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LANGUAGE

2005-2009 AMERICAN COMMUNITY SURVEY

March 2011



Department of Community Planning, Housing and Development
Planning Division
Planning Research and Analysis Team

Arlington Vision

“Arlington will be a diverse and inclusive world-class urban community with secure, attractive residential and commercial neighborhoods where people unite to form a caring, learning, participating, sustainable community in which each person is important.”

— Arlington County Board

INTRODUCTION

2005-2009 American Community Survey

This report, *Language, 2005-2009 American Community Survey*, is the fifth in a series to examine the 2005-2009 American Community Survey (ACS) 5-Year Estimates for Arlington County, Virginia. This report compares the estimates of the 5-Year ACS to the 2000 Census long form survey. Other report topics in this series include: households and families, race/ethnicity, income, employment, poverty, housing, language, commuting, and education.

The ACS is an annual survey, administered by the U.S. Census Bureau, that samples 3 million residential addresses throughout the United States. It replaces the long-form survey previously used in the decennial census. The 2005-2009 ACS is not an average of five years nor 60 months, rather the data collected are aggregated and spread evenly across the entire period represented without over-representing any particular month or year.

Availability

The ACS provides time period estimates on population characteristics that were collected over one, three, and five years. Figure 1 shows the collection dates for each of the published ACS data products. The data produced in the one-year estimate are most current to the year of collection. However, the 5-year estimate provides data that are not as current but more precise and reliable, due to a larger sample size.

Also shown in Figure 1, each period estimate is only published for areas with minimum population requirements. For example, the one-year estimate provides data annually for city/county geographic areas with populations of at least 65,000. The 2005-2009 ACS 5-year estimate, released in December 2010, is the first set of ACS data released at the Census tract and block group geographic level since the 2000 Census.

Figure 1: ACS Published Data

ACS Estimate	Data Collected	Published for Areas
2009 ACS (1-Year)	1/1/2009-12/31/2009	Populations 65,000+
2009 ACS (3-Year)	1/1/2007-12/31/2009	Populations 20,000+
2009 ACS (5-Year)	1/1/2005-12/31/2009	Almost any size

Sample Size

While the ACS replaces the decennial census long form, it is administered to a much smaller sample of the population. The 2005-2009 ACS 5-Year Estimate data, used for this and subsequent topic reports, sampled 12,285 individuals out of an estimated 206,405 Arlington residents. This sample size represents about 5.95 percent of Arlington's population. The sample size for the 2000 Census long form was more than double the ACS sample at 12.8 percent.

Margin of Error and Coefficients of Variation

Since the period estimates are based on a sample of the population, there is a margin of error (MOE) associated with each estimate. The MOE provides information on how much sampling error is associated with each estimate. A larger MOE indicates a less reliable estimate, relative to the size of the estimate. Since estimates vary, it can be difficult to decipher whether an estimate is reliable using the MOE.

Coefficients of variation (CV) are values that represent a percentage of variability and determine the reliability for an estimate. The CV is a ratio of the standard error to the estimated value. Estimates with lower CV are more reliable. For this series of reports, the CV will be used to determine if the estimates are reliable. Estimates with CV values below 5.00 are considered to be very reliable. For this and subsequent topic reports, estimates with CV values between 5.00 and 15.00 are considered slightly less reliable. Estimates with CV values higher than 15.00 are not considered reliable.

Significance Testing

Significance testing is important for determining whether the difference between the 2000 Census and 2005-2009 ACS 5-Year estimates are likely due to random chance (sampling error) or likely represents a true difference that exists in the population as a whole. This report identifies the statistical significance of the change in the estimates at a 90 percent confidence level.

LANGUAGE

Overview 2005-2009

Through the ACS, the U.S. Census Bureau collects information on the language spoken at home. The data are categorized into four main groups besides English and are defined in Figure 3 on the right. If English is not the primary language spoken at home, the respondent is asked to write in their spoken language. The respondent is also asked how well they speak English. From these questions it can be determined if a household is linguistically isolated; a linguistically isolated household was one in which all adults had some limitation in communicating English. For a household to be classified linguistically isolated, the following two criteria need to be satisfied: No household member age 14 and over spoke only English and no household member age 14 and over spoke English “very well” who also spoke another language.

