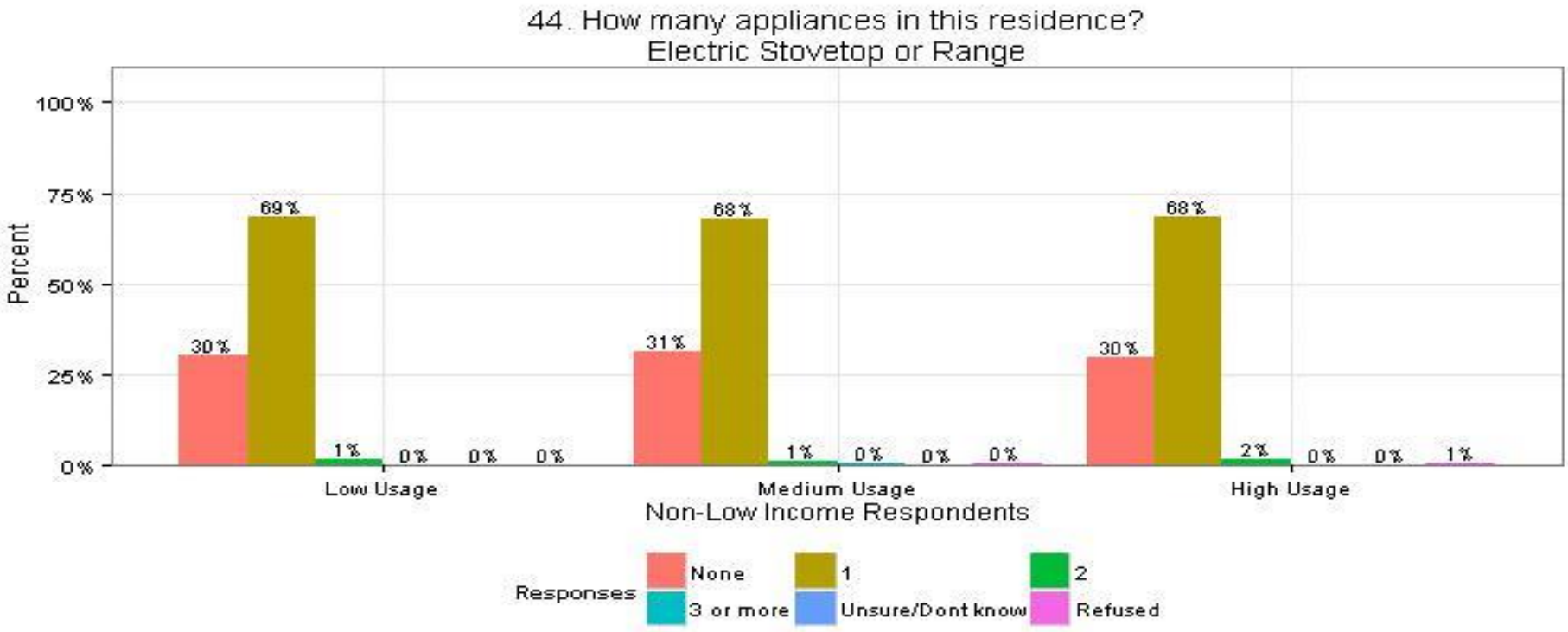
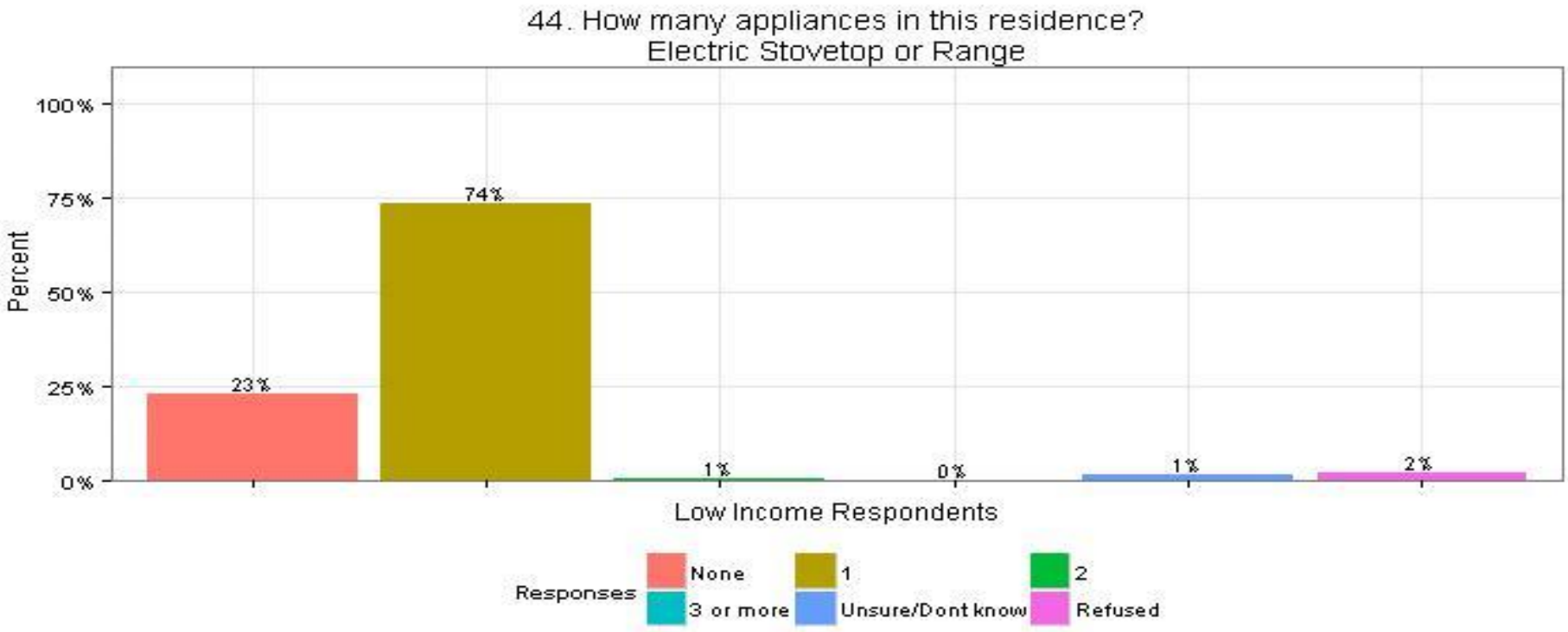
44. How many appliances in this residence? Electric Stovetop or Range Non-Low Income Respondents



