# A STUDY OF HEALTH HABITS OF SENIOR <br> HIGH-SCHOOL GIRLS 

By<br>Mary V. Jones<br>.

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Mary V. Jones

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## I. THE PROBLEM--STATEMENT AND DEFINITION

Since health is one of the cardinal principles of education, it becomes one of the functions of the school to teach how good health can be achieved and preserved.

Dr. Logan Clendening in a recent article discussing health essentials says, "the really important fundamental rules about which everyone agrees, are very few and very platitudinous."l Briefly he summarizes them as follows, (1) get enough air to breathe, (2) eat enough of the right kind of food, (3) have a good heredity, and (4) avoid contagion by acquiring immunity to as many of the contagious diseases as possible. In these four rules, Dr. Clendening gives fundamentals which are of major importance to healthful living.

The state of Indiana has seen that special care will be given to assure that today's children will have a knowzedge of health habits that their parents did not receive. Our state legislature has made it mandatory to teach a course in health instruction, and "requiring instruction In the elementary schools as to the effect of alcoholic drinks, tobacco, sedatives and narcotics upon the human system. ${ }^{2}$

[^0]Health instruction is in its infancy. However, the records of the past show that we must teach essential facts based on science which will be applicable in the lives of the great majority of students.

Much has been written presenting and favoring various methods of teaching health education in the public schools of our country but little has been done to verify the results of this instruction.

The value of health teaching is to be found in the degree to which the subject functions in the life of the individual. This study shows the recorded health practices of 990 high-school girls in 11 senior high schools of Indiana.

A study of health habits is a timely subject especially today when the methods of presenting health information to school children are attracting considerable attention. It is interesting to remember that not long ago health instruction in the schools was merely the teaching of anatomy. To be able to name and locate all the bones of the body was a required lesson in each course of study. Today, the child is no longer called upon to study formal hygiene and physiology. Function is now of first importance with emphasis placed upon the formation of proper attitudes and habits.

We are told that "the ideal of health is not mere freedom from obvious deformities and pathological symptoms. It is the realization of the highest physical, mental, and spiritual possibilities of the individual." ${ }^{3}$

[^1]In order to determine whether or not our health teaching is serving this ideal, we need a basis or scale by which to measure'the amount of growth in health knowledge, habits, and practices.

Perhaps the first measure of individual health was a standard of endurance and physical fitness rather than of habits and practices. The early Greeks set up in their athletic games and works of art, men who were examples of what was to be desired physically.

One of the earliest attempts at measuring health was that of the height-weight charts. Baldwin states that "the first health measuring scales were the weight-height index used in 1874.4, This report was supplanted by Bowditch in 1877.5 Meny attempts have been made to measure health habits and practices. One of the most outstanding contributions to the field has been the "Personal Health Standard and Scale." ${ }^{6}$

Wood and Lerrigo have developed scales which express for various age groups appropriate standards of healthful behavior in terms of habits, attitudes, and knowledge of such points as nutrition, sleep, care of the body, control of infection, etc. ${ }^{7}$

[^2]Doctor Fmerson made a study of the health habits in a woman's college. ${ }^{8}$ Twenty questions were asked in regard. to sleep, exercise, food, and other habits of living. The study showed a loss by classes in various habits. That is to say, the freshmen had habits more inducive to health than did the seniors. The greatest differences were in relation to exercise and outdoor air in which seniors were 40 per cent less "air minded" than freshmen. This study by Dr. Pmerson would tend to suggest that college life does not better desirable living habits. The lowest scores were made on questions in regard to fatigue and regular rest periods.

This study of the health habits of senior high-school girls is just another step made in the hopes that the teaching of health may be improved. If the results help to develop but one individual to a greater capacity, then the study will have contributed its part.

Billiam P. Jmerson, M.D. "Health Habits in a Voman's College," Journal of the American Medical Association, May 1928, p. 1434.

## II. A STUDY OF HEALTH HABITS OF SENIOR HIGH-SCHOOL GIRLS

## A. General Procedure

1. Scope of the Study.

The data for this study were collected from 990 girls in Indiana representing $l l$ high schools in various parts of the state. The schools included Brazil, Goshen, Hagerstown, Honey Creek of Vigo County, Jasonville, Michigan City, Petersburg, Spencer, Van Buren of Clay County, Tashington, Wiley of Terre Haute.

The above schools were selected because of the personal contacts of the writer, and on account of the size of the schools and their locations. Rural as well as city high schools were chosen. The enrollments of these schools ranged from 166 to 962 pupils. Of the 990 individual cases, 463 of the girls were in the tenth grade, 266 were in the eleventh, and 261 were in the twelfth grade.

## 2. Purpose of the Study.

This study has been undertaken with a three-fold purpose in view. The results may be used:
a. as a basis for planning a course of study in health education.
b. to survey a local situation to discover where the teaching of this subject has been a success or a failure.
c. to indicate where emphasis is needed in health education. 3. The Check List.

A health habit check list was prepared by combining suggested units from standard textbooks on health education. The practices which were accepted by a majority of texts were then grouped into topics, and questions pertaining to each were devised. These questions resulting were sent to the teachers of health and physical education in the schools selected for the study. The questions were distributed and were checked by the girls during the regular class hour. To facilitate checking and save time, it was believed best to eliminate as much writing as possible. Hence all the questions were to be answered in the affirmative or negative. The writer realizes, however, that some of the questions should have been more detailed. But again, the questions asked for health habits, and if the practice had become. habitual, in most cases the questions could be answered by "yes" or "no".

A copy of the devised list of questions can be found in the appendix.
4. Tabulation of Data.

Students were classified in each school as sophomores, juniors and seniors. The desirable habits as well as the undesirable habits were checked for each group. These totals were then made for each class in the given school. From this record, percentages were worked out for each class on each individual health practice. This allows the presentation of tables showing percentages for each item for each school by classes, percentages for each class, and total percentages
for all schools.
B. Results of the Survey

1. Explanation of Table I.

The first table shows the percentages of desirable and undesirable health habits for the tenth, eleventh and twelfth grades and the total percentages for the 990 cases studied.

It should be noticed that in preparing the check list the questions were stated in so f'ar as possible, in both positive and negative form so that the student would be unable to check the list without reading the questions. In tabulating the answers, to avoid confusion, the returns were checked desirable habits, undesirable habits and no answers. This allowed all the desirable habits to fall under one column.

## TABLE I

PARCENTAGES OFi DESIRABIE AND UNDESIRABLE ZEALTH HABITS
FOR THE TENTH, ELEVETVTH, AND TWELFTH GRADES
AND TOTAL PERCENTAGES FOR AL工 CASES
A. Nutrition
l. Do you eat three regular meais daily?
2. Do you eat between meals?
3. Do you take time to eat slowly and to chew food thoroughly during meals?
4. Do you eat when overtired?
5. Does your daily diet include two kinds of fruit?
6. Does your daily diet include cereal for breakfast?
7. Does your daily diet include two kinds of vegetables?
8. Does your daily diet include a pint of milk either as a liquid or a sclid food?
9. Does your daily diet include candy and sweets at meal time only?
10. Do you wash food down with water?
ll. Do you drink from four to six glasses of water daily?
12. Do you avoid ice water and otner iced drinks?
13. Do you avoid tea, coffee and coco-cola?

| $\begin{aligned} & \text { N } \\ & \text { Ho } \\ & \text { W } \\ & \text { Wun } \end{aligned}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Desirable | . 87 | . 81 | . 84 | . 84 |
| Undesirable | .13 | . 19 | . 16 | .15 |
| Desirable | . 22 | . 22 | . 28 | . 24 |
| Undesirable | . 78 | . 76 | . 70 | . 75 |
| Desirable | . 74 | . 63 | .69 | . 70 |
| Undesirable | . 25 | . 36 | . 30 | . 29 |
| Desirable | . 53 | . 58 | . 55 | . 55 |
| Undesirable | . 45 | . 40 | . 42 | . 43 |
| Lesirable | . 67 | . 56 | . 56 | . 61 |
| Undesirable | . 32 | . 44 | . 43 | . 38 |
| Desirable | . 61 | . 58 | . 52 | . 58 |
| Undesirable | . 59 | . 41 | . 47 | . 42 |
| Desirable | . 90 | . 89 | . 87 | . 89 |
| Undesirable | . 10 | . 11 | . 12 | .11 |
| Desirable | . 69 | . 59 | . 64 | . 65 |
| Undesirable | . 31 | . 41 | . 36 | . 35 |
| Desirable | . 18 | . 18 | . 14 | . 17 |
| Undesirable | . 80 | . 82 | . 85 | . 82 |
| Desirable | . 70 | . 71 | .77 | . 72 |
| Undesirable | . 30 | . 29 | .23 | . 28 |
| Desirable | . 68 | . 74 | . 75 | . 72 |
| Undesirable | . 31 | . 26 | . 25 | . 28 |
| Desirable | . 21 | . 22 | . 24 | . 22 |
| Undesirable | . 79 | .77 | . 76 | . 78 |
| Desirable | . 35 | . 25 | . 30 | . 31 |
| Undesirable | . 65 | . 75 | . 69 | . 59 |

B. Exercise and Recreation

1. Do you use moderation in physical activities?
2. Do you work or play outaoors two nours daily?
3. Do you take part in some of the following activities: tennis, swimaing, golf, hiking, volley-ball, basket-ball, other team games?
4. Do you devote from one to two hours daily (in addition to exercise) to social recreation, to reading or to other recreative occupations?
C. Sleep and Rest
5. Do you sleep from eight to ten hours every night?
6. Do you rise and do you $\xi 0$ to bed at regular hours?
7. Do you sleep in a ventilated room?
8. Do you relax at least ten minutes some time during tne day?
D. Fresh Air
9. When possible do you control the condition of indoor air to keep the room well aired?
10. Do you choose outdoor recreation in preference to indoor recreation?
E. Elimination
11. Do you depend upon laxatives for effective bowel movement?
12. Do you have a bowel movement regularly once a day?

|  |  |  | $\begin{aligned} & \frac{I}{4} \\ & 4 \\ & 4 \\ & H \\ & 0 \\ & 0 \\ & \hline \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Desirable | . 81 | . 85 | .87 | . 84 |
| Undesirable | . 16 | .13 | . 11 | . 14 |
| Desirable | . 61 | . 50 | . 45 | . 53 |
| Undesirable | . 39 | . 50 | . 55 | . 46 |
| Desirable | . 89 | . 88 | . 81 | .87 |
| Undesirable | . 09 | . 12 | . 18 | . 12 |
| Desiraole | . 86 | . 82 | . 83 | . 84 |
| Undesirable | . 13 | . 17 | . 16 | . 15 |
| Desirable | . 70 | . 62 | . 61 | . 66 |
| Undesirable | . 30 | . 38 | . 38 | . 34 |
| Lesirable | . 38 | . 38 | . 39 | . 38 |
| Undesirable | . 62 | . 62 | . 60 | . 61 |
| Desirable | . 92 | . 89 | . 95 | . 92 |
| Undesirable | . 08 | .11 | . 05 | . 08 |
| Desirable | . 76 | . 78 | .74 | . 76 |
| Undesirable | . 24 | . 21 | . 26 | . 24 |
| Desirable | . 91 | . 92 | .89 | . 91 |
| Undesirable | . 08 | . 06 | . 10 | . 08 |
| Desirable | . 86 | . 81 | . 76 | . 82 |
| Undesirable | . 14 | . 19 | . 23 | . 18 |
| Uesirable | . 88 | . 88 | . 89 | . 88 |
| Undesirable | . 12 | . 12 | . 10 | . 12 |
| Desirable | . 83 | . 81 | . 77 | . 81 |
| Undesirable | .17 | . 19 | .23 | . 19 |

F. Eaucation for Farenthood

1. Do you carry on a hygienic regime during the menstrual period?
a. Do you take moderate exercise every day?
b. Do you receive adequate rest during the period?
c. Do you take a sponge bath daily?
a. Do you adhere to a regular schedule of activity as far as possible?
2. Do you enjoy home life?
3. Do you use scientific language in regard to sex organs and functions?
4. Do you go to your parents for information and advice on sex questions?
G. Clotining
5. Do you wear clothes suited to the occupation, weather and temperature?
6. Do you wear tight brassieres or tignt girdles?
7. Do you wear a low-neeled, well-fitting shoe for general wear?
H. Care of the Skin and the Nails
8. Do you select cosmetics with care?
9. Do you take a cleansing oath at least three times a week?
10. Do you manicure your nails?
I. Care of the Hair and the Scalp
11. لo you use only clean combs and brushes on the hair?
12. Do you patronize only clean beauty shops?

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Desirable | . 83 | . 81 | . 83. | . 83 |
| Undesirable | . 14 | . 17 | . 15 | . 15 |
| Desirable | . 84 | . 81 | . 80 | . 82 |
| Undesirable | . 13 | . 18 | . 18 | .16 |
| Desirable | . 50 | . 50 | . 50 | . 50 |
| Undesirable | . 48 | . 48 | . 49 | . 48 |
| Desirable | . 76 | . 80 | . 77 | . 77 |
| Undesirable | . 18 | . 19 | . 21 | . 19 |
| Desirable | . 89 | . 85 | . 90 | . 88 |
| Undesirable | . 09 | . 14 | . 10 | . 11 |
| Desirable | . 61 | . 63 | . 54 | . 60 |
| Undesirable | . 31 | . 32 | . 38 | . 33 |
| Desirable | . 71 | . 65 | . 64 | . 68 |
| Undesirable | . 25 | . 32 | . 33 | . 29 |
| Desirable | . 93 | . 91 | . 92 | . 92 |
| Undesirable | . 07 | . 09 | . 08 | . 08 |
| Desirable | . 82 | . 80 | . 80 | . 81 |
| Undesirable | . 17 | . 19 | . 20 | . 18 |
| Desirable | . 77 | . 76 | . 72 | . 75 |
| Undesirable | . 22 | . 23 | . 28 | . 24 |
| Desirable | . 83 | . 85 | . 89. | . 85 |
| Undesirable | . 12 | . 07 | . 08 | . 10 |
| Desirable | . 73 | . 74 | . 78 | . 74 |
| Undesirable | . 26 | . 26 | . 21 | . 25 |
| Desirable | . 79 | . 77 | . 87 | . 81 |
| Undesirable | . 20 | . 22 | . 13 | . 19 |
| Desirable | . 91 | . 90 | . 91 | . 90 |
| Undesirable | . 09 | . 09 | . 09 | . 09 |
| Desiradie | . 82 | . 82 | . 82 | . 82 |
| Unqesirable | . 06 | . 03 | . 02 | 04 |

J. Care of the Teeth and the Mouth
l. Do you brusn your teeth at least once daily in an approved way?
2. Do you go to the dentist at least once a year for year for examination and neces
K. Care of the Nose and the Throat
l. Do you blow your nose gently?
2. Do you know of any defects of nose or throat which need correction?
3. Do you avoid overstraining your voce, especially at atinletic events?
L. Care of the Bars and the Eyes

1. Do you protect the ears wher driving and when swimming?
2. Do you consult a physician when an abnormal ear condition is present?
3. Do you pick the ears with snarp instruments?
4. Do you use the eyes when they are iired or strained?
5. Do you choose reading positions in which the light is good, sufficiert in intensity, and reflected over the saoulcier?
6. Do you hold reading material in the best possible position?
7. Do you go to the movies more than once a week?
8. When necessary do you go to a reputable physician to have the eyes examined?

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Desirable | . 90 | . 94 | . 97 | . 93 |
| Undesirable | . 10 | . 06 | . 03 | . 07 |
| Desirable | . 54 | . 49 | . 52. | . 52 |
| t?Undesirable | . 45 | . 47 | . 46 | . 46 |
| Desirable | . 87 | . 78 | . 84 | . 84 |
| Undésirable | . 12 | . 21 | . 15 | . 15 |
| Desirable | . 80 | .77 | . 74 | . 78 |
| Undesirable | . 19 | . 20 | . 23 | . 20 |
| Desirable | . 46 | .47 | . 50 | . 47 |
| Undesirable | . 53 | . 52 | . 49 | . 52 |
| Desirable | . 66 | . 61 | . 63 | . 64 |
| Undesirable | . 29 | . 31 | . 32 | . 30 |
| Lesirable | . 61 | . 55 | . 56 | . 59 |
| Uncesirable | . 21 | .17 | . 13 | . 18 |
| Desirabie | . 88 | . 84 | . 90 | . 87 |
| Unuesirable | . 12 | .15 | . 10 | . 12 |
| Desirable | . 55 | . 50 | . 46 | . 51 |
| Undesirable | . 44 | . 50 | . 52 | . 48 |
| Desirable | . 80 | . 78 | . 77 | . 79 |
| Undesirable | . 20 | . 21 | . 22 | . 21 |
| Desirable | . 66 | . 67 | . 69 | .67 |
| Undesirable | . 33 | . 33 | $\therefore 30$ | . 32 |
| Desirable | . 80 | . 78 | . 74 | . 78 |
| Undesirable | . 19 | . 21 | . 25 | . 21 |
| Desirable | . 62 | . 58 | . 64 | . 61 |
| Undesirable | . 28 | . 28 | . 24 | .27 |

## M. Care of the Feet

1. Do you walk correctly, toes straight ahead, with the weight well forward over the balls of the feet to do so by your physician or physical education teacher?
2. Dö you wear arch supports only under the direction of a physician?
N. Indices of Physical Fitness
3. Have you had a medical examination by a physician within the last year?
4. Is an examination of this nature a yearly occurrence?
5. Do you have any physical defects which should be corrected, e.E. bad teeth, infected tonsils, etc.?
6. Have you had a serious illness within the last year?
7. Are you immunized against
a. Diptheria?
b. Scarlet fever?
c. Typhoid fever?
d. Small pox?
e. Meningitis?
8. Are you free from persistent physical pain?
9. Are you troubled with colds?
10. Are you subject to frequent headaches?
11. Do you use patent medicines or drugs without a doctor's prescription?
12. Do you smoke cigarettes?