According to the 2005-2009 ACS 5-Year Estimate, the majority (73.0%) of Arlington residents speak only English at home, as Figure 2 shows. Spanish is the second most common language spoken at home by 12.0 percent of households. The estimates for those that speak only English or Spanish are considered to be reliable with CV values of 1.07 and 3.45. The remaining residents speak either Other Indo-European Languages, Asian and Pacific Island languages, or Other languages. Even though the CV are slightly higher for these groups at 4.85, 5.31 and 9.66 percents, the estimates are still considered reliable.

The non-English speaking households have been broken down into Linguistically Isolated and not

Linguistically Isolated households. The majority of the non-English Speaking Households are not Linguistically Isolated at 83.2 percent, as Figure 4 shows below. However, 16.8 percent of households are deemed to be Linguistically Isolated, meaning they have limited English communication skills or abilities. Both Linguistically and non-Linguistically Isolated household estimates are considered to be reliable.

Figure 3: Language Groups

Spanish includes Spanish, Spanish Creole, and Ladino.

Other Indo-European languages include most languages of Europe and the Indic languages of India.

Asian and Pacific Island languages include Chinese; Korean; Japanese; Vietnamese; Hmong; Khmer; Lao; Thai; Tagalog or Pilipino; the Dravidian languages of India, such as Telugu, Tamil, and Malayalam; and other languages of Asia and the Pacific, including the Philippine, Polynesian, and Micronesian languages.

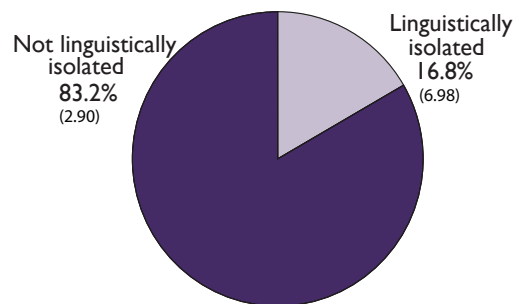
All Other languages include Uralic languages, such as Hungarian; the Semitic languages, such as Arabic and Hebrew; languages of Africa; native North American languages, including the American Indian and Alaska native languages; and indigenous languages of Central and South America.

Figure 2: Language Spoken at Home

Language	Households	Percent	CV
English only	65,944	73.0%	(1.07)
Spanish	10,808	12.0%	(3.45)
Other Indo-European	6,594	7.3%	(4.85)
Asian and Pacific Island	4,685	5.2%	(5.31)
Other Languages	2,272	2.5%	(9.66)
Total Households	90,303	100.0%	(0.70)

Coefficient of Variation (CV) = Percent of Variability
 Reliable = CV < 5.00 Less Reliable = 5.00 < CV < 15.00