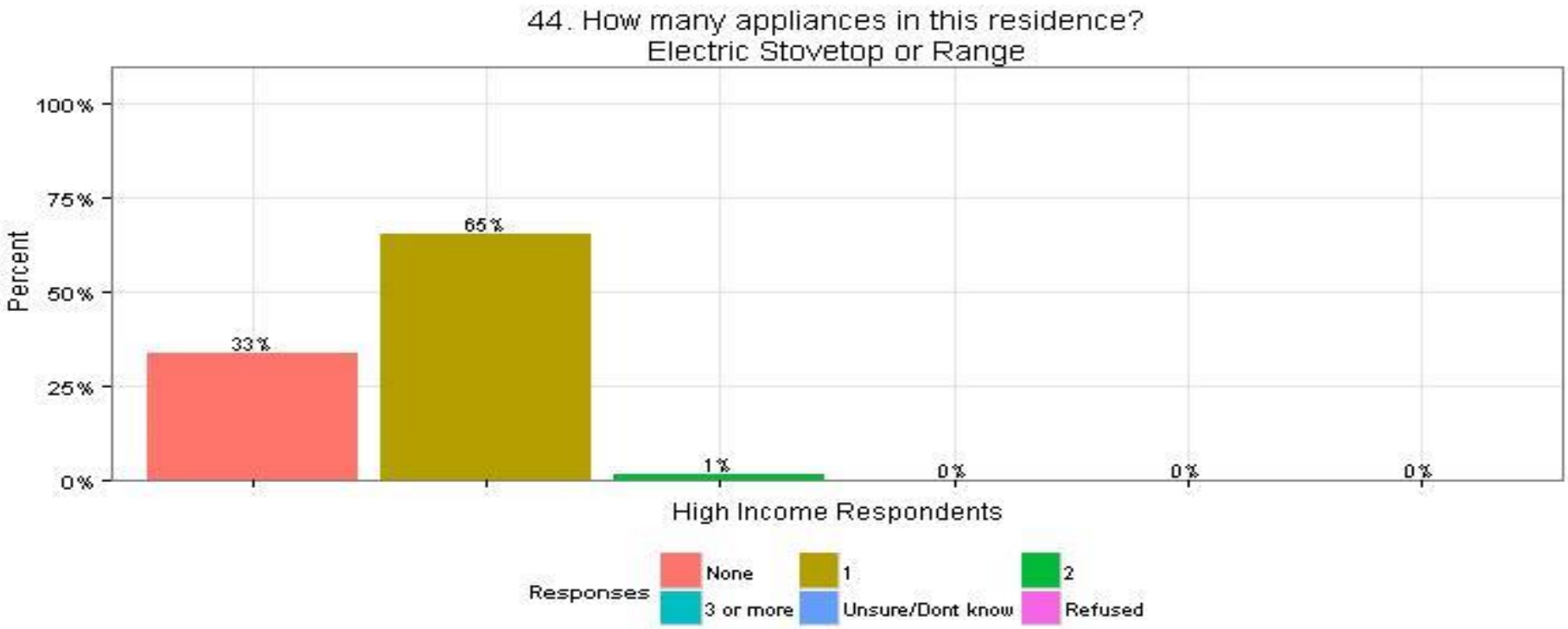
NAVIGANT

44. How many appliances in this residence?
Electric Stovetop or Range
Low Income Respondents



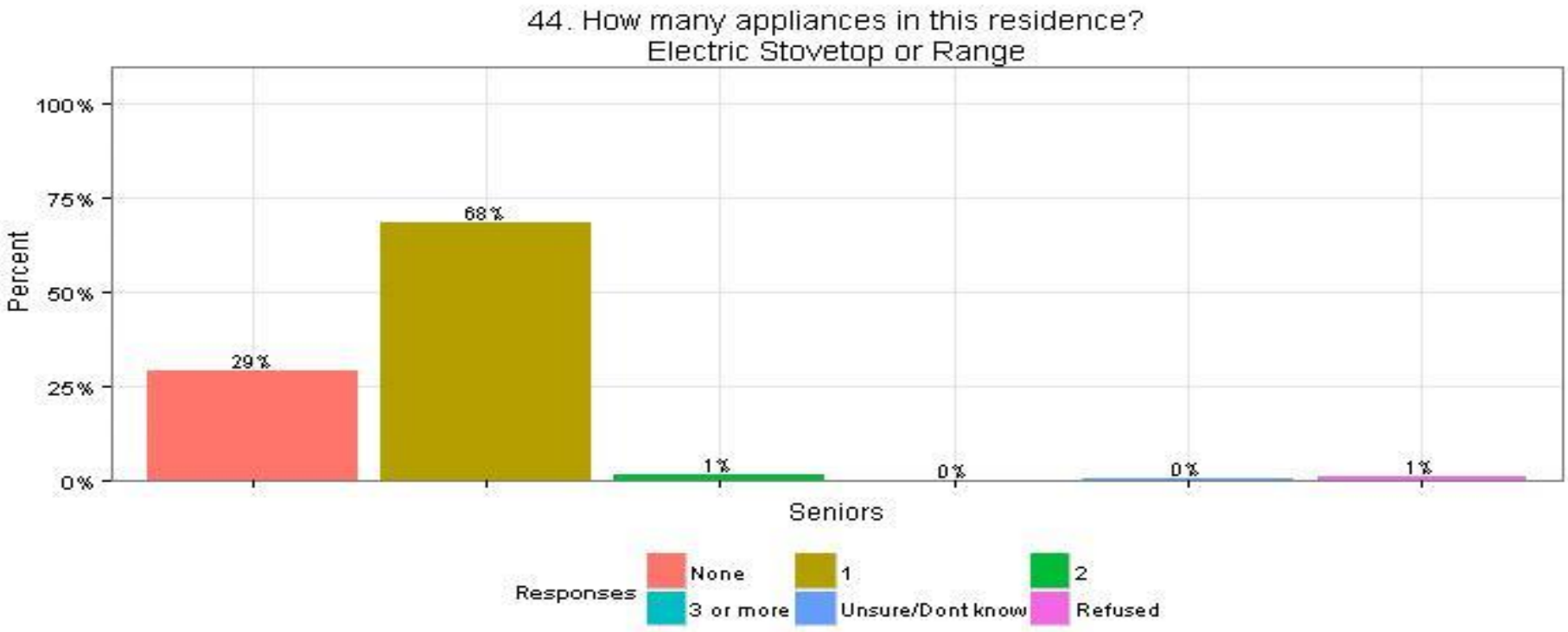
NAVIGANT

