Minnesota

DEPARTMENT OF NATURAL RESOURCES

DEMOGRAPHIC DATA
Winter Telephone Survey Compared to State Demographer's Expansions

SCORP

Research and Policy Section
Bureau of Comprehensive Planning & Progamming

DEMOGRAPHIC DATA-
WINTER TELEPHONE SURVEY
COMPARED TO
STATE DEMOGRAPHER'S EXPANSIONS

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TABLE OF CONTENTS

PAGE

Executive Summary 1

Comparison of Sample Age/Sex Distribution to Estimated Population Age/Sex Distribution 3

What Known Population Characteristics are Available? . . 4
Errors in Population Projections 4
What About Error in the Sample Distribution? 6
The Comparison of Sample to Population 8

Appendix A 9

Executive Summary

The following report shows that the sample design utilized in the Minnesota outdoor recreation participation survey has resulted in a sample distribution based on age and sex parameters which, in fact, mirrors that of the true probable population characteristics. Therefore, no adjustments, or weightings, need to be performed prior to expanding the sample information to a population level.

While a cursory examination of the regional sample to population age and sex comparisons in "Appendix A" reveals some rather consistent mismatches between the two population estimates (The 1978 population estimates are an extrapolation of the Minnesota State Demographer's 1975 and 1980 population estimates, which in turn are based on the 1960 and 1970 population census.), a recent validation survey of 15,000 Minnesota residents conducted by the State Demographer's Office has shown that the primary source of variance between our sample estimates of the population parameters and the estimated true population characteristics is, in fact, probably the result of some incorrect assumptions concerning migration factors in certain age groups and, also, "age heaping" response errors which have hindered the accuracy of the State Demographer's five year population projections.

Interestingly, the population characteristics based on our sample design (with a sample size of nearly 29,000) are probably the same that the State Demographer's Office will derive when, or if, the migration and age heaping factors are corrected for. In conclusion, we feel that our sample provides a very realistic approximation of the true 1978 population

characteristics and we are now ready to proceed with the sample expansion and data analysis.

Comparison of Sample Age/Sex Distribution to Estimated Population Age/Sex Distribution

In most cases of survey research, financial and time constraints render it infeasible to collect information from each individual of a specified population. In addition, marketing and survey research literature has documented that while taking a census of a total population may virtually remove all the error associated with the sampling process, non-sampling error (particularly interviewer caused) may increase to the point where a well-designed and executed sampling scheme may yield more reliable data than a census. Hence, sampling has become an essential tool upon which survey researchers rely in order to obtain estimates of the parameters and characteristics of the population they are studying.

It is not the purpose of this paper to describe the sampling methodology employed by IORT to obtain recreation participation information from the residents of Minnesota. For that, I refer you to Report Number 3 entitled Telephone Survey Sampling Methods by C. R. Michael Parent. Instead, this report compares the characteristics of the sample respondents to those of the state's population. These comparisons indicate how well the sample represents the population. The accuracy of representation determines what, if any, adjustments or weightings must be made to the sample so that inferences made from it are also applicable to the population. This, in fact, is the key criteria for evaluating a sampling methodology.

What Known Population Characteristics are Available?

Unfortunately, survey researchers are often confronted with the problem that true measures of population characteristics are not available with which to compare and adjust their sample. In these cases, survey researchers must fall back on what is known in sampling theory about sample design and sample size in order to evaluate the fitness of their data.

In this case, the recreation participation study conducted for the Department of Natural Resources in the State of Minneosta, we have available estimates of the age and sex distribution of Minnesota residents. These, as already stated, are estimates of the true 1978 population characteristics based on information collected during the 1960 and 1970 census of population. These age and sex population projections are made by the Office of the State Demographer, the State Planning Agency in Minnesota. They are published in five year intervals in a report entitled Minnesota Population Projections: 1970-2000.

As estimates, they are subject to the errors inherent in the methods used to derive them. In other words, just as there is a confidence band about the sample estimates of the population parameters, there is also a confidence band about the estimated true population parameters. Let's examine the types of errors that might possibly be involved in the 1978 population estimates.

Errors in Population Projections

As with any projection, the confidence interval about the estimates becomes wider the further into the future the projections are made.