Figure 4: Non-English Speaking Households



Not Reliable = CV > 15.00

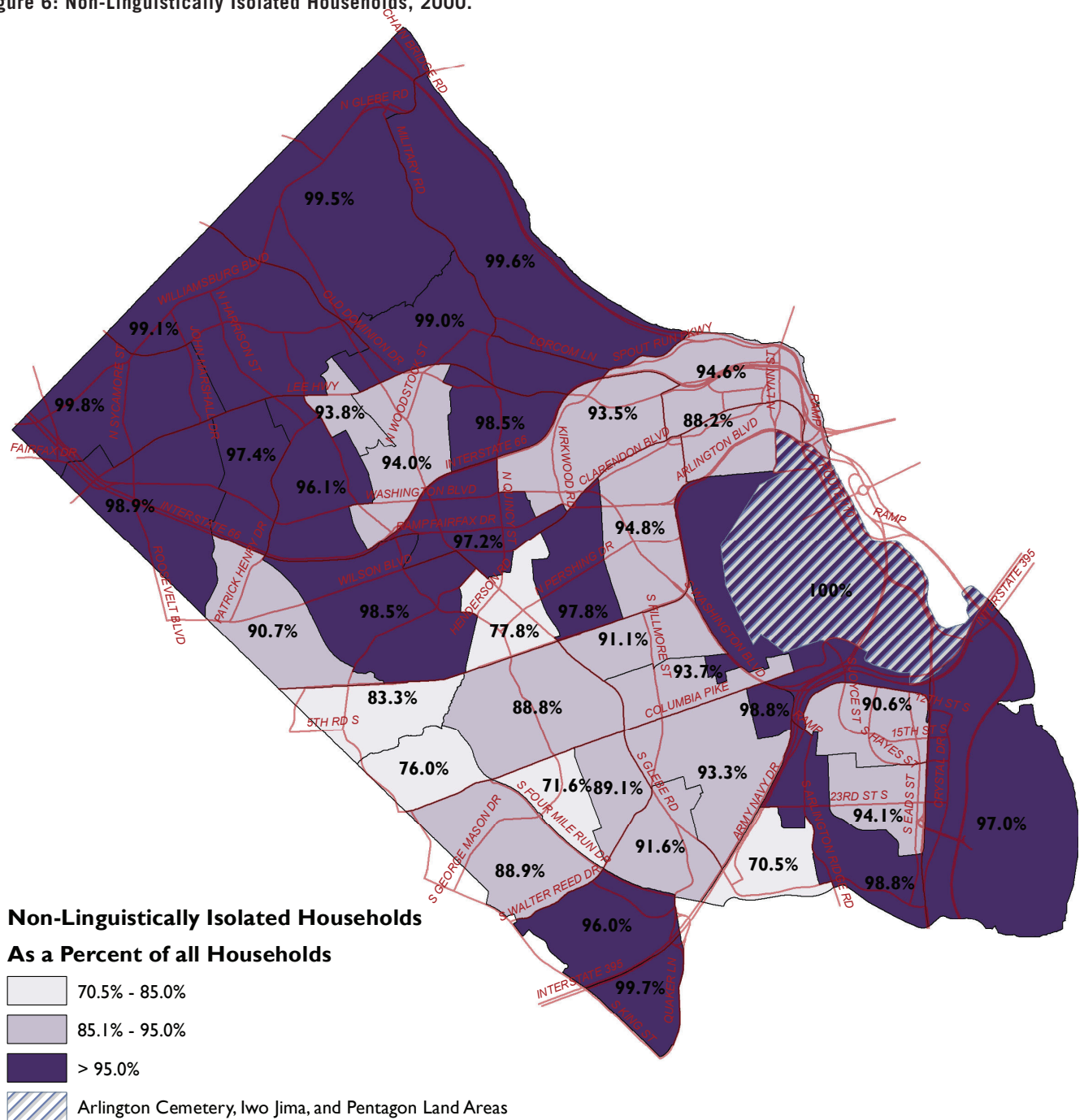
LINGUISTIC ISOLATION (2000)

2000 Decennial Census

This map replicates the classifications of Non-Linguistically Isolated households as shown in Figure 5 with Census 2000 data. Non-Linguistically Isolated households varied in range from 70.5% to 100% and

are most prevalent in North Arlington. Conversely, Linguistically Isolated households are concentrated around Columbia Pike. Overall, there are more Linguistically Isolated households in Arlington in 2000 than in 2005-2009.

Figure 6: Non-Linguistically Isolated Households, 2000.



RACE / ETHNICITY

2000 Decennial Census and 2005-2009 American Community Survey

Between 2000 and 2005-2009, the White population increased by the largest amount (15,189) of any of the race or ethnicity categories for the population aged 5 and over to form the largest racial group in Arlington (115,210 with a CV of 0.7).

While the Hispanic/Latino population aged 5 and up declined from 32,128 in 2000 to 30,948 in 2005-2009, their language proficiency shifted. Those that speak only English at home increased to occupy a share of

13.6 percent of the Hispanic/Latino population in 2005-2009, compared to 8.8 percent in 2000. Those that speak Another Language at home and also speak English "very well" increased to occupy a share of 51.4 percent of the Hispanic/Latino population in 2005-2009 compared to 33.4 percent in 2000. All other race categories, with the exception of Black/African American, exhibited an increase in speaking Another Language at home and speaking English very well..

Figure 7: English Proficiency by Race and Ethnicity for the population over 5 years of age, 2000 and 2005-2009.