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Desirabl | . 75 | 74 | . 68 | . 73 |
| Undesirable | . 24 | . 25 | . 30 | 26 |
| Desirable | . 74 | .63 | . 56 | . 66 |
| Undesirable | 14 | . 17 | . 20 | 16 |
| Desirable | . 27 | . 27 | 26 | 27 |
| Undesirable | . 46 | . 35 | . 30 | 39 |
| Desirable | . 44 | . 39 | . 38 | . 4 |
| Undesirable | 55 | . 59 | . 62 | . 58 |
| Desirable | . 32 | 32 | . 26 | . 30 |
| Undesirable | . 63 | . 60 | .66 | . 63 |
| Desirable | . 54 | 46 | . 56 | . 53 |
| Undesirabie | . 42 | . 47 | . 41 | . 43 |
| Desirable | . 88 | . 86 | . 89 | . 88 |
| undesirable | . 11 | 12 | . 10 | . 11 |
| Desirable | 38 | . 38 | . 34 | . 37 |
| Undesirable | . 56 | . 51 | . 56 | . 55 |
| Desirable | 35 | . 35 | . 29 | . 34 |
| Undesirable | . 57 | . 51 | . 59 | 56. |
| Desirable | . 15 | . 14 | . 11 | . 14 |
| Undesirable | . 74 | . 68 | .73 | . 72 |
| Desirable | . 68 | . 73 | . 72 | . 70 |
| Undesirable | . 28 | . 19 | . 26 | 25 |
| Desirable | . 10 | . 06 | .07 | 08 |
| Undesirable | . 77 | . 73 | .77 | 76 |
| Desirable | .76 | . 76 | . 75 | 6 |
| Undesirable | . 21 | . 21 | . 21 | 21 |
| Desirable | . 56 | . 59 | . 54 | 56 |
| Undesirable | . 41 | . 40 | . 44 | . 41 |
| Desirable | . 69 | . 64 | 69 | . 67 |
| Undesirable | . 28 | . 36 | . 30 | . 31 |
| Desirable | . 84 | . 81 | . 81 | . 82 |
| Undesirable | . 14 | . 17 | .17 | . 1 |
| U Desirable | 90 | . 86 | . 85 | . 87 |
| Tindesirable | . 09 | . 12 | 14 | . 11 |

0. Habits of Safety and First Aid
1. Dic you use gasoline or kerosene for lighting fires, or for cleaning purposes?
2. Are you careful in the use of electrical appliances?
3. Do you skate or boat only under safe conditions?
4. Do you always swim in waters patrolled by life guards?
5. Do you keep to the left when walking along highways?
6. Can you sive the proper first aid treatment for a. Bruises?
b. Cuts?
c. Finor burns?
d. Fainting?
e. Shock?
f. Broken bones?
g. Nose bleed?
h. Prozen portions of the body?
7. Can you spply artificial respiration when needed?
8. Do you call an older person or e physician in case of a serious accident?

| $\begin{aligned} & \text { +r } \\ & \text { ra } \\ & \text { gin } \end{aligned}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Desirable | . 69 | . 73 | . 70 | . 70 |
| Undesirable | . 29 | . 25 | . 30 | . 28 |
| Desirable | . 85 | . 85 | . 83 | . 84 |
| Uncesirable | . 08 | . 10 | . 10 | . 09 |
| Desirable | . 77 | . 73 | . 70 | . 74 |
| Undesirable | . 13 | . 16 | . 12 | .13 |
| Desirable | . 34 | . 40 | . 38 | . 37 |
| Undesirable | . 57 | . 51 | . 50 | . 54 |
| Desirable | . 79 | . 71 | . 75 | . 76 |
| Undesirable | . 17 | . 24 | . 17 | . 19 |
| Desirable | . 58 | .47 | . 48 | . 52 |
| Undesirable | . 30 | . 31 | . 34 | . 31 |
| Eesirable | . 64 | . 56 | . 59 | . 61 |
| Undesirable | . 25 | . 25 | . 31 | .27 |
| Desirable | . 63 | . 55 | . 57 | . 59 |
| Undesirable | . 26 | . 25 | . 32 | . 27 |
| Desirable | . 61 | . 53 | . 57 | . 53 |
| Undesirable | . 27 | . 27 | . 31 | . 28 |
| Desirable | . 48 | . 33 | . 39 | . 42 |
| Undesirable | . 35 | . 41 | . 43 | . 39 |
| Desirable | . 47 | . 31 | . 44 | . 42 |
| Undesirable | . 36 | . 43 | . 38 | . 38 |
| Desirable | . 64 | . 57 | . 57 | . 60 |
| Undesirable | . 26 | . 25 | . 32 | . 27 |
| Desirable | . 56 | . 49 | . 52 | . 53 |
| Undesirable | . 30 | . 31 | . 37 | . 32 |
| Desirable | . 45 | . 55 | . 50 | . 49 |
| Undesirable | . 52 | . 43 | . 47 | . 48 |
| Desirable | . 92 | . 89 | . 90 | . 91 |
| Undesirable | . 05 | . 05 | . 03 | . 04 |

P. Mental Health

1. Are you persistent, do you complete whatever you besin?
2. Do you concentrate upon the task at hand?
3. Do you plan your work to accomplish it in the most efficient way?
4. Do you enjoy going to school?
5. Do you do your school work promptly?
6. Do you work cheerfully and whole-heartedly?
7. Do you worry about your school work?
8. Are you honest in your contacts with teachers?
9. Do you hold errudges against your teachers?
10. Are you embarrassed when called upon to recite?
ll. Are you shy in social activities?
11. Are you forward in social activities?
12. Are you afraid of your mother?
13. Are you afraid of your father?
14. Do you enjoy beine with older people?

|  | H2 | 团 | 品 | HO |
| :---: | :---: | :---: | :---: | :---: |
| Desirable | . 67 | . 69 | . 66. | :67 |
| Undesirable | . 31 | . 29 | . 34 | . 31 |
| Desirable | .77 | . 79 | . 83 | . 79 |
| Undesirable | . 20 | . 20 | . 16 | . 19 |
| Desirable | . 79 | . 79 | . 77 | . 78 |
| Undesirable | . 19 | . 20 | . 21 | . 20 |
| Desirable | . 82 | . 80 | . 83 | . 82 |
| Undesirable | . 17 | . 19 | . 17 | . 17 |
| Desirable | . 67 | . 56 | . 68 | . 64 |
| Undesirable | . 32 | . 43 | . 31 | . 35 |
| Desirable | . 74 | . 70 | . 74 | . 73 |
| Uncesirable | . 25 | . 28 | . 24 | . 25 |
| Desirable | . 36 | . 33 | . 40 | . 37 |
| Undesirable | . 63 | . 66 | . 59 | . 63 |
| ? Desirable | . 92 | . 94 | . 95 | .93 |
| Undesirable | .07 | . 05 | . 05 | . 06 |
| Desirable | . 80 | . 80 | . 82 | . 80 |
| Undesirable | . 19 | . 20 | . 18 | . 19 |
| Desirable | . 68 | . 63 | . 66 | . 66 |
| Undesirable | . 31 | . 37 | . 33 | . 33 |
| Desirable | . 63 | . 67 | . 61 | . 63 |
| Undesirable | . 35 | . 33 | . 38 | . 35 |
| Desirable | . 60 | . 62 | . 64 | . 62 |
| Undesirable | . 37 | . 36 | . 33 | . 36 |
| Desirable | . 93 | . 0 | . 93 | . 92 |
| Undesirable | . 05 | . 08 | . 04 | . 06 |
| U Desirable | . 37 | . 35 | . 91 | . 87 |
| Uncesirable | . 10 | . 12 | . 05 | . 09 |
| Desirable | .71 | . 72 | . 82 | .74 |
| Undesirable | . 28 | .27 | .17 | . 25 |

16. Do you enjoy making new friends?
17. Do you feel free to invite your friends to your home?
18. Are you considerate of your comanions?
19. Do you control yourself when disappointed?
20. Are you respectful to those in autnority?
21. Do you respect the property of others?
22. Do you aroid cisagreeable dutics?
23. Do you solve your own problems?
24. Do you have confidence in yourself?
25. Are you nappy?

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| :---: | :---: | :---: | :---: | :---: |
| Desirable | . 94 | . 95 | . 96 | . 95 |
| Undesirable | . 05 | . 05 | . 04 | . 05 |
| Desirable | . 87 | . 89 | . 90 | . 88 |
| Undesirable | . 12 | . 10 | . 10 | . 11 |
| Desirable | . 94 | . 94 | . 93 | . 94 |
| Undesirable | . 04 | . 05 | . 05 | . 05 |
| Desirable | . 64 | . 64 | . 57 | . 62 |
| Truesirable | . 35 | . 36 | . 42 | .37 |
| Desirable | . 95 | . 95 | . 93 | . 95 |
| Undesirable | . 04 | . 04 | . 06 | . 05 |
| Desirable | . 96 | . 95 | . 97 | . 96 |
| Undesirable | . 03 | . 04 | . 02 | . 03 |
| Desirable | . 38 | . 47 | . 47 | . 43 |
| Undesirable | . 60 | . 52 | . 51 | . 55 |
| Desirable | . 7 \% | . 78 | . 77 | . 73 |
| Tndesirable | . 25 | . 26 | . 21 | . 25 |
| Desirable | . 85 | . 81 | . 82 | .84 |
| Undesirable | . 12 | .17 | . 16 | . 14 |
| Desirabie | . 89 | . 59 | . 90 | . 89 |
| Undesirable | . 10 | . 10 | . 10 | . 10 |

a. Data from Table I.

There were several findings shown in this table that were particularly outstanding. Eighty four per cent of the 990 girls had formed the desirable habit of eating three regular meals daily, but on the other hand 82 per cent of them ate "sweets" between meals. In general, the eating habits of the sophomore group were a little better than the habits established by the senior girls.

Eighty seven per cent of the total group took part in athletic games and 84 per cent of them devoted one or two hours daily to reading and social recreation.

One of the interesting findings showm in the table was the fact that although 82 per cent of the group said that they preferred outdoor to indoor recreation, only 53 per cent spent two hours daily working or playing outdoors. Fifty five per cent of the senior group did not spend two hours outdoors daily. The sophomore class had a better record, still, 39 per cent of that group responded unfavorably. A large number of girls reported that they suffered from colds and headaches, which fact may be directly traced to the above finding. Forty one per cent of the total group suffered from colds and 31 per cent were subject to frequent headaches.

The figures of this study show the same trend as in other similar studies concerning medical care and immunization. Less than 51 per cent of the total group had had medical examinations within the year but the sophomore class with 44 per cent had the greatest number of examinations. Thirty nine per cent of the juniors and 38 per cent of the seniors had had an examination.

Thirty per cent of the sophomore girls did not sleep eight hours every night and 62 per cent of them had irregular sleeping hours. Thirty eight per cent in both junior and senior classes stated that they did not sleep eight hours every night and 62 per cent of the juniors and 60 per cent of the seniors had irregular sleeping hours. Ninety two per cent of all of the girls slept in ventilated rooms.

More sophomore girls went to their parents for sex information than did senior girls. Twenty nine per cent of the group did not go to their parents for this information and 33 per cent did not use scientific language in regard to sex organs and functions. Only 50 per cent of the girls took a daily sponge bath during the menstrual period.

One hundred thirteen girls out of the total number of 990, reported that they smoked cigarettes. This is a total of 11 per cent. Of the smoking group, 37 per cent were sophomores, 31 per cent juniors, and 32 per cent were seniors. But one of the most starting points found was that 68 per cent of the smokers suffered from physical pain, frequent headaches and colds.
2. Explanation of Table II.

This table shows by means of a bar graph the percentages of responses of all girls for each item on the check list.

The dashes on the graph show desirable habits, the line shows the percentage of undesirable habits, while ( $x$ ) indicates the percentage of the questions which was not answered. This chart is just another means of indicating the great contrast between the desirable and undesirable health habits of 990 girls studied. It was formed from the data presented in Table III.

A GRAPHICAL STUDY OF TOTAL PERCENTAGES
ON ALI HEALTH HABITS
COVERING 990 CASES
A. Nutrition

1. Do you eat three regular meals daily?
2. Do you eat between meals?
3. Do you take time to eat slowly and to chew food thoroughly during meals?
4. Do you eat when overtired?
5. Does your daily diet include two kinds of fruit?
6. Does your daily diet include cereal for breakfast?
7. Does your daily diet include two kinds of vegetables?
8. Does your daily diet include a pint of milk, either as a liquid or a solid food?
9. Does your daily diet include candy and sweets at meal time only?
10. Do you wash food down with water?
11. Do you drink from four to six glasses of water daily?
12. Do you avoid ice water and other iced drinks?
13. Do you avoia tea, coffee, and coco-cola?
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0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
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X
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Desirable habit----------
Undesirable habit
$\qquad$ question not answered xxx
B. Bxercise and Recreation

1. Do you use moderation in prysical activities?
z. シo you work or play outdoors two hours daily?
2. Do you take part in some of the following activities: tennis, golf, swimuing, hiking, volley-ball, basket-ball, etc.?
3. Do you devote irom one to two hours daily (in addition to exercise) to social recreation, to reading, etc.?
C. Sleep and Rest
4. Do you sleep from eieht to ten hours every nient?
5. Do you sleep in a ventilated room?
6. Do you rise and do you go to bed at regular hours?
7. Do you relax at least ten min-

D utes some time during the day?
D. Fresh Air

1. When possible do you control the condition of indoor air to keep the room well aired?
2. Do you choose outdoor recreation in preference to indoor?
E. Rlimination
3. Do you depend upon laxatives for effective bowel movement?
4. Do you have a bowel novement regularly once a day?

Undesirable babit $\qquad$
question not answeredxxxxxxxx
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0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
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X
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x
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F. Education for Parenthood

1. Do you carry on a hygienic regimen during the menstrual period?
a. Do you take moderate exercise every day?
b. Do you receive adequate rest during the period?
c. Do you take a complete sponge bath daily?
d. Do you adhere to a regular sched-
n. gule of activity as far as possible?
2. Do you enjoy home life?
3. Do you use scientific larguage in regard to sex organs and functions?
4. Do you go to your parents for information and advice on sex questions?
G. Clothing
5. Do you wear clothes suited to the occupation, weather, and temperature?
6. Do you wear ticht brassieres or tight girdles?
7. Do you wear a low-heeled, wellfitting shoe for general wear?
H. Care of the Skin and the Nails
8. Do you select cosmetics with care?
9. Do you take a cleansing bath at least three times a week?
10. Do you maricure your nails?
I. Care of the Hair and the Scalp
11. Do you use only clean combs and brushes on the hair?
12. Do you patronize only clean beauty shops?
$0 \% \quad 10 \% \quad 20 \% \quad 30 \% \quad 40 \% \quad 50 \% \quad 60 \% \quad 70 \% \quad 80 \% \quad 90 \% \quad 100 \%$

X

X

X

$X X$
 X

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$\frac{---------------------------\infty}{x}$


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X



Xxxxxxx

Desirable habit--.-..-...-
Undesirable habit $\qquad$
J. Care of the Teeth and the Mouth

1. Do you brush your teeth at least once daily in an approved way?
2. Do jou go to the dentist at least once a. Year for examination and necessary treatment?
K. Care of the Tose and the Throat
3. Do you blow your nose gently?
4. Do you know of any defects of nose or throat which need correction?
5. Do you avoid overstrainine your voice, especially at athletic events?
I. Care of the Ears and the Byes
6. Do jou protect the ears when driving and when swiming?
7. Do you consult a physician when an obnormal ear condition is present?
8. Do you pick the ears with sharp instruments?
9. Do you use the eyes when they are tired or strained?
10. Do you choose reading positions in which the light is good, sufficient in intersity, and reflected over the shoulder?
11. Do you hold reading material in the best position?
12. Do you go to the rovies more than once a vieek?
13. When necessary do you so to a reputable physician to have the eyes examined?

Desirable nabit-----.----
Undesirable habit $\qquad$
question not answered axx
$0 \% 10 \% \quad 20 \% \quad 30 \% \quad 40 \% \quad 50 \% \quad 60 \% \quad 70 \% \quad 80 \% \quad 90 \% \quad 100 \%$

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x


$\overline{X X}$


$x \times X$

XXXXXXXXXX






XXYXYX
Mi. Care of the Feet ahead, with the weight well forward over the balls of the feet?
2. Do you take corrective foot exercises when advised to do so by your doctor or piysical education teacher?
3. Do you wear eroh supports only under direction of a physician?
N. Indices of Physical Fitness

1. Have you had a medical examination by a physician within the last year?
2. Is an examination of this nature a yearly occurrence?
3. Do you have any physical defects which should be corrected, e.e. bad teeth; infected tonsils, etc.?
4. Have you had a sericus illness within the last year?
5. Are you immunized against
a. Diptheria?
b. Scarlet fever?
c. Typhoid fever?
d. Small pox?
e. Meningitis?
6. Are you free from persistent physical pain?
7. Are rou troubled mith colds?
8. Are you subject to frequent headaches?
9. Do you use patent medicines or drucs without a doctor's prescription?
10. Do you smoke cigarettes?