This is based on the uncertainty that historical trends will continue into the future unfettered. However, this is unrealistic and, therefore, allowances have to be granted for swelling error factors in long range projections.

The relative width of the band of confidence about projected estimates is dependent on the assumptions and methodology used to make the forecasts. Naturally, the more realistic the assumptions and the more appropriate the model, the less error there will be in the projections and the narrower the confidence band. The State Demographer utilized a version of the Cohort Survival Method which requires assumptions about future rates of fertility, mortality and migration. I refer you to the above mentioned publication for a more detailed description of their methodology.

Fortunately, the State Demographer has recently completed a survey of 15,000 Minnesota residents in order to validate the reliability of their projections. Unfortunately, they have discovered at least two sources of error which are hindering the accuracy of their five year projections. One is a response error termed "age heaping." For example, middle aged men tend to round their age off to 50 years. Another source is the result of respondents reporting the age of other individuals in their household and yet another source is overt lying about age.

A second type of error is related to the assumptions about the various components effecting future population shifts. One component of population change is net migration. In making the long range projections, the Office of the State Demographer assumed that a slight net migration into the state would persist over the projection period. In fact, however, the recent validation survey revealed a slight net migration out of the

state, especially among those aged 20-24 years. The result is a consistent over estimate of the projected population size of this age group which, in fact, bears out in our survey data based on the ages collected for 28,676 individuals. On the other hand, a slightly stronger net in migration among those aged 35-39 and their accompanying children aged 5-14 has resulted in an under estimate of the true population proportions of these age groups. Of course, when the total proportions are forced to 100 percent, errors in one category create errors in the remaining proportions.

Compounding the room for error in estimating the 1978 age and sex distribution of the Minnesota population is our own extrapolation based on the State Demographer's 1975 and 1980 projections.

Unfortunately, the degree of error in the population projections is indeterminant and a confidence interval about the estimated 1978 age and sex proportions of the total population cannot be computed. The degree of error will remain unknown until the 1980 census. Therefore, allowances between sample and estimated population characteristics misfit must be made. Nonetheless, regardless of the uncertain amount of error in projected population data, they do facilitate ballpark comparisons between the two age/sex distributions.

What About Error in the Sample Distribution?

Essentially, the sample design consisted of a random sample selected systematically from telephone directories. Since the alphabetic listing of names in a phone book is independent of the characteristics of the

people enumerated, the telephone director portrays a randomly ordered population. In such a case, the standard deviation for a systematic sample is calculated in the same manner as is done for a simple random sample. The formula is as follows:

$$\text{standard deviation } (s) = \sqrt{\frac{p\,q}{n-1}\left(\frac{N-n}{N}\right)}$$

where:

p = proportion of a sample exhibiting a certain characteristic to be tested

q = 1.0 - p

n = sample size

N = population size

Therefore, as in Region 1 for example, if one wishes to calculate a 95 percent confidence interval about the proportion of sample respondents falling in the age category 6-9 years in order to determine if it contains within its bounds the estimated true proportion of the population that falls into that same age group, you would take the sample proportion plus or minus 1.96 standard deviations. Thus:

$$95\%\ CI = p - 1.96\ s \leq \text{population parameter} \leq p + 1.96\ s$$

$$= 8.0\% - 1.2\% \leq \text{population parameter} \leq 8.0\% + 1.2\%$$

$$= 6.8\% \leq \text{population parameter} \leq 9.2\%$$

Since the estimated 1978 population proportion for Region 2 falling into that age group of 6.9 percent lies within the 95 percent confidence limits, the sample estimate appears to be reasonable.

This procedure was done for each age group and both sexes for all thirteen regions. The results are displayed in Appendix A.

The Comparison of Sample to Population

An examination of the thirteen regional tables in Appendix A reveals that there is a rather consistent pattern in mismatch between the sample and estimated population age distributions. (The sex distributions appear to be on target except for Region 3.) The sample proportions falling into the age groups 6 to 9, 10 to 14, and 15 to 19 appear to overstate the estimated true population proportions while the sample proportion in the age group 20 - 24 unfailingly underestimates the population proportions. This, however, is probably a result of the previously discussed erroneous assumptions about the migratory behavior of these age groups. In fact, it is quite possible that our systematic random sample of 28,676 is a very realistic portrayal of the true population distribution.