44. How many appliances in this residence? Electric Stovetop or Range High Income Respondents



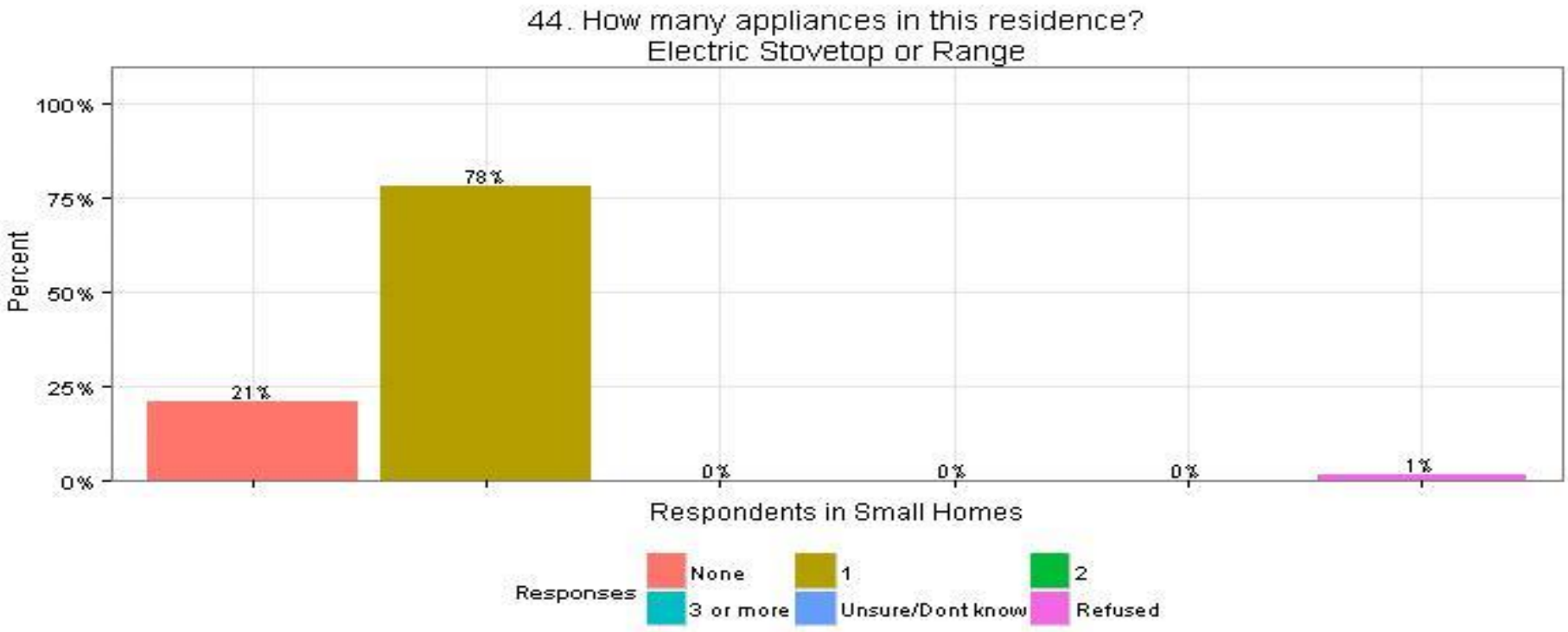
NAVIGANT

44. How many appliances in this residence? Electric Stovetop or Range Seniors