Language Category	Census 2000		ACS 2005-2009				Change Statistically Significant?
	Number	%	Estimate	Margin of Error	CV	%	
White (includes Hispanic/Latino)							
Speak only English	100,021	80.3%	115,210	1,359	0.7	83.2%	Yes
Speaks Another Language and Speaks English "Very Well"	13,757	11.0%	16,020	1,189	4.5	11.6%	Yes
Speaks Another Language and Speaks English "Less Than Very Well"	10,800	8.7%	7,223	819	6.9	5.2%	Yes
Total	124,578	100%	138,453	1,235	0.5	100%	Yes
Black/African American (includes Hispanic/Latino)							
Speak only English	12,527	74.5%	11,671	798	4.2	73.9%	No
Speaks Another Language and Speaks English "Very Well"	2,536	15.1%	2,753	539	11.9	17.4%	No
Speaks Another Language and Speaks English "Less Than Very Well"	1,751	10.4%	1,371	437	19.4	8.7%	No
Total	16,814	100%	15,795	408	1.6	100%	Yes
Asian/Pacific Islander (includes Hispanic/Latino)							
Speak only English	3,174	21.2%	4,407	511	7.1	26.6%	Yes
Speaks Another Language and Speaks English "Very Well"	6,301	42.0%	7,859	666	5.2	47.4%	Yes
Speaks Another Language and Speaks English "Less Than Very Well"	5,515	36.8%	4,297	469	6.6	25.9%	Yes
Total	14,990	100%	16,563	388	1.4	100%	Yes
Other/Multiracial (includes Hispanic/Latino)							
Speak only English	4,090	18.0%	5,072	654	7.8	22.4%	Yes
Speaks Another Language and Speaks English "Very Well"	6,865	30.3%	11,350	1,483	7.9	50.2%	Yes
Speaks Another Language and Speaks English "Less Than Very Well"	11,727	51.7%	6,188	1,032	10.1	27.4%	Yes
Total	22,682	100%	22,610	1,652	4.4	100%	No
Hispanic/Latino** (any race)							
Speak only English	2,836	8.8%	4,224	610	-	13.6%	-
Speaks Another Language and Speaks English "Very Well"	10,729	33.4%	15,919	1,349	-	51.4%	-
Speaks Another Language and Speaks English "Less Than Very Well"	18,563	57.8%	10,805	1,171	-	34.9%	-
Total	32,128	100%	30,948	0	-	100%	-

Coefficient of Variation (CV) = Percent of Variability

Reliable = CV < 5.00

Less Reliable = 5.00 < CV < 15.00

Not Reliable = CV > 15.00

** The estimate is controlled by the U.S. Census Bureau.

A statistical test for sampling variability is not appropriate.

AGE

2000 Decennial Census and 2005-2009 American Community Survey

Overall, the number of people speaking Another Language at home and speaking English less than “very well” decreased from 29,793 in 2000 to 19,079 in 2005-2009. This decrease came from the 5-17 year old population, which decreased in language share from 15.3 percent in 2000 to 8.5 percent in 2005-2009, and from the 18-64 year old population, which

decreased in language share from 17.8 percent in 2000 to 9.8 percent in 2005-2009.

Contrary to this trend, those 65 and older that speak Another Language at home and Speak English less than very well increased significantly from 1,520 in 2000 to 2,144 (CV of 8.7) in 2005-2009.

Figure 8: Age by Language Spoken at Home for the Population 5 and Over, 2000 and 2005-2009.