On the other hand, the consistent under representation in the sample of the 65 year olds and older reflects the reluctance of this age group to participate in the survey.

All in all, if a confidence band could be put around the estimated true 1978 population parameters, the fit between the two distributions is quite good. We are awaiting a report from the State Demographer which will provide a more indepth evaluation of their long range projections based on the findings of their recent validation survey. Pending the outcome, we may have to revise their long range population projections for inclusion in our recreation modeling process.

APPENDIX A

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

REGION 1

AGE CATEGORY	SAMPLE DISTRIBUTION %	2 STANDARD DEVIATIONS %	95% CONFIDENCE INTERVAL %	POPULATION DISTRIBUTION %
6 - 9	8.0	1.2	6.8 - 9.2	6.9
10 - 14	12.6	1.5	11.1 - 14.1	9.7
15 - 19	13.3	1.5	11.8 - 14.8	10.8
20 - 24	6.3	1.1	5.2 - 7.4	10.2
25 - 29	7.1	1.2	5.9 - 8.3	7.7
30 - 34	5.4	1.0	4.4 - 6.4	5.5
35 - 39	6.4	1.1	5.3 - 7.5	5.4
40 - 44	6.0	1.1	4.9 - 7.1	5.0
45 - 49	5.2	1.0	4.2 - 6.2	5.2
50 - 54	6.2	1.1	5.1 - 7.3	5.6
55 - 59	5.4	1.0	4.4 - 6.4	5.8
60 - 64	5.0	1.0	4.0 - 6.0	5.6
65+	13.2	1.5	11.7 - 14.7	16.5
Male	51.1	2.3	48.8 - 53.9	50.5
Female	48.9	2.3	46.6 - 51.2	49.5

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

REGION 2				
AGE CATEGORY	SAMPLE DISTRIBUTION %	2 STANDARD DEVIATIONS %	95% CONFIDENCE INTERVAL %	POPULATION DISTRIBUTION %
6 - 9	6.6	1.1	5.5 - 7.7	5.9
10 - 14	11.7	1.4	10.3 - 13.1	9.4
15 - 19	13.2	1.4	11.8 - 14.6	11.6
20 - 24	8.2	1.2	7.0 - 9.4	11.2
25 - 29	7.9	1.2	6.7 - 9.1	9.1
30 - 34	6.2	1.1	5.1 - 7.3	6.7
35 - 39	5.5	1.0	4.5 - 6.5	5.3
40 - 44	7.1	1.1	6.0 - 8.2	4.8
45 - 49	5.8	1.1	4.7 - 6.9	4.7
50 - 54	6.0	1.1	4.9 - 7.1	4.8
55 - 59	5.0	1.0	4.0 - 6.0	5.1
60 - 64	5.3	1.0	4.3 - 6.3	5.3
65+	11.5	1.4	10.1 - 12.9	16.0
Male	51.1	2.2	48.9 - 53.3	50.5
Female	48.9	2.2	46.7 - 51.2	49.5

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

REGION 3

AGE CATEGORY	SAMPLE DISTRIBUTION %	2 STANDARD DEVIATIONS %	95% CONFIDENCE INTERVAL %	POPULATION DISTRIBUTION %
6 - 9	7.8	1.2	6.6 - 9.0	5.8
10 - 14	11.0	1.4	9.6 - 12.4	9.3
15 - 19	12.5	1.4	11.1 - 13.9	10.9
20 - 24	8.1	1.2	6.9 - 9.3	10.6
25 - 29	8.6	1.3	7.3 - 9.9	8.2
30 - 34	7.3	1.2	6.1 - 8.5	6.2
35 - 39	5.4	1.0	4.4 - 6.4	5.5
40 - 44	5.6	1.0	4.6 - 6.6	5.3
45 - 49	6.3	1.1	5.2 - 7.4	5.6
50 - 54	6.0	1.1	5.0 - 7.0	5.9
55 - 59	5.9	1.1	4.8 - 7.0	6.0
60 - 64	5.2	1.0	4.2 - 6.2	5.9
65+	10.4	1.4	9.0 - 11.8	14.6
Male	51.8	2.3	49.5 - 54.1	48.8
Female	48.2	2.3	45.9 - 50.5	51.2