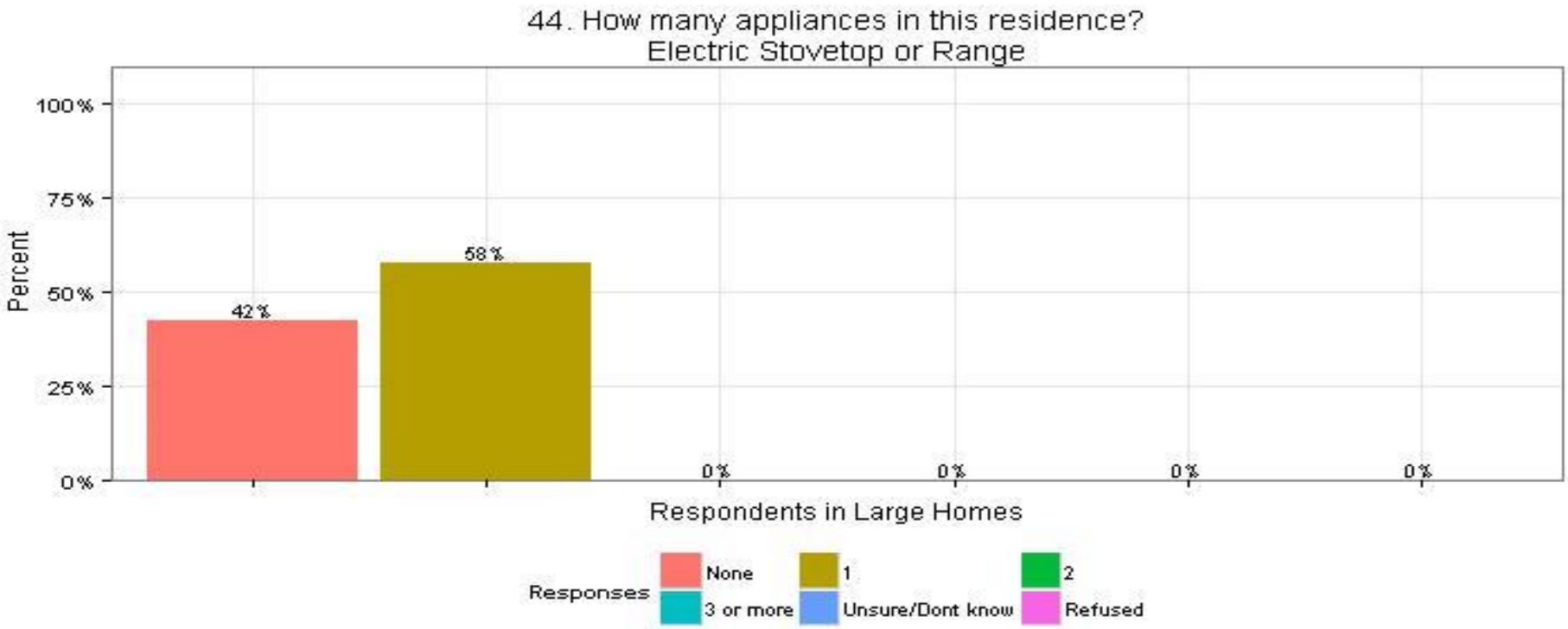
NAVIGANT

44. How many appliances in this residence? Electric Stovetop or Range Respondents in Small Homes



NAVIGANT

44. How many appliances in this residence? Electric Stovetop