Desirable habit-
Undesirable habit
guestion not answered xxxx

## $0 \% 10 \%$ 20\% 30\% $40 \% \quad 50 \% \quad 60 \% \quad 70 \% \quad 80 \% \quad 90 \% \quad 100 \%$

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O. Habits of Safety and First Aid
    l. Do you use gasoline or kerosene
        for lighting fires, or for clean-
        ing purposes?
2. Are you careful in the use of
    electrical appliances?
3. Do you skate or boat only under
    safe conditions?
4. Do you always swim in waters
    patrolled by life guards?
0% 10% 20% 30% 40% 50%, 60% 70% 80% 90% 100%
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XxXX
5. Do you always keep to the left when
walking along highways?
6. Can you give the proper first aid
        treatment for
    a. Bruises?
    b. Cuts?
    c. Minor burns?
    d. Fainting?
    e. Shock?
    f. Broken bones?
    E. Frozen portions of the body?
    h. Yose bleed?
7. Can you apply artificial respira-
        tion when needed?
8. Do you call an olcer person or a
        physician in case of e}\mathrm{ serious
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        accident?
        Desirable habit
        -----------
        Undesirable habit
    $\qquad$
question not answered xxxx
P. Mental Health

1. Are you persistent, do you complete whatever you begin?
2. Do you concentrate upon the task at hand?
3. Do you plan your work to accomplish it in the most efficient way?
4. Do you enjoy going to school?
5. Do you do your school work promptly?
6. Do you work cheerfully and rholeheartedly?
7. De you worry about your school work?
8. Are you honect in your contacts with teachers?
G. Do you hold grudges against your teachers?
9. Are you embarrassed when called upon to recite?
10. Are you shy in social activities?
11. Are you forward in social activities?
12. Are you afraid of your mother?
13. Are you afraid of your father?
14. Do you enjoy being with older people?

Desirable habit-.-...-...-.
Undesirable habit question not answered xxx

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0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
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16. Do you enjoy making new friends?
17. Do you feel free to invite your
        friends to your home?
18. Are you considerate of your
    cormpanions?
19. Do you control yourself when
        disappointed?
20. Are you respectíul to those in
        authority?
21. Do you respect the property of
        others?
22. Do you svoid disagreeable duties?
23. Do you solve vour own problems?
24. Do you have conficence in yourself?
25. Are you happy?
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0% 10% 20% 30% 40% 50% 60% 70% 30% 90% 100%
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Desirable habit--.-.-.-.--
Undesirable habit
wered xxxx
3. Explanation of Table III.

This table found in the appendix takes each school by classes and records percentages of responses for each item according to the data supplied by the students of these schools. The percentages were obtained by dividing the total number of marks on each item by the total number of pupils in the class. The result was the total percentage. The percentages throughout the table are classified in three columns indicating desirable habits, undesirable habits and no answers. Totals were taken from this table to form Table I and Table II.
III. GENERAL CONCLUSIONS
A. The Check List

1. Nutrition

Eighty four per cent of the 990 girls ate three regular meals daily but 82 per cent ate "sweets" between meals. A large number drank tea, coffee and coco-cola and 35 per cent did not consume a pint of milk daily. The eating habits of sophomore girls seemed to be more desirable than those of the senior class.
2. Exercise and Recreation

Only 53 per cent of the total group studied, stated that they played or worked outdoors two hours daily. sixty one per cent of the sophomore class responded favorably on this item but only 45 per cent of the senior group checked a desirable habit. However, 87 per cent of the group took part in recreational activities of an athletic nature and 84 per cent devoted two hours daily to social recreation.
3. Sleep and Rest

Thirty four per cent of the girls reported that they did not sleep eight hours or more each night and 61 per cent had irregular sleeping hours. Ninety two per cent of the group slept in ventilated rooms.
4. Fresh Air

Eighty two per cent stated that they preferred outdoor recreation but this preference is to be contrasted with the practice found in the above item (No. 2) in which only 53 per cent worked or played outdoors two hours daily. Ninety one per cent of the girls endeavored to control conditions of indoor air.
5. Elimination

Nineteen per cent of the group had faulty elimination, while 12 per cent depended upon laxatives.
6. Education for Parenthood

Habits during the menstrual period seemed good with the exception that only 50 per cent of the girls took a daily bath. Twenty nine per cent did not go to their parents for sex information and 33 per cent did not use scientific terms in regard to sex organs and functions. Sophomore girls had better habits in regard to these two points than did the senior class. From the habits indicated, there seems to be a vital need for sex hygiene in a course of study in health education for high-school girls.
7. Clothing

Sensible clothing was worn by 92 per cent. However, 24 per cent wore poorly fitting shoes or shoes with high heels, and 18 per cent wore tight brassieres or tight girdles.
8. Care of the Body

Excellent care was given to skin, nails, hair and scalp. Bathing at least three times a week was practiced by 74 per cent of the group. ITinety three per cent were "tooth brush conscious", but only 52 per cent went to the dentist for a yearly examination. Twenty per cent were aware of nose or throat defects which needed correction. From the habits indicated on the check list, high-school girls used their eyes after they had become tired and strained, used them in a poor manner, and then, failed to go to a physician for the necessary examination. Faulty foot mechanics seemed to be a common defect of 26 per cent of the group. Sixteen per cent of them were not taking remedial treatment when advised to do so.
9. Indices of Physical Fitness

To the author, it seems that many pertinent questions were asked in this section, and the largest number of undesirabie habits were checked. Only 41 per cent of the girls had had a physical examination during the past year, and this examination was a yearly occurrence for only 30 per cent of that number. Forty three per cent knew of physical defects which they should have corrected. Many students had not been immunized against disease, Persistent physical pain was suffered by 21 per cent, and 41 per cent were troubled with colds. Thirty one per cent had frequent headaches. Only ll per cent recorded the use of cigarettes.
10. Habits of Safety and First Aid

The group lacked the ability to render first aid treatment to a great degree even for the simplest injuries. This finding suggests that first aid study should be included in a course of health instruction. Safety habits ranked fairly high with the exception of swimming practices. Fifty four per cent of the girls swam unprotected by life guards.
11. Mental Health

The mental habits of the girls seemed to be very good. A large number, 63 per cent, worried about their school work. In lesser degrees, they avoided disagreeable duties, were unable to control feelings when disappointed, lacked persistence, and were ill at ease in social activities. Nevertheless, as a whole, the mental health of the group seemed exceptionally good.

## IV. APPENDIX

A. Bibliography

Baldwin, B.T. "Physical Growth and School Progress," U. S. Bureau of Education, Bulletin No. 10. 1914. P. 143. Bilhuber, Gertrude, and Post, Idabelle. Outlines in Health Education for Women. New York: A. S. Barnes and Co., 1927. P. 191.

Bowditch, H.P. "Growth of Children," Massachusetts Annual Report of the State Board of Health. 1877. Pp. 275-327.

Brock, G.D. Health Through Projects. New York: A. S. Barnes and Co., 1931. P. 268.

Clendening', Dr. Logan. "Your Health!" Reader's Digest. Pleasantville, New York: The Reader's Digest Association, July, 1933. Pp. 14-16.

Emerson, William P. "Health Habits in a Woman's College," Journal of the American Medical Association, May 5, 1928. Pp. 1434-1436.

Franzen, Raymond. Health Education Tests. American Child Health Association, School Health Research Monograph No. I. New York: J. J. Little and Ives Co., 1929.

Gates, Arthur and Strang, Ruth. Gates-Strang Health Knowledge Test. New York: Bureau of Publications, Teachers' College, Columbia University, 1925.

Mayr, Tr., Frank. Secretary of State. Acts of Indiana. Indianapolis: William Buford Printing Co., 1933. P: 1138.

Palmer, Irene. Tests and Measurements. New York: A. S. Barnes and Co., 1932. P. 143.

Strang, Ruth. Subject Matter in Health Education. Contributions to TBducation \#222. Teachers College, Columbia University. 1926. P. 108.

Wood, Thomas and Lerrigo, Marian. Health Behavior. Bloomington, Illinois: Public School Publishing Co., 1927. P. 150.

Wood, Thonas D. Personal Health Standard and Scale. Bureau of Publications, Teachers' College, Columbia University. 1925.

Age Class in school (underline) Sophomore Junior Senior

## DO NOT WRITE YOUR NAME.

Here are some questions. We want to know your habitual health practices. Read each question carefully. Check in the column which describes your hebit. Leave blank any questions which do not apply to you.

Yes No 1. Health Habits in Relation to the Individual A. Nutrition

1. Do you eat three regular meals daily?
2. Do you eat between meals?
3. Do you take time to eat slowly and to chew food thoroughly during meals?
4. Do you eat when overtired?
5. Does your daily diet include two kinds of fruit?
6. Does your daily diet include cereal for breakfast?
7. Does your daily diet include two kinds of vegetables?
8. Does your daily diet include a pint of milk, either as a liquid or a solid food?
9. Does your daily diet include candy and sweets at meal time only?
10. Do you wash food down with water?
11. Do you drink from four to six glasses of water daily?
12. Do you avoid ice water and other iced drinks? 13. Do you avoid tea, coffee, and coca-cola?
B. Exercise and Recreation
13. Do you use moderation in physical activities?
14. Do you work or play outdoors two hours daily?
15. Do you take part in some of the following activities: tennis, swimning, , $O l f$, hiking, volley ball, basket ball, or other team games?
16. Do you devote from one to two hours daily (in addition to exercise) to social recreation, to reading or to other recreative occupations?
C. Sleep and Rest
17. Do you sleep from eight to ten hours every night?
18. Do you sleep in a ventilated room?
19. Do you rise and do you go to bed at regular hours?
20. Do you relax at least ten minutes sone time during the day?
D. Fresh Air
21. When possible do you control the condition of indoor air to keep the room well aired?
22. Do you choose outdoor recreation in preference to indoor recreation?
E. Elimination
23. Do you depend upon laxatives for effective bowel movement?
24. Do you have a bowel movement regularly once a day?

Yes No F. Education for Parenthood

1. Do you carry on a hygienic regime during the menstrual period?
a. Do you take moderate exercise every day?
b. Do you receive adequate rest during the period?
c. Do you take a complete sponge bath daily?
d. Do you adhere to a regular schedule of activity as far as possible?
2. Do you enjoy home life?
3. Do you use scientific language in regard to sex organs and functions?
4. Do you go to your parents for information and advice on sex questions?
G. Clothing
5. Do you wear clothes suited to the occupation, weather, and temperature?
6. Do you wear tight brassieres or tight girdles?
7. Do you wear a low-heeled, well-fitting shoe for general wear?
H. Care of the Skin and the Nails
8. Do you select cosmetics with care?
9. Do you take a cleansing bath at least three times a week?
10. Do you manicure your nails?
I. Care of the Hair and the Scalp
11. Do you use only clean combs and brushes on the hair?
12. Do you patronize only clean beauty shops?
13. Do you wash the hair often enough to keep it clean?
J. Care of the Teeth and the Mouth
14. Do you brush your teeth at least once daily in an approved way?
15. Do you go to the dentist at least once a year for examination and necessary treatment?
K. Care of the Nose and the inroat
16. Do you blow your nose gently?
17. Do you know of any defects of nose or throat which need correction?
18. Do you avoid overstraining your voice, especially at athletic events?
L. Care of the Ears and the Eyes
19. Do you protect the ears when driving and when swimming?
20. Do you consult a physician when an abnormal ear condition is present?
21. Do you pick the ears with sharp instruments?
22. Do you use the eyes when they are tired or strained?
23. Do you choose reading positions in which the light is good, sufficient in intensity, and reflected over the shoulder?
24. Do you hold reading material in the best position?
25. Do you $\xi^{\circ}$ to the movies more than once a week?
26. When necessary do you go to a reputable physician to have the eyes examined?

## Yes M. Care of the Feet

1. Do you walk correctly, toes straight ahead, with the weight well forward over the balls of the feet?
2. Do you take corrective foot exercises when advised to do so by your physician or physical education teacher?
3. Do you wear arch supports only under direction of a physician?
N. Indices of Physical Fitness
4. Have you had a medical examination by a physician within the last year?
5. Is an examination of this nature a yearly occurence?
6. Do you have any physical defects which should be corrected, e.g. bad teeth, infected tonsils, flat feet, impaired sight, etc.?
7. Have you had a serious illness within the last year?
8. Are you immunized aggainst
a. Diptheria?
b. Scarlet fever?
c. Typhoid fever?
d. Small pox?
e. Meningitis?
9. Are you free from persistent physical pain?
10. Are you troubled with colds?
11. Are you subject to frequent headaches?
12. Do you use patent medicines or drugs without a doctor's prescription?
13. Do you smoke cigarettes?

Habits of Safety and First Aid

1. Do you use gasoline or kerosene for lighting fires, or for cleanine purposes?
2. Are you careful in the use of electrical appliances?
3. Do you skate or boat only under safe conditions?
4. Do you always swim in waters patrolled by life guards?
5. Do you keep to the left when walking along highways?
6. Can you give the proper first aid treatment for
a. Bruises?
b. Cuts?
c. Minor burns?
d. Fainting?
e. Shock?
f. Broken bones?
g. Nose bleed?
h. Frozen portions of the body?
7. Can you apply artificial respiration when needed?
8. Do you call an older person or a physician in case of a serious accident?
P. Mental Health
9. Are you persistent, do you complete whatever you begin?

Yes No

2. Do you concentrate upon the task at hand?
3. Do you plan your work to accomplish it in the most efficient way?
4. Do you enjoy going to school?
5. Do you do your school work promptly?
6. Do you work cheerfully and whole-heartedly?
7. Do you worry about your school work?
8. Are you honest in your contacts with teachers?
9. Do you hold grudges against your teachers?
10. Are you embarrassed when called upon to recite?
ll. Are you shy in social activities?
12. Are you forward in social activities?
13. Are you afraid of your mother?
14. Are you afraid of your father?
15. Do you enjoy being with older people?
16. Do you enjoy making new friends?
17. Do you feel free to invite your friends to your home?
18. Are you considerate of your companions?
19. Do you control yourself when disappointed?
20. Are you respectful to those in authority?
21. Do you respect the property of others?
22. Do you avoid disagreeable duties?
23. Do you solve your own problems?
24. Do you have confidence in yourself?
25. Are you happy?

Check the courses in which you have had instruction
Physical education
Hygiene or Health education
Home Nursing
Physiology
Foods and Nutrition