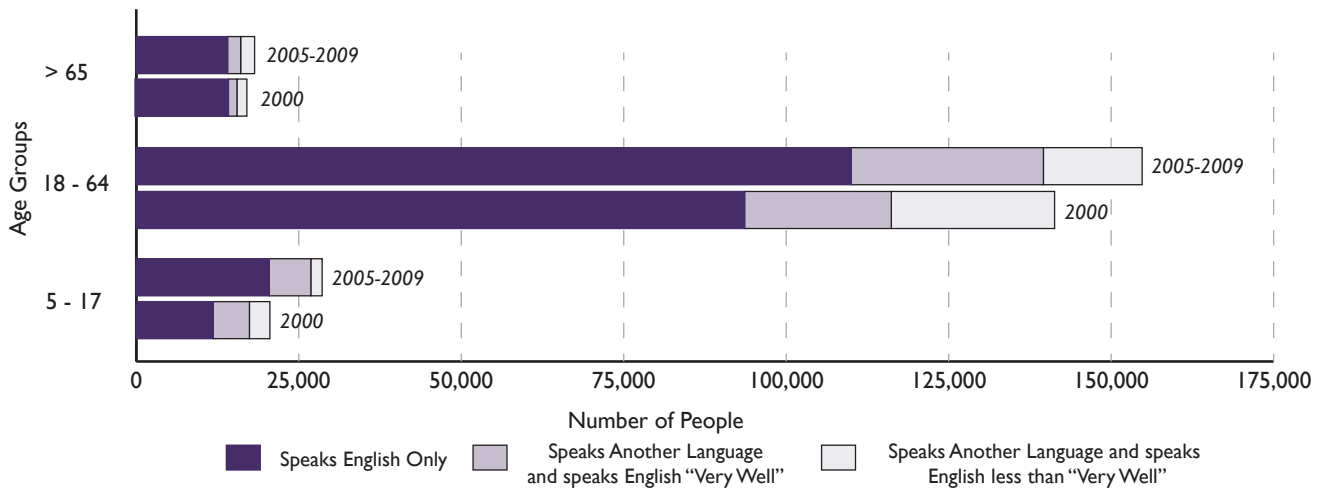


Figure 9: Age by Language Spoken at Home for the Population 5 and Over, 2000 and 2005-2009.

Age Category	Census 2000		ACS 2005-2009				Statistically Significant?
	Number	%	Estimate	Margin of Error	CV	%	
5 - 17 Years							
Speaks Only English	11,834	57.6%	12,298	595	2.9	60.1%	No
Speaks Another Language and Speaks English Very Well	5,575	27.1%	6,409	589	5.6	31.3%	Yes
Speaks Another Language and Speaks English Less Than Very Well	3,146	15.3%	1,742	485	16.9	8.5%	Yes
Total	20,555	100%	20,449	54	0.2	100%	No
18 - 64 Years							
Speaks Only English	93,601	66.2%	110,012	1,438	0.8	71.1%	Yes
Speaks Another Language and Speaks English Very Well	22,575	16.0%	29,565	1,747	3.6	19.1%	Yes
Speaks Another Language and Speaks English Less Than Very Well	25,118	17.8%	15,193	1,198	4.8	9.8%	Yes
Total	141,294	100%	154,770	81	0.0	100%	Yes
65 Years and Older							
Speaks Only English	14,377	83.5%	14,050	273	1.2	77.2%	No
Speaks Another Language and Speaks English Very Well	1,309	7.6%	2,008	296	9.0	11.0%	Yes
Speaks Another Language and Speaks English Less Than Very Well	1,529	8.9%	2,144	308	8.7	11.8%	Yes
Total	17,215	100%	18,202	64	0.2	100%	Yes