or Range Respondents in Large Homes



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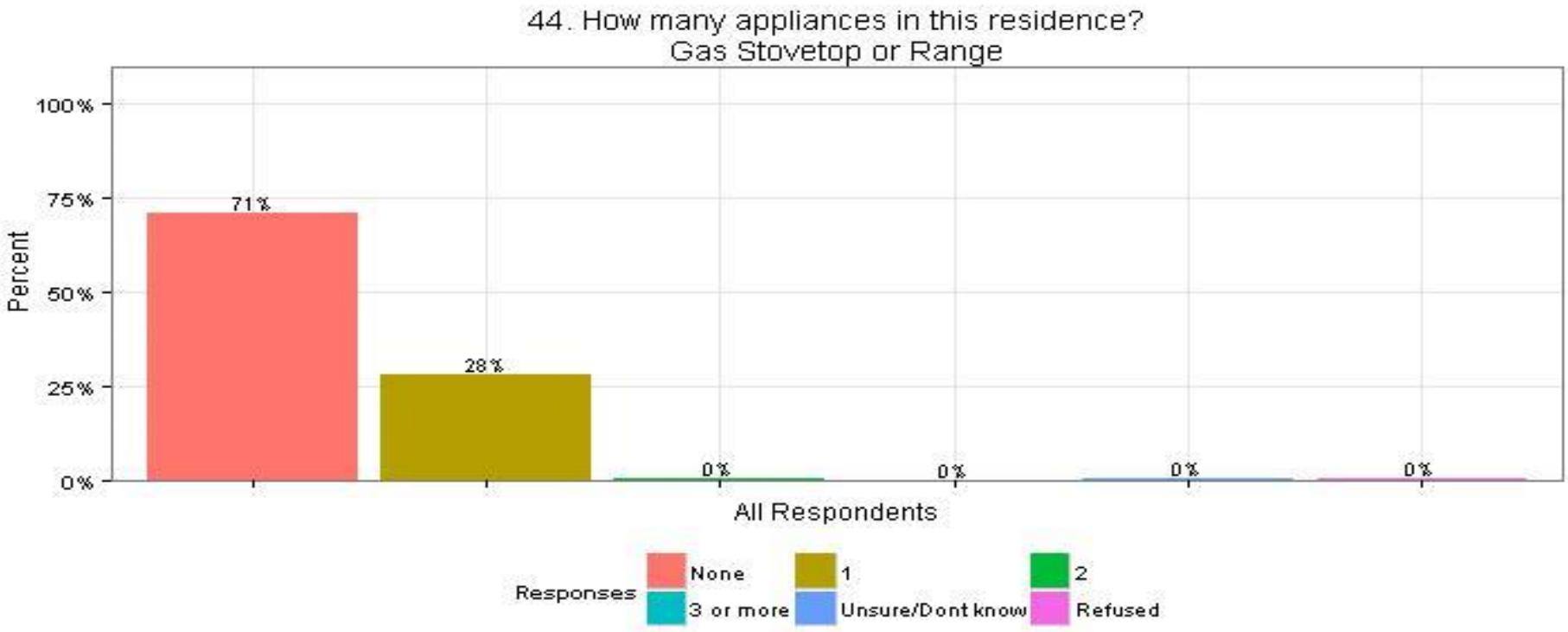
44. How many appliances in this residence?
Gas Stovetop or Range
All Respondents



