BY OUTSIDE EVENTS
62	PG_24	NUM	8	493			JUST OBSERVES
63	PG_25	NUM	8	501			INACTIVE
64	PG_26	NUM	8	509			LOW ACTIVITY LEVEL
65	PG_27	NUM	8	517			NORMAL ACTIVITY LEVEL
66	PG_28	NUM	8	525			VERY HIGH ACTIVITY LEVEL
67	PG_29	NUM	8	533			HYPERACTIVE/AGITATED
68	PG_30	NUM	8	541			VERY HAPPY/LAUGHING
69	PG_31	NUM	8	549			VERY TIMID/ANXIOUS
70	PG_32	NUM	8	557			IRRITABLE/ANGRY/HOSTILE
71	PG_33	NUM	8	565			CRIES/SAD
72	PG_34	NUM	8	573			LOSES CONTROL
73	PG_35	NUM	8	581			CONTENT/NORMAL AFFECT
74	PG_36	NUM	8	589			ANIMATED

-----LIST OF VARIABLES AND ATTRIBUTES BY POSITION-----

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
1	COM_ID	NUM	8	4			COMMUNITY ID
2	FAM_ID	NUM	8	12			FAMILY ID
3	IND_ID	NUM	8	20			INDIVIDUAL ID
4	IID	CHAR	9	28			UNIQUE ($) INDIVIDUAL ID
5	CL_ITYPE	NUM	8	37			INDIVIDUAL TYPE
6	CL_INTID	NUM	8	45			INTERVIEWER ID
7	CL_DATE	NUM	8	53			DATE OF OBSERVATION
8	CL_POBS	NUM	8	61			NUMBER OF ACTUAL OBSERVATIONS
9	CL_SOBS	NUM	8	69			NUMBER OF SCHEDULED OBSERVATIONS
10	CL_ID	NUM	8	77			NUMBER OF QUESTIONNAIRE
11	CL_SPEAK	NUM	8	85			OBSERVED SPEAKING
12	CL_PLAY	NUM	8	93			OBSERVED PLAYING
13	CL_OFTSK	NUM	8	101			OBSERVED IN OFF-TASK BEHAVIOR
14	CL_OUTRM	NUM	8	109			OBSERVED OUT-OF-CLASSROOM BEHAVIOR
15	CG_ITYPE	NUM	8	117			INDIVIDUAL TYPE
16	CG_INTID	NUM	8	125			INTERVIEWER ID
17	CG_DATE	NUM	8	133			DATE OF OBSERVATION
18	CG_ID	NUM	8	141			NUMBER OF QUESTIONNAIRE
19	CG_TIME	NUM	8	149			MINUTES ELAPED IN ADMIN. TESTS
20	CG_RDWT	NUM	8	157			READS AND WRITES
21	CG_GRADE	NUM	8	165			GRADE IN SCHOOL
22	CG_YRSCH	NUM	8	173			NUMBER OF YEARS IN SCHOOL
23	CG_WRITE	NUM	8	181			ABLE TO WRITE NAME
24	CG_CROSS	NUM	8	189			TOTAL LINES (CROSSES)
25	CG_RAVEN	NUM	8	197			COLOR PROGRESSION (RAVEN'S MATRICES)
26	CG_DIGF	NUM	8	205			DIGITS REPEATED FORWARD
27	CG_DIGR	NUM	8	213			DIGITS REPEATED IN REVERSE
28	CG_DIGT	NUM	8	221			TOTAL DIGITS REPEATED
29	CG_VOCAB	NUM	8	229			VOCABULARY SCORE
30	CG_BLOCK	NUM	8	237			DESIGNS WITH BLOCKS
31	CG_ARITH	NUM	8	245			ARITHMATIC SCORE
32	CG_MAZE	NUM	8	253			MAZES SCORE
33	PG_ITYPE	NUM	8	261			INDIVIDUAL TYPE

302

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
34	PG_INTID	NUM	8	269			INTERVIEWER ID
35	PG_DATE	NUM	8	277			DATE OF OBSERVATION
36	PG_POBS	NUM	8	285			NUMBER OF ACTUAL OBSERVATIONS
37	PG_SOBS	NUM	8	293			NUMBER OF SCHEDULED OBSERVATIONS
38	PG_ID	NUM	8	301			NUMBER OF QUESTIONNAIRE
[illegible]	G_1	NUM	8	309			FRIENDLY INTERACTION
[illegible]	PG_2	NUM	8	317			HELP/AID
41	PG_3	NUM	8	325			PHYSICAL AGGRESSIVENESS
42	PG_4	NUM	8	333			VERBAL AGRESSIVENESS
43	PG_5	NUM	8	341			AGRESSIVE PLAY
44	PG_6	NUM	8	349			MEDDLING
45	PG_7	NUM	8	357			DOMINATION
46	PG_8	NUM	8	365			ASKS FOR HELP OR ATTENTION
47	PG_9	NUM	8	373			DEFENDS SELF
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64	PG_26	NUM	8	509			LOW ACTIVITY LEVEL
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73	PG_35	NUM	8	581			CONTENT/NORMAL AFFECT
74	PG_36	NUM	8	589			ANIMATED

303

CONTENTS OF DATASET PSYCH.ADULT.MEX2B.MAY86 ON USR040 9:55 WEDNESDAY, MAY 28, 1

CONTENTS PROCEDURE
CONTENTS OF SAS MEMBER DISK.PSYCH

EATED BY OS JOB TAD ON CPUID FF-3084-124257 AT 9:54 WEDNESDAY, MAY 28, 1986 BY SAS RELEASE 5.08
NAME=PSYCH.ADULT.MEX2B.MAY86 OBSERVATIONS PER TRACK =298 BLKSIZE=23397 LRECL=157 GENERATED BY DATA
MBER OF OBSERVATIONS: 412 NUMBER OF VARIABLES: 19
MTYPE: DATA

-----ALPHABETIC LIST OF VARIABLES AND ATTRIBUTES-----

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
18	CA_ARITH	NUM	8	141			ARITHMATIC SCORE
17	CA_BLOCK	NUM	8	133			DESIGNS WITH BLOCKS
11	CA_CROSS	NUM	8	85			TOTAL LINES (CROSSES)
7	CA_DATE	NUM	8	53			DATE OF OBSERVATION
13	CA_DIGF	NUM	8	101			DIGITS REPEATED FORWARD
14	CA_DIGR	NUM	8	109			DIGITS REPEATED IN REVERSE
15	CA_DIGT	NUM	8	117			TOTAL DIGITS REPEATED
6	CA_INTID	NUM	8	45			INTERVIEWER ID
5	CA_ITYPE	NUM	8	37			INDIVIDUAL TYPE
19	CA_MAZE	NUM	8	149			MAZES SCORE
12	CA_RAVEN	NUM	8	93			COLOR PROGRESSION (RAVEN'S MATRICES)
9	CA_TIME	NUM	8	69			MINUTES SPENT ADMIN. TEST
16	CA_VOCAB	NUM	8	125			VOCABULARY SCORE
10	CA_WRITE	NUM	8	77			ABLE TO WRITE NAME
8	CA_YRSCH	NUM	8	61			NUMBER OF YEARS IN SCHOOL
1	COM_ID	NUM	8	4			COMMUNITY ID
2	FAM_ID	NUM	8	12			FAMILY ID
4	IID	CHAR	9	28			UNIQUE ($) INDIVIDUAL ID
3	IND_ID	NUM	8	20			INDIVIDUAL ID

----LIST OF VARIABLES AND ATTRIBUTES BY POSITION----

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
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19	CA_MAZE	NUM	8	149			MAZES SCORE

304