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

	REGION 4			
AGE CATEGORY	SAMPLE DISTRIBUTION	2 STANDARD DEVIATIONS	95% CONFIDENCE INTERVAL	POPULATION DISTRIBUTION
6 - 9	7.9	1.2	6.7 - 9.1	5.9
10 - 14	11.6	1.4	10.2 - 13.0	9.3
15 - 19	11.9	1.4	10.5 - 13.3	11.5
20 - 24	7.8	1.2	6.6 - 9.0	11.3
25 - 29	7.9	1.2	6.7 - 9.1	8.5
30 - 34	6.9	1.2	5.7 - 8.1	6.0
35 - 39	5.8	1.1	4.7 - 6.9	5.2
40 - 44	6.0	1.1	4.9 - 7.1	4.9
45 - 49	5.9	1.1	4.8 - 7.0	5.1
50 - 54	6.9	1.2	5.7 - 8.1	5.4
55 - 59	4.3	0.9	3.4 - 5.2	5.4
60 - 64	4.3	0.9	3.4 - 5.2	5.4
65+	12.8	1.5	11.3 - 14.3	16.0
Male	49.3	2.3	47.0 - 51.6	49.6
Female	50.7	2.3	48.4 - 53.0	50.4

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution

	REGION 5			
AGE CATEGORY	SAMPLE DISTRIBUTION %	2 STANDARD DEVIATIONS %	95% CONFIDENCE INTERVAL %	POPULATION DISTRIBUTION %
6 - 9	8.1	1.2	6.9 - 9.3	6.0
10 - 14	13.5	1.5	12.0 - 15.0	10.5
15 - 19	12.8	1.5	11.3 - 14.3	11.8
20 - 24	6.1	1.1	5.0 - 7.2	10.7
25 - 29	6.5	1.1	5.4 - 7.6	7.6
30 - 34	6.6	1.1	5.5 - 7.7	5.7
35 - 39	7.2	1.2	6.0 - 8.4	5.7
40 - 44	6.1	1.1	5.0 - 7.2	5.1
45 - 49	5.0	1.0	4.0 - 6.0	5.2
50 - 54	4.8	0.9	3.9 - 5.7	5.5
55 - 59	5.5	1.0	4.5 - 6.5	5.8
60 - 64	4.4	0.9	3.5 - 5.3	6.1
65+	13.4	1.5	11.9 - 14.9	19.6
Male	50.4	2.2	48.2 - 52.6	52.2
Female	49.6	2.2	47.4 - 51.8	47.8

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

REGION 6E

AGE CATEGORY	SAMPLE DISTRIBUTION %	2 STANDARD DEVIATIONS %	95% CONFIDENCE INTERVAL %	POPULATION DISTRIBUTION %
6 - 9	7.9	1.3	6.6 - 9.2	6.0
10 - 14	11.1	1.5	9.7 - 12.6	9.7
15 - 19	13.0	1.6	11.4 - 14.6	10.7
20 - 24	7.7	1.3	6.4 - 9.0	10.4
25 - 29	9.7	1.4	8.3 - 11.1	8.2
30 - 34	6.4	1.2	5.2 - 7.6	6.1
35 - 39	6.8	1.2	5.6 - 8.0	5.7
40 - 44	4.5	1.0	3.5 - 5.5	5.1
45 - 49	5.1	1.0	4.1 - 6.1	5.2
50 - 54	6.1	1.1	5.0 - 7.2	5.5
55 - 59	6.5	1.2	5.3 - 7.7	5.7
60 - 64	4.5	1.0	3.5 - 5.5	5.7
65+	10.7	1.5	9.2 - 12.2	16.0
Male	50.3	2.4	47.9 - 52.7	49.8
Female	49.7	2.4	47.3 - 52.1	50.2