TABLE SHOWING PERCRNTAGES OF RESPONSES BY OLASSES FOR EACH HABIT ON OHECK LIST

FOR ALI SCHOOLS STUDIED

| $\overline{\mathrm{I}} \mathrm{t} \mathrm{\in ni}$ on | School Number Sophs. 105 |  |  | Total cases 232Juniors 78 Seniors 50 |  |  |  |  |  | $\begin{aligned} & \text { School Number } \\ & \text { Sophs. } 91 \end{aligned}$ |  |  | 2 Total |  |  | cases 222 |  |  |
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| Chieck |  |  |  | Habi |  |  |  |  |  |  |  |  | Hab |  |  |  |  |  |
| List |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { yy } \\ & \text { a } \\ & \underset{\bigoplus}{\theta} \end{aligned}$ |  |  | $\begin{aligned} & \underset{y}{y} \\ & \stackrel{y}{c} \\ & \stackrel{m}{m} \end{aligned}$ |  |  |  |  |  |  |
| A.1. | . 94 | . 06 |  | . 84 | . 16 |  | . 82 | . 18 |  | . 94 | . 06 |  | . 97 | . 03 |  | . 92 | . 08 |  |
| 2. | . 20 | . 80 |  | . 26 | . 71.1 | . 03 | . 20 | . 78 | . 02 | . 32 | . 68 |  | . 29 | . 71 |  | . 24 | . 75 | . 01 |
| 3. | . 71 | . 27 | . 02 | . 71 | . 26 | . 03 | . 70 | . 28 | . 02 | . 84 | . 15 | . 01 | . 72 | . 28 |  | . 73 | . 27 |  |
| 4. | . 58 | . 40 | . 02 | . 60 | . 39 | .01 | . 54 | . 40 | . 06 | . 61 | . 39 |  | . 65 | . 35 |  | . 57 | . 43 |  |
| 5. | . 69 | . 30 | . 01 | . 60 | . 39 | . 01 | . 52 | . 46 | . 02 | . 75 | . 25 |  | . 65 | . 35 |  | . 63 | . 36 | . 01 |
| 6. | . 59 | . 40 | . 01 | . 62 | . 37 | . 01 | . 36 | . 58 | . 06 | . 68 | . 32 |  | . 58 | . 42 |  | . 57 | . 43 |  |
| 7. | . 94 | . 06 |  | . 84 | . 16 |  | . 86 | . 12 | . 02 | . 87 | . 13 |  | . 90 | . 10 |  | . 90 | . 09 | . 01 |
| 8. | . 69 | . 31 |  | . 68 | . 32 |  | . 58 | . 42 |  | . 71 | . 29 |  | . 69 | . 30 | . 01 | . 70 | . 30 |  |
| 9. | 17 | . 80 | . 03 | . 08 | . 91 | . 01 | . 08 | . 90 | . 02 | . 26 | . 73 | . 01 | . 23 | . 77 |  | . 19 | . 81 |  |
| 10. | . 67 | . 33 |  | . 74 | . 26 |  | . 70 | . 26 | . 04 | . 79 | . 21 |  | . 72 | . 28 |  | . 71 | . 29 |  |
| 11. | . 74 | . 24 | . 02 | . 83 | . 17 |  | . 82 | . 18 |  | . 68 | . 32 |  | . 65 | . 35 |  | . 78 | . 22 |  |
| 12. | . 07 | . 93 |  | . 04 | . 96 |  | . 16 | . 84 |  | . 32 | . 68 |  | . 46 | . 54 |  | . 31 | . 69 |  |
| 13. | . 29 | . 71 |  | . 30 | . 70 |  | . 26 | . 74 |  | . 41 | . 59 |  | . 26 | . 74 |  | . 30 | . 70 |  |
| R.1. | . 83 | . 12 | . 05 | . 88 | . 12 |  | . 78 | . 18 | . 04 | . 87 | . 13 |  | . 93 | . 06 | . 01 | . 86 | . 13 | . 01 |
| 2. | . 78 | . 22 |  | . 49 | . 50 | . 01 | . 52 | . 46 | . 02 | . 61 | . 39 |  | . 56 | . 44 |  | . 62 | . 37 | . 01 |
| 3. | . 92 | . 66 | . 02 | . 95 | . 05 |  | . 82 | . 18 |  | . 89 | . 09 | . 02 | . 82 | . 18 |  | . 95 | . 05 |  |
| 4. | . 83 | . 16 | . 01 | . 79 | . 21 |  | . 92 | . 06 | . 02 | . 93 | . 06 | . 01 | . 84 | . 16 |  | . 94 | . 06 |  |
| C.l. | . 69 | . 31 |  | . 57 | . 43 |  | . 52 |  |  | . 77 | . 23 |  | . 70 | . 30 |  | . 63 | . 36 | . 01 |
| 2. | . 93. | . 07 |  | . 85 | . 05 |  | . 92 | . 08 |  | . 96 | . 04 |  | . 92 | . 08 |  | . 95 | . 05 |  |
| 3. | . 43 | . 57 |  | . 36 | . 64 |  | . 40 | . 56 | . 04 | . 42 | . 57 | . 01 | . 46 | . 54 |  | . 49 | . 51 |  |
| 4. | . 83 | . 16 | . 01 | . 80 | . 20 |  | . 74 | . 22 | . 04 | . 83 | . 17 |  | . 78 | . 22 |  | . 81 | . 19 |  |




| Item | School |  | Nramb |  |  | 1 | cases | 232 |  | School Number 2 |  |  |  |  | Total | cases 222 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| on |  | $\pm$ |  |  | ${ }_{0}$ |  |  | $\sim$ |  |  | $\pm$ |  |  | (1) |  |  | ${ }_{0}$ |  |
| Check |  | $\xrightarrow{3}$ |  | 0 | $\stackrel{1}{0}$ |  | ${ }^{*}$ | ${ }^{-1}$ |  | $\omega$ | 3 |  | $\omega$ | $\xrightarrow{-1}$ |  |  | $\xrightarrow{-1}$ |  |
| List | $\stackrel{1}{-1}$ | 0 |  | $\stackrel{-1}{-1}$ | * |  | $\stackrel{-1}{ }$ | C |  | $\stackrel{-1}{0}$ | 8 |  | $\stackrel{-1}{-1}$ | 0 |  | -1 | 6 |  |
| List | a | f- |  | $\bigcirc$ | 4 |  | s | s |  | $\bigcirc$ | \& |  | $\bigcirc$ | $\dot{4}$ |  | - | ¢ |  |
|  | \% | -r | ¢ | \% | $\cdots$ | S | む | - | $\checkmark$ | $\stackrel{3}{3}$ | - | , 4 | cid | ${ }_{0}$ | $\underline{y}$ | \% | 4 | K |
|  | - | ¢ | E | -1 | $\pm$ | 岩 | $\cdot$ | , | E | - | 0 | E | $\cdots$ | ( | ع | - | (1) | d |
|  | 0 | O | $\pi$ | ${ }_{i}$ | O | 0 | 0 | 73 | $\sigma$ | 3 | ' | - | 3 | - | drs | 6 | + | హ |
|  | $\stackrel{\text { ® }}{\text { ® }}$ | $\stackrel{\square}{\square}$ | ${ }_{\text {F }}$ | A | $\stackrel{8}{5}$ | $\stackrel{-1}{ }$ | $\stackrel{\ominus}{\ominus}$ | E | $\stackrel{-1}{\text { ¢ }}$ | $\stackrel{0}{\square}$ | E | $\stackrel{-1}{9}$ | $\stackrel{\Perp}{\square}$ | $E$ | -1 | $\stackrel{1}{A}$ | $\stackrel{\square}{\square}$ | $\stackrel{-1}{m}$ |
| 0.1. | . 79 | . 20 | . 01 | . 85 | . 12 | . 03 | . 72 | . 26 | . 02 | .87 | . 12 | . 01 | . 92 | . 08 |  | . 88 | . 12 |  |
| 2. | . 90 | . 07 | . 03 | . 85 | . 09 | . 06 | . 82 | . 10 | . 08 | . 91 | . 07 | . 02 | . 85 | . 14 | . 01 | . 93 | . 06 | . 01 |
| 3. | . 80 | . 08 | . 12 | . 69 | . 11 | . 20 | . 66 | . 12 | . 22 | . 80 | . 06 | . 14 | . 81 | . 08 | . 11 | . 83 | . 13 | .04 |
| 4. | . 48 | . 37 | . 15 | . 52 | . 29 | . 19 | . 52 | . 34 | . 14 | . 47 | . 48 | . 05 | . 57 | . 40 | . 03 | . 55 | . 43 | . 02 |
| 5. | . 73 | . 19 | . 08 | . 69 | . 17 | . 14 | . 66 | . 12 | . 22 | . 81 | . 13 | . 06 | . 84 | . 16 |  | . 87 | . 13 | . 01 |
| 6.3. | . 62 | . 26 | . 12 | . 45 | . 39 | . 16 | . 40 | . 34 | . 26 | . 64 | . 07 | . 29 | . 24 | . 22 | . 54 | . 59 | . 16 | . 25 |
| b. | . 77 | . 13 | . 10 | . 51 | . 29 | . 14 | . 64 | . 20 | . 16 | . 65 | . 08 | . 27 | . 89 | . 20 | . 51 | . 79 | . 15 | . 06 |
| c. | . 74 | . 16 | . 10 | . 59 | . 26 | . 15 | . 58 | . 22 | . 20 | . 65 | . 07 | . 28 | . 35 | . 16 | . 49 | . 79 | . 15 | . 06 |
| d. | . 70 | . 19 | . 11 | . 50 | . 34 | . 16 | . 68 | . 22 | . 10 | . 62 | . 10 | . 28 | . 35 | . 14 | . 51 | . 70 | . 18 | . 12 |
| e. | . 31 | . 45 | . 24 | . 15 | . 65 | . 20 | . 28 | . 50 | . 2 ? | . 44 | . 15 | . 41 | . 21 | . 15 | . 64 | . 48 | . 25 | . 27 |
| $f$. | . 33 | . 47 | . 20 | . 13 | . 63 | . 15 | . 38 | . 38 | . 24 | . 4 ? | . 14 | . 44 | . 21 | . 15 | . 64 | . 49 | . 26 | . 25 |
| E. | . 75 | . 19 | . 06 | . 63 | . 25 | . 12 | . 64 | . 22 | . 14 | $\bigcirc 68$ | . 07 | . 25 | . 31 | . 20 | . 49 | . 76 | . 15 | . 09 |
| h. | . 46 | . 36 | . 18 | . 43 | . 42 | . 15 | . 60 | . 30 | . 10 | . 54 | . 07 | . 85 | . $2 \leq$ | . 22 | . 54 | . 68 | . 20 | . 12 |
| 7. | . 49 | . 50 | . 01 | . 64 | . 33 | . 03 | . 60 | . 36 | . 04 | . 31 | . 65 | . $\mathrm{O}_{4}$ | .34 | . 61 | . 05 | . 48 | . 48 | . 04 |
| 8. | . 96 | . 01 | . 03 | . 88 | . 06 | . 06 | . 34 | . 02 | . 14. | . 60 | . 06 | . 04 | . 94 |  | . 06 | . 94 | . 04 | . 02 |
| P.1. | . 68 | . 28 | . 04 | . 74 | . 24 | . 02 | . 54 | . 36 |  | . 68 | . 32 |  | . 83 | . 16 | . 01 | . 78 | . 22 |  |
| 2. | . 82 | . 14 | . 04 | . 85 | . 15 |  | . 86 | . 12 | . 02 | . 84 | . 16 |  | . 79 | . 20 | . 01 | . 88 | . 11 | . 01 |
| 3. | . 82 | . 16 | . 02 | . 87 | . 12 | . 01 | . 74 | . 20 | . 06 | . 80 | . 19 | . 01 | . 90 | . 10 |  | . 92 | . 08 |  |
| 4. | . 78 | . 21 | . 01 | . 86 | . 14 |  | . 76 | . 24 |  | . 85 | . 14 | . 01 | . 79 | . 20 | . 01 | . 88 | . 12 |  |
| 5. | . 65 | . 35 |  | . 59 | . 39 | . 02 | . 60 | . 38 | . 02 | . 64 | . 36 |  | . 65 | . 35 |  | . 75 | . 25 |  |
| 6. | . 81 | . 19 |  | . 73 | . 26 | . 01 | . 56 | . 38 | . 06 | . 76 | . 24 |  | . 77 | . 22 | . 01 | . 89 | . 11 |  |
| 7. | . 38 | . 62 |  | . 36 | . 64 |  | . 42 | . 56 | . 02 | . 33 | . 67 |  | . 33 | . 67 |  | . 32 | . 68 |  |
| 8. | . 97 | . 03 |  | . 94 | . 05 | . 01 | . 86 | . 12 | . 02 | . 67 | . 03 |  | . 99 | . 01 |  | 1.00 |  |  |
| 9. | . 77 | . 22 | . 01 | . 89 | . 11 |  | . 78 | . 20 | . 02 | . 87 | . 13 |  | . 80 | . 20 |  | . 78 | . 22 |  |
| 10. | . 73 | . 27 |  | . 75 | . 25 |  | . 44 | . 48 | . 08 | . 65 | . 35 |  | . 60 | . 40 |  | . 73 | . 27 |  |
| 11. | . 62 | . 37 | . 01 | . 70 | . 30 |  | . 58 | . 40 | . 02 | . 71 | . 27 | . 02 | . 65 | . 35 |  | . 67 | . 33 |  |
| 12. | . 62 | . 34 | . 024 | . 66 | . 32 | . 02 | . 82 | . 12 | . 06 | . 54 | . 45 | . 01 | . 62 | . 35 | . 03 | . 54 | . 44 | . 02 |
| 13. | . 91 | . 06 | . 03 | . 89 | . 10 | . 01 | . 88 | . 08 | . 04 | . 95 | . 04 | . 01 | . 90 | . 10 |  | . 97 | . 02 | . 01 |
| 14. | . 90 | . 06 | . 04 | . 88 | . 11 | . 01 | . 94 | . 08 | . 04 | . 86 | . 12 | . 02 | . 84 | . 11 | . 05 | . 90 | . 05 | . 05 |
| 15. | . 79 | . 21 |  | . 8C | .19 | . 01 | . 72 | . 86 | . 02 | .70 | . 30 |  | . 64 | . 35 | . C 1 | . 82 | . 18 |  |


| Item on | Sch | 001 | Numb | r 1 |  | Cota | cases | 232 |  | School | $1 \text { Yum }$ | ber |  | Tota | 1 | es 2 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Chear | $\omega$ | $\begin{aligned} & 0 \\ & 0 \\ & \hline-1 \end{aligned}$ |  | ${ }^{*}$ | $\stackrel{\underset{\sim}{2}}{\underset{\sim}{0}}$ |  | ${ }_{0}$ | $\underset{\sim}{\mathbf{o}}$ |  |  | $\begin{aligned} & 0 \\ & \sim \\ & \hline-1 \end{aligned}$ |  |  | $\begin{array}{r} 0 \\ -1 \\ \hline \end{array}$ |  |  |  |  |
| List | $\stackrel{-1}{2}$ | 腎 |  | $\stackrel{-1}{0}$ | \% |  | 7 | ส |  | $\stackrel{-}{-1}$ | \% |  | $\stackrel{-}{\square}$ | \% |  | $\stackrel{-}{-}$ | $0$ |  |
|  | \% | $\rightarrow$ |  |  |  |  |  |  |  |  |  |  |  | - |  |  | $\stackrel{4}{4}$ |  |
|  | - | ${ }_{0}$ | $\underset{4}{ }$ | . | ${ }_{0}$ | $\checkmark$ |  |  |  | - | ${ }_{3}^{12}$ | -4 | 4 | 8 |  |  | ${ }_{2}$ |  |
|  | $\stackrel{\square}{0}$ | 0 |  | 0 | 0 |  |  |  | สึ | 6 | \% |  | 0 | O | สี | ${ }_{6}$ | $\stackrel{8}{8}$ | ¢ |
|  | $\stackrel{\square}{\square}$ | $\stackrel{\square}{E}$ | ¢ | $\stackrel{\square}{\square}$ | S | m | $\stackrel{\otimes}{\square}$ |  | $\stackrel{\rightharpoonup}{\infty}$ | $\stackrel{\square}{\square}$ | \% | $\stackrel{\square}{9}$ | , | E | 产 | $\stackrel{ \pm}{*}$ | d | - |
| P. 16. | . 96 | . 03 | . 01 | . 95 | . 05 |  | . 96 | . 04 |  | . 94 | . 66 |  | .57 | . 03 |  | . 99 | 01 |  |
| 17. | . 95 | . 05 |  | . 91 | . 09 |  | . 90 | 10 |  | . 88 | . 12 |  | . 89 | . 11 |  | . 94 | 06 |  |
| 18. | . 95 | . 04 | . 01 | . 97 | . 03 |  | . 98 |  | . 02 | . 89. | . 01 |  | . 98 | . 01 | . 01 | . 95 | . 05 |  |
| 12. | . 63 | . 37 |  | . 66 | . 34 |  | . 64 | . 34 | . 02 | . 80 | . 20 |  | . 78 | . 22 |  | . 64 | . 36 |  |
| 20. | . 98 | . 02 |  | . 97 | . 02 | . 01 | . 98 | . 02 |  | . 96 | . 04 |  | . 99 | . 01 |  | 1.00 |  |  |
| 21. | . 98 | . 01 | . 01 | . 97 | . 02 | . 01 | 1.00 |  |  | 1.00 |  |  | . 99 | . 01 |  | . 98 | . 01 |  |
| 22. | . 38 | . 60 | . 02 | . 53 | . 47 |  | . 46 | . 48 | . 06 | . 34 | . 65 | . 01 | . 49 | . 50 | . 01 | . 58 | . 41 | . 01 |
| 23. | . 70 | . 28 | . 02 | . 79 | . 19 | . 02 | . 72 | . 26 | . 02 | . 80 | . 19 | . 01 | . 75 | . 25 |  | . 90 | . 09 | . 01 |
| 24. | . 90 | . 08 | . 02 | . 85 | . 14 | . 01 | . 82 | . 12 | . 06 | . 93 | . 07 |  | . 92 | . 08 |  | . 90 | . 09 | . 01 |
| 25. | . 95 | . 05 |  | . 92 | . 07 | . 01 | . 86 | . 14 |  | . 86 | . 14 |  | . 89 | . 10 | . 01 | . 90 | . 09 | . 01 |

> School Number 3 Sophs. 55 Total cases 95 Juniors 23

| A. 1. 1.79 | . 21 |  | . 74 | . 26 |  | . 71 | . 29 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. 09 | . 91 |  | . 09 | . 87 | . 04 | . 12 | . 88 |  |
| 3. . 75 | . 25 |  | . 48 | . 52 |  | . 53 | . 41 | . 06 |
| 4. . 54 | . 42 | . 04 | . 43 | . 48 | .09 | . 53 | . 47 |  |
| 5. . 60 | . 36 | . 04 | . 61 | . 39 |  | . 41 | . 59 |  |
| 6. . 49 | . 51 |  | . 31 | . 69 |  | . 35 | . 65 |  |
| 7. . 82 | . 18 |  | . 74 | . 26 |  | . 71 | . 29 |  |
| 8. . 64 | . 35 |  | . 48 | . 52 |  | . 59 | . 41 |  |
| 9. . 20 | . 76 | . 04 | . 09 | . 91 |  | . 05 | . 94 |  |
| 10. . 82 | . 18 |  | . 74 | . 26 |  | . 94 | . 06 |  |
| 11. 71 | . 29 |  | . 79 | . 21 |  | .77 | . 23 |  |
| 12. . 31 | . 69 |  | . 22 | . 78 |  | . 18 | . 82 |  |
| 13. . 38 | . 60 | . 02 | . 22 | . 78 |  | . 24 | . 76 |  |
| B. 1. . 88 | . 12 |  | . 91 | . 09 |  | . 94 |  | . 06 |
| 2. . 55 | . 45 |  | . 58 | . 42 |  | . 35 | . 65 |  |
| 3.1 .00 |  |  | . 87 | . 13 |  | . 71 | . 29 |  |
| 4. . 87 | . 11 | . 02 | . 70 | . 26 | . 04 | . 94 | . 06 |  |