Coefficient of Variation (CV) = Percent of Variability

Reliable = CV < 5.00 Less Reliable = 5.00 < CV < 15.00 Not Reliable = CV > 15.00

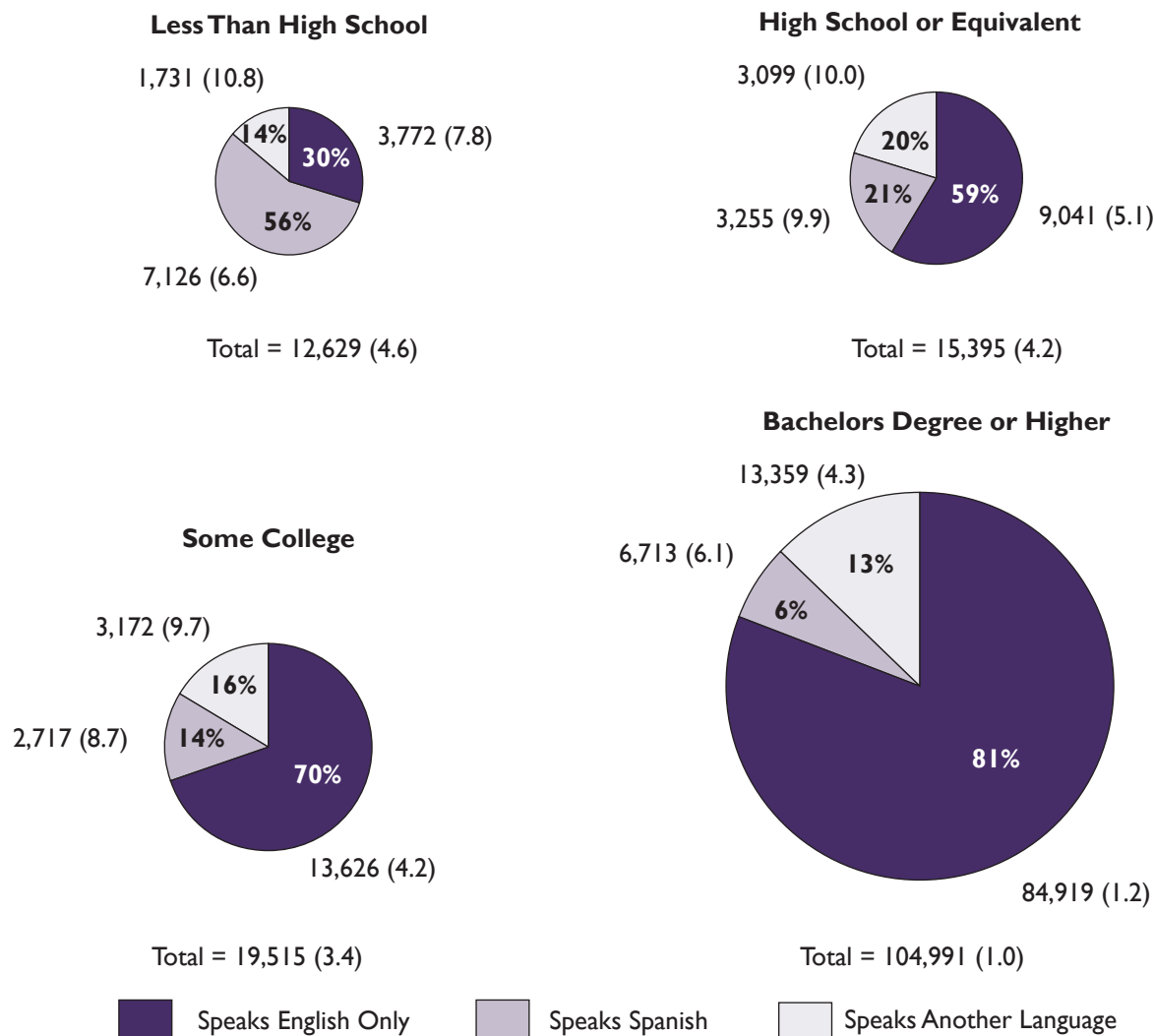
EDUCATIONAL ATTAINMENT

2005-2009 American Community Survey

The 2005-2009 ACS examines the educational attainment and language spoken at home for the population 5 years and over. In 2005-2009, 68.8% of the population 25 and over had a Bachelors Degree or Higher. Of this highly educated group, 81 percent spoke only English at home, 13 percent spoke Another Language at home, and 6 percent spoke Spanish at home. For the population with less than a High School education, 30 percent spoke only English at home, 56 percent spoke spanish at home, and 14 percent spoke another language at home.

For those that speak only English at home, 76.3 percent had a Bachelors Degree or Higher, 12.2 percent had Some College, 8.1 percent had a High School Degree or Equivalent, and 2.4 percent had Less than a High School Graduate. For those that speak Spanish at home, 33.9 percent had a Bachelors Degree or Higher, 13.7 percent had Some College, 16.4 percent had a High School Degree or Equivalent, and 36.0 percent had less than a High School Degree. These data were not comparable with Census 2000.

Figure 10: Educational Attainment by Language Spoken at Home for the Population Age 25 and Over.



Note: Pie Charts are scaled approximately by their totals.

Coefficient of Variation (CV) = Percent of Variability

Reliable = CV < 5.00

Less Reliable = 5.00 < CV < 15.00

Not Reliable = CV > 15.00

POVERTY

2005-2009 American Community Survey

The 2005-2009 ACS examines the Poverty status and the language spoken at home for the population 5 years and over. In 2005-2009, 7.1 percent (13,419 with a CV of 7.3) of the population was determined to be below the Poverty level. Of this group, 50 percent spoke only English at home, 29 percent spoke Spanish at home, and 21 percent spoke Another Language at home.

In 2005-2009, 92.9 percent (176,490 with a CV of 0.8) of the population was determined to be above the Poverty level. Of this group, 72 percent spoke only English at home, 15 percent spoke Spanish at home, and 14 percent spoke another language at home.