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

REGION 6W

AGE CATEGORY	SAMPLE DISTRIBUTION %	2 STANDARD DEVIATIONS %	95% CONFIDENCE INTERVAL %	POPULATION DISTRIBUTION %
6 - 9	8.2	1.3	6.9 - 9.5	5.4
10 - 14	10.9	1.5	9.4 - 12.4	9.4
15 - 19	10.9	1.5	9.4 - 12.4	10.7
20 - 24	6.2	1.1	5.1 - 7.3	10.2
25 - 29	6.7	1.1	5.6 - 7.8	7.1
30 - 34	6.9	1.1	6.8 - 8.0	4.9
35 - 39	6.5	1.1	5.4 - 7.6	5.0
40 - 44	4.3	1.0	3.3 - 5.3	4.9
45 - 49	5.7	1.1	4.6 - 6.8	5.3
50 - 54	6.4	o.1	5.3 - 7.5	6.0
55 - 59	6.8	1.1	5.7 - 7.9	6.3
60 - 64	6.3	1.1	5.2 - 7.4	6.1
65+	14.1	1.6	12.5 - 15.7	18.7
Male	49.3	2.4	46.9 - 51.7	48.9
Female	50.7	2.4	48.3 - 53.1	51.1

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

REGION 7E

AGE CATEGORY	SAMPLE DISTRIBUTION	2 STANDARD DEVIATIONS	95% CONFIDENCE INTERVAL	POPULATION DISTRIBUTION
6 - 9	9.1	1.3	7.8 - 10.4	6.7
10 - 14	11.0	1.4	9.6 - 12.4	11.1
15 - 19	10.9	1.4	9.5 - 12.3	11.4
20 - 24	5.7	1.1	4.6 - 6.8	9.5
25 - 29	8.2	1.3	6.9 - 9.5	6.9
30 - 34	8.6	1.3	7.3 - 9.9	6.7
35 - 39	6.6	1.1	5.5 - 7.7	7.3
40 - 44	5.5	1.0	4.5 - 6.5	5.6
45 - 49	5.2	1.0	4.2 - 6.2	5.0
50 - 54	5.9	1.1	4.8 - 7.0	4.8
55 - 59	4.7	1.0	3.7 - 5.7	4.9
60 - 64	4.8	1.0	3.8 - 5.8	4.9
65+	13.8	1.6	11.2 - 15.4	15.4
Male	50.1	2.3	47.8 - 52.4	51.2
Female	49.9	2.3	47.6 - 52.2	48.8

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

	REGION 7W			
AGE CATEGORY	SAMPLE DISTRIBUTION	2 STANDARD DEVIATIONS	95% CONFIDENCE INTERVAL	POPULATION DISTRIBUTION
6 - 9	9.0	1.3	7.7 - 10.3	8.1
10 - 14	13.8	1.6	12.2 - 15.4	11.3
15 - 19	12.7	1.5	11.2 - 14.2	12.7
20 - 24	10.2	1.4	8.8 - 11.6	11.8
25 - 29	10.5	1.4	9.1 - 11.9	9.7
30 - 34	7.2	1.2	6.0 - 8.4	7.2
35 - 39	6.3	1.1	5.2 - 7.4	5.9
40 - 44	5.7	1.1	4.6 - 6.8	5.0
45 - 49	5.0	1.0	4.0 - 6.0	4.6
50 - 54	5.0	1.0	4.0 - 6.0	4.4
55 - 59	3.5	0.8	2.7 - 4.3	4.2
60 - 64	3.0	0.8	2.2 - 3.8	4.0
65+	8.1	1.3	6.8 - 9.4	11.2
Male	50.0	2.3	47.7 - 52.3	49.5
Female	50.0	2.3	47.7 - 52.3	50.5

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

	REGION 8			
AGE CATEGORY	SAMPLE DISTRIBUTION	2 STANDARD DEVIATIONS	95% CONFIDENCE INTERVAL	POPULATION DISTRIBUTION
6 - 9	8.3	1.3	7.0 - 9.6	5.7
10 - 14	11.3	1.4	9.9 - 12.7	9.7
15 - 19	12.8	1.6	11.2 - 14.4	11.3
20 - 24	6.8	1.2	5.6 - 8.0	10.9
25 - 29	6.3	1.1	5.2 - 7.4	8.1
30 - 34	5.9	1.1	4.8 - 6.0	5.4
35 - 39	5.0	1.0	4.0 - 6.0	5.2
40 - 44	6.2	1.1	5.1 - 7.3	5.0
45 - 49	6.7	1.2	5.5 - 7.9	5.2
50 - 54	6.9	1.2	5.7 - 8.1	5.8
55 - 59	6.6	1.2	5.4 - 7.8	5.9
60 - 64	5.7	1.1	4.6 - 6.8	5.7
65+	11.5	1.4	10.1 - 12.9	16.1
Male	48.9	2.3	46.9 - 51.2	49.2
Female	51.1	2.3	48.8 - 53.4	50.8