School Mumber 4 Total cases 54
Sopins. 44 Juniors 9 Seniors 1

| .78 | .22 | .67 | .33 | 1.00 |
| :--- | :--- | :--- | :--- | :--- |
| .30 | .70 | .34 | .66 | 1.00 |
| .85 | .15 | .67 | .33 | 1.00 |
| .50 | .50 | .67 | .33 | 1.00 |
| .64 | .36 | .67 | .33 | 1.00 |
| .64 | .36 | .78 | .22 | 1.00 |
| .89 | .11 | .89 |  | .11 |
| .80 | .20 | .45 | .55 | 1.00 |
| .23 | .77 | .23 | .77 | 1.00 |
| .78 | .22 | .89 | .11 | 1.00 |
| .80 | .20 | .67 | .33 | 1.00 |
| .28 | .72 | .67 | .33 | 1.00 |
| .48 | .52 | .45 | .55 | 1.00 |
| .69 | .31 | 1.00 |  | 1.00 |
| .50 | .50 | .56 | .44 | 1.00 |
| .87 | .11 | .02 | .89 | .11 |
| .85 | .15 | .78 | .22 | 1.00 |




TABLE III. (Continued.)

| $\begin{aligned} & \text { Itern } \\ & \text { on } \\ & \text { Chech } \\ & \text { Iist } \end{aligned}$ |  | 1001 0 0 0 8 .5 .7 0 0 0 0 0 |  |  |  | tal <br>  |  |  | $\begin{aligned} & \sqrt[4]{4} \\ & \frac{1}{3} \\ & \overrightarrow{A x} \end{aligned}$ |  | Sc hg -1 0 0 $-\quad$ 3 0 0 0 $E$ | $01 \mathrm{~V}$ $\begin{aligned} & \text { y } \\ & \frac{3}{3} \\ & \stackrel{3}{m} \end{aligned}$ |  |  | Totel $\stackrel{x}{\overrightarrow{a n}}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. 8. | . 79 | . 21 |  | . 58 | . 48 |  | . 59 | . 41 |  | . 71 | 57 |  |  |  |  |  |  |  |
| $\bigcirc$ | . 82 | . 16 | . 02 | . 92 | . 04 | . 04 | . 94 | . 06 |  | . 89.5 | . 13 | $\begin{aligned} & .02 \\ & .0 ? \end{aligned}$ | . 86 | . 44 |  |  |  |  |
| 10. | . 86 | . 12 | . 02 | . 66 | . 34 |  | . 89 | . 11 |  | . 84 | - 06 |  | . 78 | . 11 | . 11 | $\begin{aligned} & 1.00 \\ & 1.00 \end{aligned}$ |  |  |
| 0.1. | . 76 | . 20 | . 04 | . 70 | . 30 |  | . 65 | . 35 |  | . 50 |  |  |  |  |  |  |  |  |
| 2. | . 90 | . 05 | . 05 | . 87 | . 13 |  | . 88 | . 06 | . 06 | ..$^{2}$ | . 02 | . 06 | . 68 | . 33 | . 11 |  | 1.00 |  |
| 3. | .75 | . 20 | . 05 | . 87 | . 13 |  | 1.00 |  |  | - 76 | . 18 | . .06 | .89 .89 | . 11 |  | 1.00 |  |  |
| 4. | . 13 | . 83 | . 04 | . 18 | . 82 |  | . 12 | . 82 | . 06 | . 30 | . 66 | . .04 | . 89 |  | -11 |  | 1.00 |  |
| 5. | . 80 | . 16 | . 04 | . 70 | . 26 | . 04 | . 94 |  | . 06 | . 82 | . 12 |  | . 64 | . 55 |  | 1.00 |  |  |
| $6 . \mathrm{a}$. | . 45 | . 51 | . 04 | . 70 | . 30 |  | . 53 | . 47 |  | . 74 | . 20 | . 06 | . 89 | . 11 |  | 1.00 |  |  |
| b. | . 60 | . 38 | . 02 | . 70 | . 30 |  | . 53 | . 47 |  | . 74 | . 20 | . 06 | . 89 | . 11 |  | 1.00 |  |  |
| c. | . 60 | . 38 | . 02 | . 70 | . 30 |  | . 53 | . 47 |  | . 74 | . 20 | . 06 | . 89 | . 11 |  | 1.00 |  |  |
| d. | . 58 | . 40 | . 02 | . 70 | . 30 |  | . 59 | . 41 |  | . 74 | . 2 | . 06 | . 39 | . 11 |  | 1.00 |  |  |
| e. | . 51 | . 47 | . 0 ? | . 66 | . 34 |  | - 4 | . 3.3 |  | . 74 | . 20 | . 06 | . 89 | . 11 |  | 1.00 |  |  |
| $f$. | . 47 | . 51 | . 02 | . 61 | . 39 |  | . 47 | . 33 |  | . 74 | . 20 | . 06 | . 89 | . 11 |  | 1. 00 |  |  |
| g. | . 56 | . 42 | . 02 | . 70 | . 30 |  | . 5.3 | . 47 |  | . 74 | . $=0$ | . 06 | . 39 | . 11 |  | 1.00 |  |  |
| h. | . 56 | . 40 | . 04 | . 70 | . 30 |  | . 47 | . 53 |  | . 74 | . 80 | . 06 | . 89 | . 11 |  | 1.00 |  |  |
| 7. | . 47 | . 49 | . 04 | . 61 | . 39 |  | . 59 | . 41 |  | . 55 | . 45 |  | . 73 | . 22 |  |  | 1.00 |  |
| 8. | . 92 | . 01 | . 07 | . 96 | . 04 |  | 1.00 |  |  | . 92 | . 04 | . 04 | 1.00 |  |  | 1.00 |  |  |
| F.l. | . 60 | . 36 | . 04 | . 58 | . 42 |  | . 59 | . 41 |  | . 69 | . 31 |  |  | . 22 |  |  |  |  |
| 2. | . 72 | . 21 | . 07 | . 74 | . 26 |  | .71 | . 28 |  | . 78 | . ${ }^{2}$ |  | . 89 | . 11 |  | 1.00 |  |  |
| 3. | . 72 | . 23 | . 05 | . 79 | . 21 |  | . 53 | . 47 |  | . 89 | . 11 |  | . 78 | . 28 |  | 1.00 |  |  |
| 4. | . 82 | . 14 | . 04 | . 74 | . 26 |  | . 83 | . 17 |  | . 82 | . 18 |  | . 88 | . 11 |  | 1.00 |  |  |
| 5. | . 72 | . 21 | . 07 | . 48 | . 52 |  | . 71 | . 29 |  | . 87 | . 13 |  | . 36 | . 44 |  | 1.00 |  |  |
| 6. | . 57 | . 36 | .07 | . 70 | . 30 |  | . 71 | . 20 |  | . 82 | . 18 |  | . 39 | . 11 |  | 1.00 |  |  |
| 7. | . 39 | . 56 | . 0.5 | . 26 | . 74 |  | . 53 | . 47 |  | . 39 | . 61 |  | . 56 | . 44 |  |  | 1.00 |  |
| 8. | . 77 | . 16 | . 07 | . 87 | . 13 |  | 1. 00 |  |  | . 58 | . 0 E |  | . 89 | . 11 |  | 1.00 |  |  |
| 9. | . 75 | . 21 | . 04 | . 70 | . 30 |  | . 83 | . 17 |  | . 87 | . 13 |  | . 89 | . 11 |  | 1.00 |  |  |
| 10. | . 53 | . 42 | . 05 | . 61 | . 39 |  | . 59 | . 41 |  | . 73 | . 27 |  | . 56 | . 44 |  | 1.00 |  |  |


| Item on Check List |  | Number $\begin{aligned} & \underset{y}{y y} \\ & \stackrel{y}{a} \\ & \stackrel{\mu}{n} \end{aligned}$ |  |  | 1 ca <br> 光 ल ल | ses 95 <br>  |  |  |  |  |  | case <br>  |  |  | 兄 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P.11. | . 46.47 | . 07 | . 70 | . 30 |  | . 53 | . 47 |  | . 55.45 | . 45 | . 55 |  | 1.00 |  |  |
| 12. | . 70.23 | . 07 | .66 | . 34 |  | . 59 | . 41 |  | . 73.27 | . 78 | . 22 |  |  | 1.00 |  |
| 13. | . 92.04 | . 04 | . 83 | . 13 | . 04 | 1.00 |  |  | . 94.06 | 1.00 |  |  | 1.00 |  |  |
| 14. | . 84.11 | . 05 | . 87 | . 09 | . 04 | . 83 | . 11 | . 06 | .92.06 . 02 | . 89 | . 11 |  | 1.00 |  |  |
| 15. | . 78.18 | . 04 | . 87 | . 13 |  | . 83 | . 11 | . 06 | . 71.25 | 1.00 |  |  | 1.00 |  |  |
| 16. | . 90.05 | . 05 | . 83 | . 17 |  | . 83 | .17 |  | . 98.02 | 1.00 |  |  | 1.00 |  |  |
| 17. | . 81.14 | . 05 | . 70 | . 26 | . 04 | . 94 | . 05 |  | . 82.18 | . 89 | . 11 |  | 1.00 |  |  |
| 18. | . 82.08 | . 09 | . 87 | . 13 |  | . 94 | . 06 |  | . 96.04 | . 89 |  | . 11 | 1.00 |  |  |
| 19. | . 53.38 | . 09 | . 58 | . 4.2 |  | . 65 | . 35 |  | . 69.31 | . 67 | . 33 |  | 1.00 |  |  |
| 20. | . 88.05 | . 07 | . 96 | . 04 |  | . 89 | . 11 |  | 1.00 | . 89 |  | . 11 | 1.00 |  |  |
| 21. | . 86.07 | . 07 | . 91 | . 09 |  | 1.00 |  |  | 1.00 | 1.00 |  |  | 1.00 |  |  |
| 22. | . 39.52 | . 09 | . 52 | . 48 |  | . 41 | . 59 |  | .33 .67 | . 56 | . 44 |  | 1.00 |  |  |
| 23. | . 67.21 | . 12 | . 91 | . 09 |  | . 65 | . 35 |  | . 82.18 | . 78 | . 11 | . 11 |  | 1.00 |  |
| 24. | . 69.20 | . 11 | . 66 | . 34 |  | . 77 | . 23 |  | .85 .15 | . 67 | . 33 |  | 1.00 |  |  |
| 25. | .86 .07 | . 07 | . 91 | . 09 |  | . 88 | . 06 | . 06 | . 91.07 .02 | . 89 | . 11 |  | 1.00 |  |  |
|  | School Sophs. | $\begin{aligned} & \text { Tumbe } \\ & 21 \end{aligned}$ | $\stackrel{r}{5}$ | $\begin{array}{r} \text { Tota } \\ \text { iors } 5 \end{array}$ | 1 ca | ses 40 Senio | rs 14 |  | School Prumber Sophs. 17 | $\begin{gathered} 6 \mathrm{To} \\ \text { Juni } \end{gathered}$ | tal | case 13 | $\begin{gathered} 46 \\ \text { Senio } \end{gathered}$ | rs 16 |  |
| A.1. | . 91.09 |  | . 60 | . 40 |  | .79 | . 21 |  | .77 .23 | . 62 | . 38 |  | . 69 | . 25 | . 06 |
| 2. | . 10.90 |  |  | 1.00 |  | . 21 | . 79 |  | .30 .70 |  | . 92 | . 08 | . 19 | . 81 |  |
| 3. | . 70.30 |  | . 80 | . 20 |  | . 57 | . 43 |  | .38 .12 | . 85 | . 15 |  | . 94 | . 06 |  |
| 4. | . 30.50 | . 20 | . 60 | . 40 |  | . 50 | . 50 |  | . 71.29 | . 69 | . 31 |  | . 37 | . 50 | 13 |
| 5. | . 76.24 |  | . 80 | . 20 |  | . 86 | . 14 |  | . 88.12 | . 62 | . 38 |  | . 63 | . 37 |  |
| 6. | . 52.43 | . 0.5 | . 80 | . 20 |  | . 50 | . 50 |  | . 65.35 | . 62 | . 38 |  | . 88 | . 06 | . 06 |
| 7. | . 95.05 |  | . 80 | . 20 |  | . 93 | . 07 |  | . 88.12 | . 92 | . 08 |  | . 87 | . 13 |  |
| 8. | . 70.24 |  | . 60 | . 40 |  | . 79 | . 21 |  | .77 .83 | . 39 | . 61 |  | . 69 | . 31 |  |
| 9. | . 15.85 |  |  | 1.00 |  |  | 1.00 |  | . 36.64 | . 46 | . 54 |  | . 38 | . 62 | . 06 |
| 10. | . 50.50 |  | . 80 | . 20 |  | . 64 | . 36 |  | .95.06 | . 77 | . 23 |  | . 84 | . 06 |  |
| 11: | . 60.40 |  | . 40 | . 60 |  | . 50 | . 50 |  | .77 .23 | . 85 | . 15 |  | . 69 | . 31 |  |
| 12. | . 10.80 |  | . 20 | . 80 |  | . 07 | . 93 |  | . 30.70 | . 23 | . 77 |  | . 25 | . 75 |  |
| 13. | . 30.70 |  | . 20 | . 80 |  | . 27 | .73 |  | . 42.58 | . 16 | . 34 |  | . 31 | . 69 |  |

TABLW III. (Continued.)



TABLE III. (Contirued.)



| Item on Check List | Scho <br>  |  | umbe $\begin{aligned} & \text { yu } \\ & \underset{\sim}{\tilde{m}} \\ & \underset{\sim}{1} \end{aligned}$ | 7 T <br>  |  | case <br>  |  |  | $\begin{aligned} & \text { y } \\ & \text { w } \\ & \underset{m}{w} \end{aligned}$ |  |  | mber <br> ü <br> a <br> - | 8 T0 |  | case <br>  |  |  | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A. 9. |  | 1.00 |  | . 37 | . 63 |  |  | 1.00 |  | . 29 | . 71 |  | . 04 | . 96 |  | . 11 | . 89 |  |
| 10. | . 25 | . 75 |  | . 44 | . 56 |  | .71 | . 29 |  | . 67 | . 33 |  | . 87 | . 13 |  | . 78 | . 22 |  |
| 11. | .75 | . 25 |  | . 88 | . 12 |  | .79 | . 14 | . 07 | .33 | . 67 |  | . 66 | . 30 | . 04 | . 56 | . 44 |  |
| 12. | . 25 | . 75 |  | . 25 | . 75 |  | . 14 | . 86 |  | . 24 | . 76 |  | . 09 | . 87 | . 04 | . 33 | . 67 |  |
| 13. | . 50 | . 50 |  | . 19 | . 75 | . 06 | . 29 | . 71 |  | . 43 | . 57 |  | . 26 | . 74 |  | .67 | . 33 |  |
| B.1. | . 75 | . 25 |  | . 63 | . 25 | . 12 | . 86 | . 07 | . 07 | . 86 | . 14 |  | . 87 | . 13 |  | . 89 | . 11 |  |
| 2. | 1.00 |  |  | . 56 | . 44 |  | . 36 | . 64 |  | . 48 | . 52 |  | . 18 | . 82 |  | . 22 | . 78 |  |
| 3. | 1.00 |  |  | . 94 | . 06 |  | . 72 | . 21 | . 07 | . 72 | . 14 | . 14 | . 87 | . 09 | . 04 | . 78 | . 22 |  |
| 4. | . 75 | . 25 |  | . 82 | . 12 | . 06 | . 57 | . 43 |  | . 81 | . 19 |  | . 87 | . 13 |  | . 89 | . 11 |  |
| C.1. | . 50 | . 50 |  | . 69 | . 31 |  | . 57 | . 36 | . 07 | . 52 | . 48 |  | . 35 | . 61 |  | . 44 | . 56 |  |
| 2. | 1.00 |  |  | . 75 | . 25 |  | 1.00 |  |  | . 90 | . 10 |  | . 87 | . 13 |  | 1.00 |  |  |
| 3. | . 50 | . 50 |  | . 31 | . 69 |  | . 21 | . 79 |  | . 29 | . 71 |  | . 14 | . 82 | . 04 | .11 | . 89 |  |
| 4. | 1.00 |  |  | . 94 | . 06 |  | . 79 | . 21 |  | . 43 | . 57 |  | . 83 | . 13 | . 04 | . 78 | . 22 |  |
| D.1. | 1.00 |  |  | . 75 | . 19 | . 06 | . 86 | . 07 | . 07 | . 90 | . 10 |  | 1.00 |  |  | . 89 | . 11 |  |
| 2. | 1.00 |  |  | 1.00 |  |  | . 57 | . 43 |  | . 81 | . 19 |  | . 91 | . 09 |  | . 78 | . 22 |  |
| E. 1. | . 75 | . 25 |  | . 69 | . 31 |  | . 93 | . 07 |  | . 81 | . 19 |  | . 83 | . 17 |  | . 89 | . 11 |  |
| 2. | . 50 | . 50 |  | . 81 | . 19 |  | . 86 | . 14 |  | . 81 | . 19 |  | . 74 | . 26 |  | . 89 | . 11 |  |
| F.i.a. | . 75 |  | . 25 | . 69 | . 31 |  | . 86 | . 14 |  | . 90 | . 10 |  | . 87 | . 13 |  | . 67 | . 22 | 11 |
| b. | . 50 | . 25 | . 25 | . 69 | . 31 |  | . 79 | . 14 | . 07 | . 90 | . 10 |  | . 65 | . 35 |  | . 78 | . 22 |  |
| c. | . 25 | . 50 | . 25 | . 50 | . 50 |  | . 29 | . 71 |  | . 43 | . 57 |  | . 39 | . 61 |  | . 33 | . 67 |  |
| d. | . 75 |  | . 25 | . 81 | . 19 |  | . 57 | . 36 | . 07 | . 66 | . 24 | . 10 | . 87 | . 09 | . 04 | . 67 | . 33 |  |
| 2. | . 50 | . 25 | . 25 | .75 | . 25 |  | 1.00 |  |  | . 95 | . 05 |  | . 96 | . 04 |  | . 89 | . 11 |  |
| 3. | . 25 | . 25 | . 50 | . 50 | . 38 | . 12 | . 50 | . 29 | . 21 | . 57 | . 38 | . 05 | . 34 | . 57 | . 09 | . 44 | . 56 |  |
| 4. | . 50 | . 25 | . 25 | . 57 | 31 | . 12 | . 57 | . 36 | . 07 | . 52 | . 48 |  | . 48 | . 52 |  | . 33 | .67 |  |