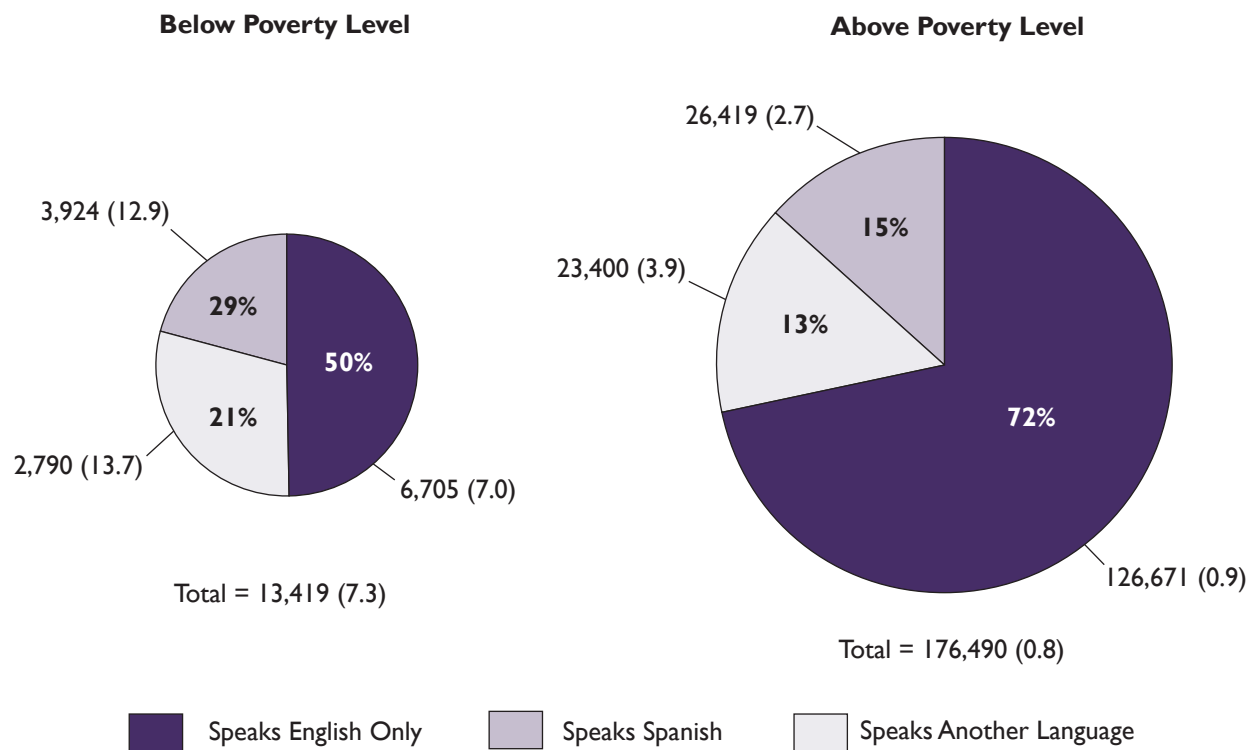
English at home, 15 percent spoke Spanish at home, and 14 percent spoke another language at home.

For those that speak Spanish at home, 12.9 percent (3,924 with a CV of 12.9) were below the Poverty line. This compares with 5.0 percent (6,705 with a CV of 7.0) of those that speak English only at home and 10.7 percent (2,790 with a CV of 13.7) of those that speak Another Language at home being below the Poverty line.

These data were not comparable with Census 2000.

Figure 11: Poverty Status in the Last 12 Months by Language Spoken at Home for the Population 5 Years and Over.

For the Population 5 Years and over for whom Poverty Status is Determined



Note: Pie Charts are scaled approximately by their totals.

Coefficient of Variation (CV) = Percent of Variability

Reliable = CV < 5.00

Less Reliable = 5.00 < CV < 15.00

Not Reliable = CV > 15.00

Published and Forthcoming Reports

A series of 2005-2009 ACS 5-Year Estimate reports will be released in 2011. Below is a list of ACS topics and release months.

Overview (January 2011)

Households and Families (February 2011)

Age (February 2011)

Race & Ethnicity (March 2011)

Foreign Population (April 2011)

Employment (April 2011)

Education (May 2011)

Income (May 2011)

Poverty (June 2011)

Journey to Work (June 2011)

Housing (July 2011)

Once published, copies of the reports may be downloaded at the following location:

www.arlingtonva.us/PRAT

The Planning Research and Analysis Team (PRAT) is part of Arlington County Planning Division and is responsible for maintaining, analyzing, and disseminating information related to planning development and demographics.

PRAT staff are Robert Ruiz (Team Leader), Elizabeth Rodgers, and Andrew D'huyvetter.



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