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

	REGION 9			
AGE CATEGORY	SAMPLE DISTRIBUTION	2 STANDARD DEVIATIONS	95% CONFIDENCE INTERVAL	POPULATION DISTRIBUTION
6 - 9	7.5	1.2	6.3 - 8.7	6.4
10 - 14	11.7	1.5	10.2 - 13.2	9.4
15 - 19	13.3	1.6	11.7 - 14.9	11.4
20 - 24	9.3	1.4	7.9 - 10.7	11.4
25 - 29	8.3	1.3	7.0 - 9.6	9.1
30 - 34	7.0	1.2	5.8 - 8.2	6.8
35 - 39	5.2	1.0	4.2 - 6.2	5.4
40 - 44	6.2	1.1	5.1 - 7.3	5.1
45 - 49	5.6	1.1	4.5 - 6.7	5.1
50 - 54	6.5	1.2	5.3 - 7.7	5.3
55 - 59	5.1	1.0	4.1 - 6.1	5.2
60 - 64	3.5	0.9	2.6 - 4.4	5.1
65+	10.7	1.4	9.3 - 12.1	14.5
Male	48.2	2.3	45.9 - 50.5	48.9
Female	51.8	2.3	49.5 - 54.1	51.1

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

REGION 10				
AGE CATEGORY	SAMPLE DISTRIBUTION	2 STANDARD DEVIATIONS	95% CONFIDENCE INTERVAL	POPULATION DISTRIBUTION
6 - 9	7.5	1.3	6.2 - 8.8	6.3
10 - 14	10.7	1.5	9.2 - 12.2	10.0
15 - 19	13.2	1.6	11.6 - 14.8	11.4
20 - 24	8.4	1.3	7.1 - 9.7	10.7
25 - 29	10.1	1.4	8.7 - 11.5	8.3
30 - 34	7.5	1.3	6.2 - 8.8	7.1
35 - 39	5.4	1.1	4.3 - 6.5	6.4
40 - 44	6.5	1.1	5.4 - 7.6	5.6
45 - 49	5.6	1.1	4.5 - 6.7	5.2
50 - 54	5.4	1.1	4.3 - 6.5	5.3
55 - 59	4.8	1.0	3.8 - 5.8	5.2
60 - 64	4.8	1.0	3.8 - 5.8	4.9
65+	10.0	1.4	8.6 - 11.4	13.5
Male	47.9	2.4	45.5 - 50.3	49.0
Female	52.1	2.4	49.7 - 54.5	51.0

Comparison of Regional Sample Age/Sex Distribution to Total Estimated 1978 Regional Age/Sex Distribution.

REGION 11				
AGE CATEGORY	SAMPLE DISTRIBUTION	2 STANDARD DEVIATIONS	95% CONFIDENCE INTERVAL	POPULATION DISTRIBUTION
6 - 9	8.3	0.7	7.6 - 9.0	7.0
10 - 14	11.7	0.8	10.9 - 12.5	10.1
15 - 19	12.5	0.8	11.7 - 13.3	11.1
20 - 24	9.2	0.7	8.5 - 9.9	10.6
25 - 29	9.2	0.7	8.5 - 9.9	10.1
30 - 34	9.1	0.7	8.4 - 9.8	9.2
35 - 39	7.8	0.7	7.1 - 8.5	7.1
40 - 44	5.9	0.6	5.3 - 6.5	5.8
45 - 49	6.2	0.6	5.6 - 6.8	5.4
50 - 54	5.8	0.6	5.2 - 6.4	5.3
55 - 59	4.7	0.5	4.2 - 5.2	4.8
60 - 64	3.0	0.4	2.6 - 3.4	4.0
65+	6.7	0.6	6.1 - 7.3	9.4
Male	50.4	1.2	49.2 - 51.6	48.0
Female	49.6	1.2	48.4 - 50.8	52.0