TABLi III. (Continued.)

| Iter | Scho | 01 Nu | umbe |  | Total | cas | es 34 |  |  | Sch | 01 | Numb | 8 | Tota | c | 53 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| on |  | $\stackrel{0}{-1}$ |  |  | $\stackrel{\square}{-1}$ |  |  | $\stackrel{0}{-1}$ |  |  |  |  |  | $\stackrel{ \pm}{-1}$ |  |  | $\xrightarrow{0}$ |  |
| List | $\stackrel{0}{-1}$ | 0 |  | $\stackrel{0}{-1}$ | $\cdots$ |  | $\stackrel{0}{-}$ | \% |  | $\stackrel{0}{-1}$ | \% |  | $\stackrel{0}{-1}$ | $\stackrel{\square}{0}$ |  |  | $\stackrel{\square}{6}$ |  |
|  | $\xrightarrow{0}$ | . |  | O | H |  |  | 4 |  | 2 | \% |  | $\bigcirc$ |  |  | $\bigcirc$ |  |  |
|  | $\underset{\sim}{0}$ | $\begin{aligned} & 12 \\ & 0 \end{aligned}$ |  | - | $0_{0}$ | $\checkmark$ |  | $\begin{aligned} & -1 \\ & 0 \\ & 0 \end{aligned}$ |  |  | ${ }_{0}$ |  | . | ${ }^{2}$ |  | 3 | 等 |  |
|  | 1 | or | દ్త |  | $\stackrel{0}{0}$ | ฮ్ |  | $\stackrel{0}{0}$ | $\frac{8}{6}$ | $\vec{v}_{v_{2}}$ | ש |  | $\overbrace{2}$ |  |  | ${ }_{6}^{\prime}$ | \% | 或 |
|  | ค | S |  | $\stackrel{\oplus}{\oplus}$ | E | $\stackrel{\sim}{m}$ | $\stackrel{\circ}{\AA}$ |  |  | $\stackrel{\oplus}{\mathrm{A}}$ | $E$ |  | $\stackrel{\oplus}{\AA}$ |  | $\vec{m}$ |  | $\xi$ |  |
| G.1. | 1.00 |  |  | . 56 | . 44 |  | 1.00 |  |  | . 81 | . 19 |  | . 96 | . 04 |  | 1.00 |  |  |
| 2. | . 50 | . 50 |  | . 69 | . 31 |  | . 86 | . 14 |  | . 57 | . 43 |  | . 78 | . 22 |  | .78 | . 22 |  |
| 3. | 1.00 |  |  | . 50 | . 38 | . 12 | . 93 | . 07 |  | .67 | . 33 |  | . 74 | . 26 |  | . 56 | . 44 |  |
| H. 1. | . 50 | . 25 | . 25 | . 37 | . 25 | . 38 | . 72 | . 14 | . 14 | . 71 | . 19 | . 10 | . 83 | . 17 |  | . 89 |  | . 11 |
| 2. | . 75 | . 25 |  | . 75 | . 25 |  | . 50 | . 50 |  | . 47 | . 48 | . 05 | . 57 | . 43 |  | .67 | . 33 |  |
| 3. | . 50 | . 50 |  | . 69 | . 31 |  | . 79 | . 14 | . 07 | . 76 | . 24 |  | . 83 | . 17 |  | . 67 | . 33 |  |
| I. 1. | . 75 | . 25 |  | . 94 | . 06 |  | . 93 | . 07 |  | . 86 | . 14 |  | . 96 | . 04 |  | . 78 | . 22 |  |
| 2. | . 50 | . 25 | . 25 | . 56 |  | . 44 | . 71 |  | . 29 | . 66 | . 29 | . 05 | . 74 | . 04 | . 22 | . 67 |  | . 33 |
| 3. | . 75 | . 25 |  | 1.00 |  |  | 1.00 |  |  | 1.00 |  |  | I. 00 |  |  | . 89 |  | . 11 |
| J. 1. | . 75 | . 25 |  | . 94 | . 06 |  | 1.00 |  |  | . 76 | . 24 |  | . 83 | . 17 |  | . 39 | . 11 |  |
| 2. |  | 1.00 |  | . 50 | . 50 |  | . 43 | . 57 |  | . 19 | . 81 |  | . 26 | . 74 |  | . 11 | .89 |  |
| K.l. | . 50 | . 25 | . 25 | . 50 | . 50 |  | . 86 | . 14 |  | . 81 | . 19 |  | . 79 | . 17 | . 04 | . 33 | . 67 |  |
| 2. | . 75 | . 25 |  | . 63 | . 31 | . 06 | . 72 | . 14 | . 14 | . 86 | . 14 |  | . 87 | . 04 | . 09 | . 44 | . 56 |  |
| 3. | . 75 | . 25. |  | . 13 | . 87 |  | . 43 | . 57 |  | . 29 | . 71 |  | . 39 | . 61 |  | . 44 | . 56 |  |
| L. 1. | . 50 | . 25 | . 25 | . 44 | . 44 | . 12 | . 36 | . 50 | . 14 | . 47 | . 48 |  | . 48 | . 48 |  | . 33 | . 56 | . 11 |
| 2. | . 25 | . 50 | . 25 | . 37 | . 38 | . 25 | . 50 | . 14 | . 36 | . 62 | . 19 | . 19 | . 57 | . 13 | . 30 | . 23 | . 44 | . 33 |
| 3. | . 75 | . 25 |  | . 63 | . 31 | . 06 | . 79 | . 21 |  | . 81 | . 19 |  | . 87 | . 13 |  | . 56 | . 44 |  |
| 4. |  | . 75 | . 25 | . 25 | . 75 |  | . 29 | . 64 | . 07 | . 43 | . 57 |  | . 39 | . 61 |  | .33 | . 67 |  |
| 5. | . 50 | . 50 |  | . 50 | . 50 |  | . 57 | . 43 |  | . 76 | . 24 |  | . 70 | . 30 |  | . 78 | . 22 |  |
| 6. | . 50 | . 50 |  | . 50 | . 50 |  | . 50 | . 50 |  | . 52 | . 43 | . 05 | . 48 | . 52 |  | .78 | . 22 |  |
| 7. | . 75 | . 25 |  | . 56 | . 38 | . 06 | . 72 | . 21 | . 07 | . 90 | . 05 | . 05 | .83 | . 17 |  | .67 | . 33 |  |
| 8. | . 75 | . 25 |  | . 37 | . 44 | . 19 | . 57 | . 29 | . 14 | . 48 | . 52 |  | . 30 | . 61 | . 09 | . 45 | . 44 | . 11 |

TABLE III. (Continued.)

| Item on Check List | Schoo <br>  |  | ber <br> Y $\vec{y}$ $\vec{m}$ $\vec{m}$ |  |  | ases | $\overline{34}$ |  |  | School <br>  |  | mber <br>  |  |  | cases <br>  |  |  | पै $\stackrel{3}{3}$ $\stackrel{\rightharpoonup}{\text { a }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| H.1. | . 25 | . 50 | . 25 | . 62 | . 38 |  | . 79 | . 21 |  | . 67 | 33 |  | . 53 | . 43 | . 04 | . 56 | . 33 | . 11 |
| 2. | . 75 | . 25 |  | . 50 | . 31 | . 19 | . 29 | . 21 | . 50 | . 71 | . 24 | . 05 | . 44 | . 13 | . 43 |  | . 56 | 44 |
| 3. | . 50 | . 50 |  | . 19 | . 69 | . 12 | . 14 | . 50 | . 36 | . 25 | . 52 | . 19 | . 08 | . 57 | . 35 |  | . 67 | . 33 |
| N.l. | . 50 | . 50 |  | . 50 | . 50 |  | . 21 | . 79 |  | . 10 | . 90 |  | . 09 | . 91 |  |  | 1.00 |  |
| 2. | . 50 | . 50 |  | . 32 | . 56 | . 12 | . 07 | . 79 | . 14 | . 14 | . 76 | . 10 | . 18 | . 69 | . 13 | . 22 | . 67 | 11 |
| 3. |  | 1.00 |  | . 25 | . 63 | . 12 | . 50 | . 43 | . 07 | . 33 | . 67 |  | . 43 | . 57 |  | . 33 | . 67 |  |
| 4. | 1.00 |  |  | . 63 | . 25 | . 12 | . 86 | . 14 |  | . 90 | . 10 |  | . 79 | . 17 | . 04 | . 67 | . 22 | . 11 |
| 5.a. |  | 1.00 |  | . 19 | . 75 | . 06 | . 36 | . 57 | . 07 | . 23 | . 67 | . 10 | . 26 | . 61 | . 13 | . 33 | . 56 | . 11 |
| b. |  | 1.00 |  | . 44 | . 50 | . 06 | . 43 | . 43 | . 14 | . 38 | . 52 | . 10 | . 39 | . 39 | . 22 | . 11 | . 67 | . 22 |
| c. |  | 1.00 |  | . 19 | . 69 | . 12 | . 15 | . 64 | . 21 | . 14 | . 76 | . 10 | . 17 | . 61 | . 22 | . 11 | . 67 | . 22 |
| d. | . 50 | . 25 | . 25 | . 81 | . 19 |  | . 57 | . 56 | . 07 | . 71 | . 29 |  | . 70 | . 13 | . 17 | . 67 | . 22 | II |
| e. |  | . 75 | . 25 |  | . 81 | . 19 | . 08 | . 71 | . 21 | . 09 | . 81 | . 10 | . 04 | . 74 | . 22 |  | . 67 | . 33 |
| 6. | . 25 | . 50 | . 25 | .62 | . 38 |  | . 57 | . 29 | . 14 | . 71 | . 24 | . 05 | . 66 | . 30 | . 04 | . 89 | . 11. |  |
| 7. | . 25 | . 75 |  | .62 | . 38 |  | . 64 | . 29 | .0\% | . 47 | . 48 | . 05 | . 52 | . 48 |  | . 56 | . 44 |  |
| 8. | . 50 | . 50 |  | . 50 | . 50 |  | . 71 | . 29 |  | . 76 | . 19 | . 05 | . 61 | . 39 |  | . 67 | . 33 |  |
| 9. | . 50 | . 50 |  | . 63 | . 31 | . 06 | . 79 | . 14 | . 07 | . 80 | . 10 | . 10 | . 61 | . 39 |  | . 67 | . 33 |  |
| 10. | 1.00 |  |  | . 88 | . 12 |  | . 93 | . 07 |  | . 90 | . 10 |  | 1.00 |  |  | . 78 | . 22 |  |
| 0.1. | . 75 | . 25 |  | . 75 | . 25 |  | . 79 | . 21 |  | . 57 | . 38 | . 05 | . 31 | . 69 |  | . 44 | . 56 |  |
| 2. | . 75 | . 25 |  | . 69 | . 25 | . 06 | . 93 | . 07 |  | . 72 | . 14 | . 14 | . 87 |  | . 13 | . 67 |  | . 33 |
| 3. | . 50 | . 25 | . 25 | . 50 | . 31 | . 19 | . 65 | . 14 | . 21 | . 71 | . 24 | . 05 | . 78 | . 22 |  | . 67 | . 11 | . 22 |
| 4. |  | . 75 | . 25 | . 56 | . 38 | . 06 | . 50 | . 36 | . 14 | . 14 | . 76 | . 10 | . 22 | . 74 | . 04 | . 22 | . 78 |  |
| 5. | . 75 | . 25 |  | . 50 | . 44 | . 06 | . 72 | . 21 | . 07 | . 62 | . 38 |  | . 70 | . 30 |  | . 56 | . 44 |  |
| $6 . a$. | 1.00 |  |  | . 63 | . 25 | . 12 | . 58 | . 21 | . 21 | . 38 | . 19 | . 43 | . 43 | . 22 | . 35 | . 22 | . 11 | . 67 |
| b. | .75 | . 25 |  | . 88 | . 06 | . 06 | . 79 | . 21 |  | . 38 | . 19 | . 40 | . 48 | . 22 | . 30 | . 22 | . 11 | . 67 |
| c. | . 75 | . 25 |  | . 69 | . 25 | . 06 | . 79 | . 14 | . 07 | . 38 | . 19 | . 43 | . 48 | . 22 | . 30 | . 22 | . 11 | . 67 |
| d. | . 50 | . 25 | . 25 | . 75 | . 25 |  | . 72 | . 21 | . 07 | . 38 | . 19 | . 43 | . 48 | . 22 | . 30 | . 22 | . 11 | . 67 |
| e. | . 50 | . 25 | . 25 | . 31 | . 63 | . 06 | . 50 | . 43 | . 07 | . 43 | . 14 | . 43 | . 35 | . 26 | . 39 | . 22 | . 11 | . 67 |
| f. | . 75 | . 25 |  | . 25 | . 63 | . 12 | . 29 | . 57 | . 14 | . 43 | . 14 | . 43 | . 26 | . 26 | . 48 | . 22 | . 11 | . 67 |
| g. | . 75 | . 25 |  | . 81 | . 19 |  | . 50 | . 43 | . 07 | . 38 | . 19 | . 43 | . 48 | . 17 | . 35 | . 22 | . 11 | . 67 |
| n. | . 50 | . 50 |  | . 75 | . 25 |  | . 50 | . 36 | . 14 | . 38 | . 19 | . 43 | . 43 | . 22 | . 35 | . 22 | . 11 | . 67 |


| Item on |  | 1 | Vumbe | 7 | cota | 1 ca | es 34 |  |  |  |  |  |  |  |  | cases |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Check | － | $\underset{0}{0}$ |  |  |  |  |  | － |  |  | $\stackrel{0}{-1}$ |  |  | $\stackrel{0}{-1}$ |  |  | － |  |
| List | $\stackrel{-1}{2}$ | － |  | －1 | 品 |  | $\stackrel{-1}{0}$ | \％ |  | $\stackrel{-1}{-1}$ | 兌 |  | $\stackrel{0}{-1}$ | 感 |  | $\stackrel{0}{0-1}$ | B |  |
|  | \％ | $\vec{b}$ |  | 4 | ${ }_{6}$ |  | \％ | $\stackrel{-1}{*}$ |  | ${ }_{4}^{6}$ | $\stackrel{-1}{7}$ |  | ${ }_{4}^{6}$ | $\stackrel{r}{r}$ |  | $\stackrel{3}{4}$ | 0 |  |
|  | $\stackrel{\sim}{\square}$ | $\stackrel{ \pm}{0}$ | d | $\begin{aligned} & .4 \\ & .7 \end{aligned}$ | $\stackrel{\mathscr{D}}{\stackrel{2}{2}}$ | 주주 | $\stackrel{.}{7}$ | $\stackrel{ \pm}{ \pm}$ |  | $\underset{-7}{-7}$ | 2 |  | $\xrightarrow{H}$ | $\stackrel{1}{0}$ |  | $\cdots$ | － | － |
|  | $\stackrel{\nu}{7}$ | ¢ | $\stackrel{\sim}{m}$ | $\begin{aligned} & \stackrel{\text { Na }}{\stackrel{\rightharpoonup}{A}} \end{aligned}$ | $\begin{aligned} & \text { D } \\ & 5 \end{aligned}$ | $\begin{aligned} & \text { a } \\ & \text { d } \end{aligned}$ | $\begin{gathered} \stackrel{\circ}{\otimes} \\ \ominus \end{gathered}$ | 范 | $\stackrel{\stackrel{\rightharpoonup}{\mathrm{m}}}{ }$ | $\begin{aligned} & \stackrel{2}{\otimes} \\ & \stackrel{1}{2} \end{aligned}$ | E | $\underset{\sim}{\underset{\sim}{7}}$ | $0 .$ | E |  | $\stackrel{\ddot{2}}{\stackrel{\rightharpoonup}{0}}$ | E | $\xrightarrow{7}$ |
| 0.7 ． | ． 25 | ． 75 |  | ． 75 | ． 25 |  | ． 50 | ． 36 | ． 14 | ． 48 |  |  | $\stackrel{.78}{.78}$ | ． 22 |  |  |  |  |
| 8. | ． 75 | ． 25 |  | ． 75 | ． 19 | ． 06 | 1.00 |  |  | 95 | ． 05 |  | ． 00 |  |  |  |  | 1 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| P．1． | ． 50 | ． 50 |  | ． 56 | ． 38 | ． 06 | ． 64 | ． 36 |  | .71 | ． 29 |  | ． 57 | ． 43 |  | ． 67 | ． 33 |  |
| 2. | ． 75 |  | ． 25 | ． 75 | ． 25 |  | ． 93 | ． 07 |  | ． 62 | ． 33 | ． 05 | ． 70 | ． 26 | ． 04 | .67 | ． 33 |  |
| 3. | ． 75 |  | ． 25 | ． 56 | ． 38 | ． 06 | ． 79 | ． 21 |  | ． 62 | ． 38 |  | .79 | ． 17 | ． 04 | .67 | ． 33 |  |
| 4. | ． 75 | ． 25 |  | ． 88 | ． 12 |  | ． 93 | ． 07 |  | ． 81 | ． 19 |  | .74 | ． 26 |  | ． 67 | ． 33 |  |
| 5. | .75 | ． 25 |  | ． 37 | ． 63 |  | ． 43 | ． 50 | ． 07 | ． 67 | ． 33 |  | .39 | ． 57 | ． 04 | .78 | ． 22 |  |
| 6. | .75 | ． 25 |  | ． 69 | ． 25 | ． 06 | ． 79 | ． 21 |  | .76 | ． 24 |  | ． 57 | ． 39 | ． 04 | ． 56 | ． 44 |  |
| 7. | ． 50 | ． 50 |  | ． 56 | ． 44 |  | ． 36 | ． 64 |  | ． 24 | ． 76 |  | ． 17 | ． 83 |  | .78 | ． 22 |  |
| 8. | ． 50 | ． 25 | ． 25 | 1.00 |  |  | 1.00 |  |  | ． 81 | ． 19 |  | 1.00 |  |  | 1.00 |  |  |
| 9. | ． 50 | ． 25 | ． 25 | ． 81 | ． 19 |  | ． 79 | ． 21 |  | ． 81 | ． 19 |  | ． 74 | ． 26 |  | ． .89 | ． 11 |  |
| 10. | ． 75 | ． 25 |  | ． 62 | ． 38 |  | ． 64 | ． 36 |  | .57 | ． 4.5 |  | ． 43 | ． 57 |  | ． 56 | ． 44 |  |
| 11. | ． 75 |  | ． 25 | ． 88 | ． 12 |  | ． 30 | ． 50 |  | ． 67 | ． 33 |  | ． 70 | ． 30 |  | ． 67 | ． 33 |  |
| 12. | ． 50 | ． 25 | ． 25 | ． 38 | ． 56 | ． 06 | －． 64 | ． 36 |  | ． 57 | ． 43 |  | ． 61 | ． 39 |  |  | ． 33 |  |
| 13. | 1.00 |  |  | ． 88 | ． 06 | ． 06 | 1.00 |  |  | ． 95 | ． 05 |  | .96 | ． 04 |  |  | ． 11 |  |
| 14. | 1.00 |  |  | ． 75 | ． 19 | ． 06 | $\because .93$ | ． 07 |  | ． 90 | ． 10 |  | ． 74 | ． 17 | ． 09 | ． 89 | ． 11 |  |
| 15. | ． 25 | ． 75 |  | ． 62 | ． 38 |  | ． 86 | ． 07 | ． 07 | ． 48 | ． 52 |  | ． 70 | ． 30 |  | ． 44 | ． 56 |  |
| 16. | 1.00 |  |  | ． 94 | ． 06 |  | 1.00 |  |  | ． 95 | ． 05 |  | 1.00 |  |  | ． 89 | ． 11 |  |
| 17. | 1.00 |  |  | ． 81 | ． 19 |  | ． 79 | ． 21 |  | ． 76 | ． 24 |  | 1.00 |  |  | ． 89 | ． 11 |  |
| 18. | 1.00 |  |  | ． 88 | ． 12 |  | ． 86 | ． 0.7 | ． 07 | ． 76 | ． 19 | ． 05 | ． 91 | ． 09 |  | ． 89 | ． 11 |  |
| 19. | ． 75 | ． 25 |  | ． 50 | ． 50 |  | ． 50 | ． 50 |  | ． 48 | ． 52 |  | ． 52 | ． 48 |  | ． 33 | ． 67 |  |
| 20. | 1.00 |  |  | ． 81 | ． 19 |  | ． 93 |  | ． 07 | 1.00 |  |  | ． 96 | ． 04 |  | ． 67 | ． 33 |  |
| 21. | 1.00 |  |  | ． 82 | ． 12 | ． 06 | ． 93 |  | ． 07 | ． 95 | ． 05 |  | ． 96 | ． 04 |  | ． 78 | ． 22 |  |
| 22. |  | 1.00 |  | ． 38 | ． 56 | ． 06 | ． 43 | ． 50 | ． 07 | ． 24 | ． 71 | ． 05 | ． 48 | ． 52 |  | ． 56 | ． 44 |  |
| 23. | ． 50 | ． 50 |  | ． 50 | ． 44 | ． 06 | ． 79 | ． 21 |  | ． 76 | ． 24 |  | ． 52 | ． 48 |  | ． 78 | ． 11 | 11 |
| 24. | ． 75 |  | ． 25 | ． 69 | ． 25 | ． 06 | .79 | ． 21 |  | ． 81 | ． 19 |  | ． 87 | ． 09 | ． 04 | ． 33. | ． 67 |  |
| 25. | .75 | ． 25 |  | 1.00 |  |  | ．93 | ． 0 ？ |  | ． 81 | ． 19 |  | ． 74 | ． 26 |  | ． 78. | ． 22 |  |

Item School Number 9 Total cases 85 School Number 10 Total cases 60
on
Cist

| A.1. | . 86 | . 14 |  | 273 | . 227 |  | . 92 | . 08 |  | . 86 | . 14 |  | . 95 | . 05 |  | 1.00 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. | . 17 | . 83 |  | . 20 | . 80 |  | . 34 | . 63 | . 03 | . 23 | . 77 |  | . 20 | . 80 |  | . 20 | . 80 |
| 3. | . 69 | . 28 | . 03 | . 40 | . 60 |  | . 72 | . 28 |  | . 74 | . 23 | . 03 | . 65 | . 35 |  | . 40 | . 60 |
| 4. | . 34 | . 66 |  | . 67 | . 33 |  | . 69 | . 31 |  | . 51 | . 49 |  | . 50 | . 50 |  | . 20 | . 80 |
| 5. | . 71 | . 26 | . 03 | . 40 | . 60 |  | . 40 | . 54 | . 06 | . 69 | . 28 | . 03 | . 50 | . 50 |  | . 60 | . 40 |
| 6. | . 66 | . 34 |  | . 53. | . 47 |  | . 54 | . 46 |  | . 72 | . 28 |  | . 70 | . 25 | . 05 |  | 1.00 |
| 7. | . 94 | . 06 |  | 1.00 |  |  | . 89 | . 11 |  | . 94 | . 06 |  | 1.00 |  |  | . 80 | . 20 |
| 8. | . 66 | . 34 |  | . 47 | . 53 |  | . 60 | . 40 |  | . 74 | . 26 |  | . 75 | . 25 |  | . 80 | . 20 |
| 9. | . 03 | . 97 |  | . 13. | . 87 |  | . 29 | . 71 |  | . 20 | . 80 |  | . 10 | . 90 |  |  | 1.00 |
| 10. | . 63 | . 34 | . 03 | . 67 | . 33 |  | . 80 | . 20 |  | . 49 | . 51 |  | . 60 | . 40 |  | . 60 | . 40 |
| 11. | . 63 | . 37 |  | . 53 | . 47 |  | . 86 | . 14 |  | . 71 | . 26 | . 03. | . 80 | . 20 |  | . 80 | . 20 |
| 12. | . 11 | . 89 |  |  | 1.00 |  | . 34 | . 66 |  | . 26 | . 74 |  | . 05 | . 95 |  |  | 1.00 |
| 13. | . 32 | . 68 |  | . 20 | . 80 |  | . 43 | . 57 |  | . 20 | . 80 |  | . 25 | . 75 |  |  | 1.00 |
| B. 1. | . 80 | . 14 | . 06 | . 60 | . 40 |  | - 89 | . 08 | . 03 | . 63 | . 31 | . 06 | . 80 | . 10 | . 10 | 1.00 |  |
| 2. | . 43 | . 54 | . 03 | . 47 | . 53 |  | . 23 | . 77 |  | . 66 | . 34 |  | . 60 | . 40 |  | . 60 | .40 |
| 3. | . 69 | . 31 |  | . 73 | . 27 |  | . 72 | . 28 |  | . 94 | . 06 |  | . 95 | . 05 |  | . 80 | . 20 |
| 4. | . 89 | . 08 | . 03 | . 67 | . 33 |  | . 69 | . 31 |  | . 89 | . 11 |  | . 85 | . 15 |  | . 80 | . 20 |
| 6.1. | . 77 | . 23 |  | . 67 | . 33 |  | . 77 | . 23 |  | . 69 | . 31 |  | . 65 | . 35 |  | . 80 | . 20 |
| 2. | . 83 | . 17 |  | . 93 | . 07 |  | . 94 | . 06 |  | . 89 | . 11 |  | . 80 | . 20 |  | 1.00 |  |
| 3. | . 34 | . 66 |  | . 27 | . 73 |  | . 52 | . 48 |  | . 26 | . 74 |  | . 45 | . 55 |  | . 60 | . 40 |
| 4. | . 63 | . 37 |  | . 53 | . 40. | . 07 | . 54 | . 46 |  | . 86 | . 14 |  | . 80 | . 20 |  | . 80 | . 20 |
| D.1. | . 86 | . 08 | . 06 | . 93 | . 07 |  | . 83 | . 17 |  | . 89 | . 11 |  | . 90 | . 10 |  | . 40 | . 60 |
| 2. | . 83 | . 17 |  | .73 | . 27 |  | . 69 | . 31 |  | . 94 | . 06 |  | . 70 | . 30 |  | 1.00 |  |
| E.l. | . 94 | . 06 |  | . 80 | . 20 |  | . 89 | . 11 |  | . 86 | . 14 |  | . 85 | . 15 |  | 1.00 |  |
| 2. | . 86 | . 14 |  | . 73 | . 27 |  | . 63 | . 37 |  | . 86 | . 14 |  | . 80 | . 20 |  | . 60 | . 40 |

Item School Number 9 Total cases 85 School Fumber 10 Total cases 60
on
Check
List

| F.1.a. | . 43 | . 57 |  | . 53 | . 47 |  | . 60 | . 40 |  | . 91 | . 06 | . 03 | . 80 | . 20 |  | 1.00 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| b. | . 83 | . 14 | . 03 | . 87 | . 13 |  | . 83 | . 17 |  | . 89 | . 08 | . 03 | . 50 | . 10 |  | . 80 | . 20 |
| c. | . 43 | . 57 |  | . 47 | . 53 |  | . 46 | . 54 |  | . 60 | . 40 |  | . 65 | . 35 |  | . 20 | . 80 |
| d. | . 80 | . 17 | . 03. | . 60 | . 40 |  | . 83 | . 17 |  | . 86 | . 11 | . 03 | . 80 | . 20 |  | . 60 | . 40 |
| 2. | . 80 | . 17 | . 03 | . 87 | . 13 |  | . 94 | . 06 |  | . 91 | . 06 | . 03 | . 75 | . 25 |  | 1.00 |  |
| 3. | . 66 | . 28 | . 06 | . 67 | . 33 |  | . 34 | . 66 |  | . 75 | . 14 | . 11 | . 60 | . 40 |  | . 40 | . 60 |
| 4. | . 74 | . 26 |  | . 67 | . 33 |  | . 60 | . 40 |  | .72 | . 20 | . 08 | . 60 | . 40 |  | . 40 | . 60 |
| G.1. | 2.77 | . 23 |  | . 73 | . 27 |  | . 89 | . 11 |  | . 94 | . 06 |  | . 90 | . 05 | . 05 | 1.00 |  |
| 2. | . 74 | . 26 |  | . 73 | . 27 |  | . 74 | . 26 |  | . 83 | . 17 |  | . 90 | . 10 |  | 1.00 |  |
| 3. | . 49 | . 51 |  | . 60 | . 40 |  | . 37 | . 63 |  | . 86 | . 14 |  | . 95 | . 05 |  | 1.00 |  |
| H. 1. | . 83 | . 11 | . 06 | . 73 | . 07 | . 20 | . 80 | . 17 | . 03 | . 86 | . 14 |  | . 90 | . 10 |  | . 80 | . 20 |
| 2. | . 54 | . 46 |  | . 53 | . 47 |  | . 63 | . 34 | . 03 | .74 | . 26 |  | . 75 | . 25 |  | . 40 | . 60 |
| 3. | . 72 | -28 |  | . 46 | . 47 | . 07 | . 83 | . 17 |  | . 69 | . 31 |  | . 90 | . 10 |  | 1.00 |  |
| I.1. | . 92 | . 08 |  | . 73 | . 27 |  | . 92 | . 08 |  | . 97 | . 03 |  | . 80 | . 20 |  | . 80 | . 20 |
| 2. | . 54 |  | . 46 | . 60 |  | . 40 | . 57 |  | . 43 | . 88 | . 06 | . 06 | . 75 | . 05 | . 20 | . 80 | . 20 |
| 3. | .97 | . 03 |  | . 93 | . 07 |  | . 94 | . 06. |  | 1.00 |  |  | . 95 | . 05 |  | 1.00 |  |
| J.1. | . 92 | . 08 |  | . 87 | . 13 |  | . 94 | . 06 |  | . 94 | . 06 |  | . 90 | . 10 |  | 1.00 |  |
| 2. | . 34 | . 6.6 |  | . 40 | . 53 | . 07 | . 34 | . 66 |  | . 63 | . 37 |  | . 50 | . 50 |  | 1.00 |  |
| K.l. | . 89 | . 11 |  | . 73 | . 27 |  | . 91 | . 06 | . 03 | . 80 | . 17 | . 03 | . 80 | . 20 |  | . 60 | . 40 |
| 2. | . 63 | . 37 |  | . 47 | . 53 |  | . 63 | . 37 |  | . 77 | . 20 | . 03 | . 80 | . 20 |  | 1.00 |  |
| 3. | . 34 | . 66 |  | . 60 | . 40 |  | . 54 | . 46 |  | . 34 | . 66 |  | . 50 | . 50 |  | . 40 | . 60 |
| L. 1. | . 55 | . 37 | . 08 | . 53 | . 40 | . 07 | . 49 | . 37 | . 14 | . 72 | . 28 |  | . 75 | . 20 | . 05 | . 40 | . 60 |
| 2. | . 49 | . 34 | . 17 | . 60 | . 27 | . 13 | . 37 | . 23 | . 40 | . 74 | . 20 | . 06 | . 50 | . 25 | . 25 | . 80 | . 20 |

Item School Number 9 Total cases 85
on
Check
List

| L. 3. | . 83 | . 17 |  | . 93 | . 07 |  | . 86 | . 14 |  | . 97 | . 03 |  | . 95 | . 05 |  | 1.00 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4. | . 40 | . 60. |  | . 40 | . 60 |  | . 54 | . 43 | . 03 | . 72 | . 28 | . | . 45 | . 55 |  | . 20 | . 80 |
| 5. | . 69 | . 31 |  | . 53 | . 47 |  | . 74 | . 26 |  | . 86 | . 14 |  | .95 | . 05 |  | . 60 | . 40 |
| 6. | . 46 | . 54 |  | . 47 | . 53 |  | . 49 | . 48 | . 03 | . 66 | . 34 |  | . 90 | . 10 |  | . 60 | . 40 |
| 7. | . 86 | . 14 |  | . 80 | . 20 |  | . 77 | . 20 | . 03 | . 72 | . 28 |  | . 85 | . 15 |  | . 40 | . 60 |
| 8. | . 46 | . 46 | . 08 | . 66 | . 27 | . 07 | . 46 | . 34 | . 20 | . 66 | . 26 | . 08 | . 50 | . 40 | . 10 | . 80 | . 20 |
| M.1. | . 66 | . 34. |  | . 73 | . 27 |  | . 37 | . 63 |  | .77 | . 23 |  | . 90 | . IC |  | 1.00 |  |
| 2. | . 40 | . 40 | . 20 | . 27 | . 40 | . 33 | . 37 | . 23 | . 40 | . 81 | .08 | . 11 | .70 | . 20 | . 10 | 1.00 |  |
| 3. | . 29 | . 31 | . 40 | . 27 | . 20 | . 53 | . 14 | . 26 | . 60 | . 34 | . 60 | . 06 | . 55. | . 35 | . 10 | . 80 | . 20 |
| N.1. | . 34 | . 66 |  | . 40 | . 60 |  | . 20 | . 80 |  | . 51 | . 46 | . 03 | . 15 | . 85 |  | . 20 | . 80 |
| 2. | . 09 | . 91 |  | . 13 | . 80 | . 07 | . 08 | . 86 | . 06 | . 34 | . 66 |  | . 10 | . 90 |  |  | . 80.20 |
| 3. | . 43 | . 57 |  | . 20 | . 80 |  | . 46 | . 54 |  | . 57 | . 43 |  | . 55 | . 40 | . 05 | . 80 | . 20 |
| 4. | . 89 | . 11 |  | . 93 | . 07 |  | . 86 | . 14 |  | . 83 | . 14 | . 03 | . 85 | . 15 |  | 1.00 |  |
| $5 . a$. | . 23 | .77 |  | . 13 | . 87 |  | . 23 | . 71 | . 06 | . 26 | . 68 | . 06 | . 30 | . 65 | . 05 | . 40 | . 60 |
| b. | . 26 | . 74 |  | . 53 | . 47 |  | . 23 | . 74 | . 03 | . 40 | . 54 | . 06 | . 30 | . 65 | . 05 | . 60 | . 40 |
| c. | . 09 | . 91 |  |  | 1.00 |  | . 06 | . 91 | . 03 | . 20 | . 74 | . 06 | . 15 | . 80 | . 05 | . 20 | . 80 |
| a. | 183 | . 17 |  | . 80 | . 20 |  | . 86 | . 14 |  | . 66 | . 34 |  | . 80 | . 20 |  | 1.00 |  |
| e. |  | 1.00 |  |  | 1.00 |  | . 03 | . 94 | . 03 | . 14 | . 80 | . 06 | . 10 | . 80 | . 10 | . 20 | . 80 |
| 6. | . 83 | . 17 |  | . 80 | . 13 | . 07 | . 86 | . 14 |  | . 71 | . 23 | . 06 | . 85 | . 10 | . 05 | . 80 | . 20. |
| 7. | . 43 | . 46 | . 11 | . 40 | . 47 | . 13 | . 71 | . 26 | . 03 | . 63 | . 34 | . 03 | . 60 | . 40 |  | 1.00 |  |
| 8. | . 52 | . 31 | . 17 : | . 73 | . 20 | . 07 | . 72 | . 28 |  | . 69 | . 28 | . 03 | . 55 | . 45 |  | . 80 | . 20 |
| 9. | . 80 | . 17 | . 03. | . 86 | . 07 | . 07 | . 71 | . 26 | . 03 | . 86 | . 11 | . 03 | . 75 | . 25 |  | . 80 | . 20 |
| 10. | . 94 | . 06 |  | 1.00 |  |  | . 94 | . 03 | . 03 | 1.00 |  |  | . 95 | . 05 |  | . 80 | . 20 |
| 0.1. | . 54 | . 46 |  | . 53 | . 40 | . 07 | . 52 | . 48 |  | . 72 | . 28 |  | . 70 | . 30 |  | . 80 | . 20 |
| 2. | . 66 | . 23 | . 11 | . 86 | . 07 | . 07 | . 72 | . 14 | . 14 | . 89 | . II |  | . 80 | . 20 |  | 1.00 |  |
| 3. | . 72 | . 17 | . 11 | . 60 | . 33 | . 07 | . 57 | . 03 | . 40 | . 86 | . 11 | . 03 | . 75 | . 20 | . 05 | . 80 | . 20 |
| 4. | . 21 | . $68{ }^{\circ}$ | . 11 | . 13 | . 67 | . 20 | . 12 | . 57 | . 31 | . 26 | . 68 | . 06 | . 25 | . 70 | . 05 |  | 1.00 |
| 5. | . 89 | . 08 | . 03 | . 46 | .47 | . 07 | . 72 | . 20 | . 08 | . 39 | . 11 |  | . 80 | . 20 |  | . 60 | . 40 |

Item School Number 9 Total cases 85
on
Check
List

| 0.6.2. | . 49 | . 51 |  | . 33 | . 67 |  | . 23 |  | 20 | . 66 | . 28 | . 06 | . 50 | . 40 | . 10 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| b. | . 49 | . 51 |  | . 33 | . 67 |  | . 35 | . 54 | . 11 | 71 | . 23 | . 06 | 65 | 30 | 5 |  |  |
| c. | . 49 | . 51 |  | . 33. | . 67 |  | . 32 | . 54 | . 14 | 71 | . 23 | . 06 | 60 | . 30 | 10 |  |  |
| d. | . 46 | . 54 |  | . 33 | . 67 |  | . 29 | . 54 | . 17 | .72 | . 20 | . 08 | . 50 | . 40 | . 10 | 1.00 |  |
| e. | .43 | . 57 |  | . 33 | . 67 |  | . 14 | . 63 | . 23 | . 64 | . 28 | . 08 | . 40 | . 50 | . 10 | . 80 | 20. |
| $f$. | .43 | . 57 |  | . 33 | . 67 |  | . 20 | . 60 | . 20 | . 66 | . 26 | . 08 | . 35 | . 55 | . 10 | . 80 | . 20 |
| g. | . 49 | . 51 |  | . 33 | . 67 |  | . 29 | . 54 | .17 | . 72 | . 20 | . 08 | . 70 | . 30 |  | 1.00 |  |
| n. | . 49 | . 51 |  | . 33 | . 67 |  | . 26 | . 57 | . 17 | . 72 | . 20 | . 08 | . 65 | . 30 | . 05 | . 60 | 40 |
| 7. | . 26 | . 71 | . 03 | . 27 | . 73 |  | . 34 | . 66 |  | . 54 | . 43 | . 03 | . 65 | . 35 |  | 1.00 |  |
| 8. | . 94 | . 06 |  | . 67 | . 20 | . 13 | . 86 | . 06 | . 08 | . 89 | . 08 | . 03 | . 95 |  | . 05 | 1.00 |  |
| P.1. | . 63 | . 34 | . 03 | . 53 | . 40 | . 07 | . 52 | . 48 |  | . 80 | . 17 | . 03 | . 80 | . 20 |  | . 60 | . 40 |
| 2. | . 69 | . 23 | . 08 | . 73 | . 20 | . 07 | . 80 | . 20 |  | . 77 | . 20 | . 03 | . 90 | . 10 |  | . 60 | . 40 |
| 3. | . 71 | . 23 | . 06 | . 53 | . 47 |  | . 83 | . 11 | . 06 | . 83 | . 14 | . 03 | . 80 | . 20 |  | . 40 | . 60 |
| 4. | . 77 | . 23 |  | . 46 | . 47 | . 07 | -. 92 | . 08 |  | . 84 | . 06 |  | . 85 | . 10 | . 05 | . 80 | . 20 |
| 5. | . 51 | . 46 | . 03 | . 60 | . 40 |  | . 80 | . 20 |  | . 69 | . 31 |  | . 65 | . 35 |  | . 40 | . 60 |
| 6. | . 57 | . 40 | . 03 | . 47 | . 53 |  | . 83 | . 17 |  | . 74 | . 26 |  | . 75 | . 20 | . 05 | . 80 | . 20 |
| 7. | . 26 | . 74 |  | . 27 | . 73 |  | . 46 | . 54 |  | . 37 | . 63 |  | . 40 | . 55 | . 05 | . 80 | . 20 |
| 8. | . 94 | . 06 |  | . 80 | . 13 | . 07 | . 92 | . 08 |  | . 92 | . 08 |  | . 95 |  | . 05 | 1.00 |  |
| 9. | . 66 | . 31 | . 03 | . 60 | . 33 | . 07 | . 80 | . 20 |  | . 92 | . 08 |  | . 80 | . 20 |  | . 80 | . 20 |
| 10. | . 71 | . 26 | . 03 | . 33 | . 67 |  | .74 | . 26 |  | . 80 | . 20 |  | . 80 | . 20 |  | . 60 | . 40 |
| 11. | . 69 | . 28 | . 03 | . 53 | . 47 |  | . 54 | . 46 |  | . 54 | . 46 |  | . 60 | . 35 | . 05 | . 60 | . 40 |
| 12. | . 48 | . 46 | . 06. | . 60 | . 40 |  | . 66 | . 34 |  | . 69 | . 28 | . 03 | . 55 | . 40 | . 05 | . 60 | . 40 |
| 13. | . 94 | . 03 | . 03 | . 86 | . 07 | . 07 | . 86 | . 06 | . 08 | . 89 | . 11 | , | . 95 | . 05 |  | 1.00 |  |
| 14. | . 86 | . 14 |  | . 93 | . 07 |  | . 91 | . 03 | . 06 | . 77 | . 23 |  | . 85 | . 15 |  | 1.00 |  |
| 15. | . 83 | . 17 |  | . 66 | . 27 | . 07 | . 89 | . 11 |  | . 74 | . 26 |  | . 60 | . 40 |  | 1.00 |  |
| 16. | . 89 | . 08 | . 03 | . 93 |  | . 07 | . 94 | . 06 |  | 1.00 |  |  | 1.00 |  |  | 1.00 |  |
| 17. | . 83 | . 17 |  | . 93 | . 07 |  | . 80 | . 17 | . 03 | . 94 | . 06 |  | . 90 | . 05 | . 05 | 1.00 |  |
| 18. | . 94 | . 03 | . 03 | . 93 | . 07 |  | . 94 | . 03 | . 03 | . 97 | . 03 |  | 1.00 |  |  | . 80 | . 20 |
| 19. | . 57 | : 40 | . 03 | 53 | . 47 |  | . 49 | . 51 |  | . 42 | . 51 |  | . 60 | . 40 |  | . 40 | . 60 |

Item School Number 9 Total cases 85
on
Check
List

| F. 20. | . 97 |  | . 03 | . 80 | . 20 |  | . 97 | . 03 | . 94 | . 03 | . 03 | 1.00 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21. | . 97 | . 03 | . | . 93 | . 07 |  | . 97 | . 03 | . 94 | . 06 |  | 1.00 |  | . 40 | . 60 |  |
| 22. | . 32 | . 68 |  | . 20 | . 73 | . 07 | . 43 | . 57 | . 40 | . 57 | . 03 | . 85 | . 05 | . 80 | . 20 |  |
| 23. | . 74 | . 26 | . | . 53 | . 40 | . 07 | . 89 | . 11 | .77 | . 23 | . 03 | . 80 | . 20 | . 80 | . 60 |  |
| 24. | . 80 | . 17 | . 03 | . 74 | . 13 | . 13 | . 86 | . 14 | .91 | . 03 | . 06 | . 75 | . 25 | . 80 | . 60 | O |
| 25. | . 89 | . 11 |  | . 86 | . 07 | . 07 | . 92 | . 08 | .94 | . 06 | . 06 | . 90 | . 10 | +. .00 | . 60 |  |

Sophs. 35 Juniors 5 Seniors

School Number 11 Total cases 68

Item School Number 11 Total cases á
on
Check
List

| C.3. | . 31 | . 69 |  |  | 1.00 |  | . 32 | . 68 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4. | . 83 | . 17 |  | . 60 | . 40 |  | . 57 | . 43. |  |
| D.1. | . 92 | . 08 |  | . 80 | . 20 |  | . 93 | . 07 |  |
| 2. | . 92 | . 08 |  | . 60 | . 40 |  | . 82 | . 18 |  |
| E.l. | . 86 | . 14 |  | 1.00 |  |  | . 82 | . 18 |  |
| 2. | .77 | . 23 |  | 1.00 |  |  | . 71 | . 29 |  |
| F.l.a. | . 80 | . 20 |  | . 60 | . 40 |  | . 89 | . 11 |  |
| b. | . 89 | . 11 |  | . 80 | . 20 |  | . 73 | . 25 | . 04 |
| c. | . 63 | . 37 |  | . 40 | . 60 |  | . 39 | . 57 | . 04 |
| d. | .77 | . 23 |  | . 60 | . 40 |  | . 68 | . 25 | . 07 |
| 2. | . 86 | . 14 |  | . 80 | . 20 |  | 1.00 |  |  |
| 3. | . 52 | . 48 |  | . 60 | . 40 |  | . 18 | . 46 | . 36 |
| 4. | . 57 | . 43 |  | . 20 | . 60 | . 20 | . 68 | . 25 | . 07 |
| G.1. | . 86 | . 14. |  | . 80 | . 20 |  | . 89 | . 11 |  |
| 2. | . 94 | . 06 |  | . 20 | . 80 |  | . 82 | . 18 |  |
| 3. | . 63 | . 37 |  | . 40 | . 60 |  | . 64 | . 36 |  |
| H. 1. | . 66 | . 34 |  | . 60 | . 20 ' | . 20 | . 86 | . 14 |  |
| 2. | . 97 | . 03 |  | . 80 | . 20 |  | . 89 | . 11 |  |
| 3. | .77 | . 20 | . 03 | . 40 | . 60 |  | . 89 | . 11 |  |
| I.1. | : 80 | . 20 |  | . 60 | . 40 |  | . 79 | . 21 |  |
| 2. | . 83 | . 14 | . 03 | . 60 . | . 40 |  | . 78 | . 04 | . 18 |
| 3. | 1.00 |  |  | 1.00 |  |  | 1.00 |  |  |
| J.1. | . 97 | .03 |  | 1.00 |  |  | 1.00 |  |  |
| 2. | . 52 | . 48 |  | . 40 | . 60 |  | . 43 | . 57 |  |

Item School Number Il Total cases 68
on
Check
List

| K. 1. | . 86 | . 14 | . 6 | . 60 | . 40 |  | . 75 | . 25 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. | . 66 | . 34 |  | 1.00 |  |  | . 75 | . 21 | . 04 |
| 3. | . 37 | . 63 |  | . 20 | . 80 |  | . 50 | . 46 | . 04 |
| I.1. | . 60 | . 34 | . 06 |  | . 60 | . 40 | . 43 | . 50 | . 07 |
| 2. | . 74 | . 23 | . 03 | . 40 | . 20 | . 40 | . 50 | . 18 | . 32 |
| 3. | . 77 | . 23 |  | . 80 | . 20 |  | . 96 | . 04 |  |
| 4. | . 60 | . 40 |  | . 60 | . 40 |  | . 42 | . 54 | . 04 |
| 5. | . 60 | . 40 |  | . 60 | . 40 |  | . 67 | . 29 | . 04 |
| 6. | . 52 | . 48 |  | . 20 | . 80 |  | . 61 | . 39 |  |
| 7. | . 72 | . 28 |  | 1.00 |  |  | . 79 | . 21 |  |
| 8. | . 48 | . 46 | . 06 | . 60 | . 20 | . 20 | . 57 | . 39 | . 04 |
| M. 1. | . 66 | . 34 |  | . 20 | . 80 |  | . 54 | . 46 |  |
| 2. | .80 | . 14. | . 06 | . 40 | . 20 | .40 | . 39 | . 36 | . 25 |
| 3. | . 23 | .63 | . 14 |  | . 60 | . 40 | . 29 | . 39 | . 32 |
| N.1. | . 23 | . 77 |  | . 60 | . 40 |  | . 25 | . 71 | . 04 |
| 2. | . 23 | . 77 |  | . 20 | . 40 | . 40 | . 07 | . 61 | . 32 |
| 3. | . 40 | . 57 | . 03 |  | 1.00 |  | . 36 | . 64 |  |
| 4. | . 89 | . 11 |  | . 40 | . 60 |  | . 79 | . 14 | . 07 |
| 5.a. | . 31 | . 69 |  | . 20 | . 80 |  | . 25 | . 68 | . 07 |
| b. | . 29 | . 71 |  | . 40 | . 60 |  | . 21 | . 75 | . 04 |
| c. | . 11 | . 89 |  |  | 1.00 |  | . 14 | . 79. | . 07 |
| d. | . 54 | . 46 |  | . 60 | . 40 |  | . 61 | . 39 |  |
| e. | . 14 | . 83 | . 03 |  | 1.00 |  | . 11 | . 82 | . 07 |
| 6. | . 72 | . 28 |  | . 60 | . 40 |  | . 68 | . 32 |  |
| 7. | . 54 | . 46 |  | . 20 | . 80 |  | . 50 | . 50 |  |
| 8. | . 72 | . 28 |  | . 40 | . 60 |  | . 57 | . 39 | . 04 |
| 9. | . 89 | . 11 |  | . 80 | . 20 |  | . 71 | . 29 |  |
| 10. | . 86 | . 11 | . 03 | . 60 | . 40 |  | 1.00 |  |  |

Item School Number 11 Total cases 68
on
Cneck
List


| Item <br> on <br> Check | School Number II Total cases 68 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| List |  |


[^0]:    IDr. Logan Clendening, "Your Health!" Reader!s Digest (Pleasantville: The Reader's Digest Association, July, 1933), pp. 14-16.
    ${ }^{2}$ Frank Mayr Jr., Seopetary of Stete, Acts: of Indiang: (Indianapolis: William B. Burford Prirting Compeny, ligz), p. 1138 .

[^1]:    3Thomas D. Wood and Marion O. Lerrigo, Health Behavior (Bloomington, Illinois: Public School Publishing Company, 1927), p. 150.

[^2]:    ${ }^{4}$ B. T. Baldwin, "Physical Growth and School Progress," (U. S. Bureau of Education, Bulletin 1914, No. 10.) p. 143.
    $5_{\mathrm{H}}$. P. Bowditch, Papers on Anthropometry, (American Statistical Association, 1894 T, $\frac{\text { p. } 65 .}{}$

    6T. D. Wood and H. G. Powell, Personal Health Standard and Scale, (Bureau of Pubilications, Teachers College, Columbia

    7 Wood and Lerrigo, op. cit., p. 150.