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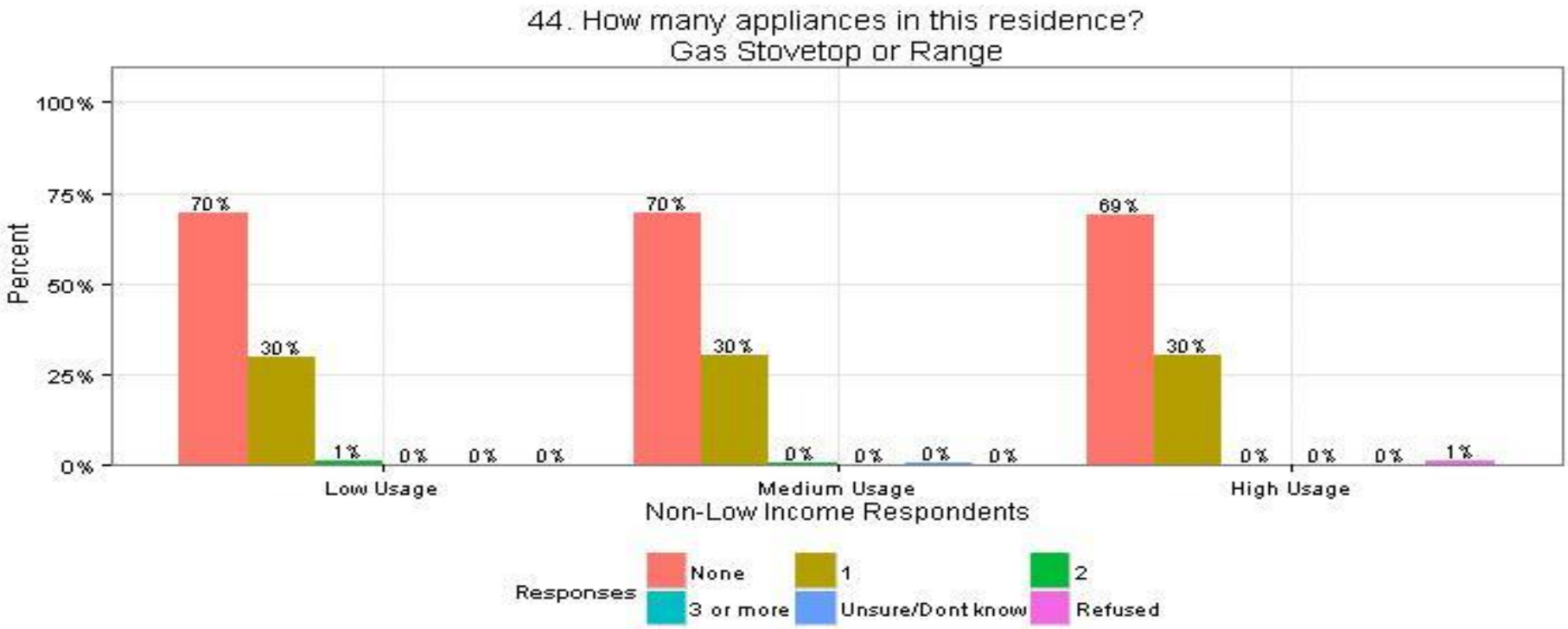
44. How many appliances in this residence?
Gas Stovetop or Range
Non-Low Income Respondents



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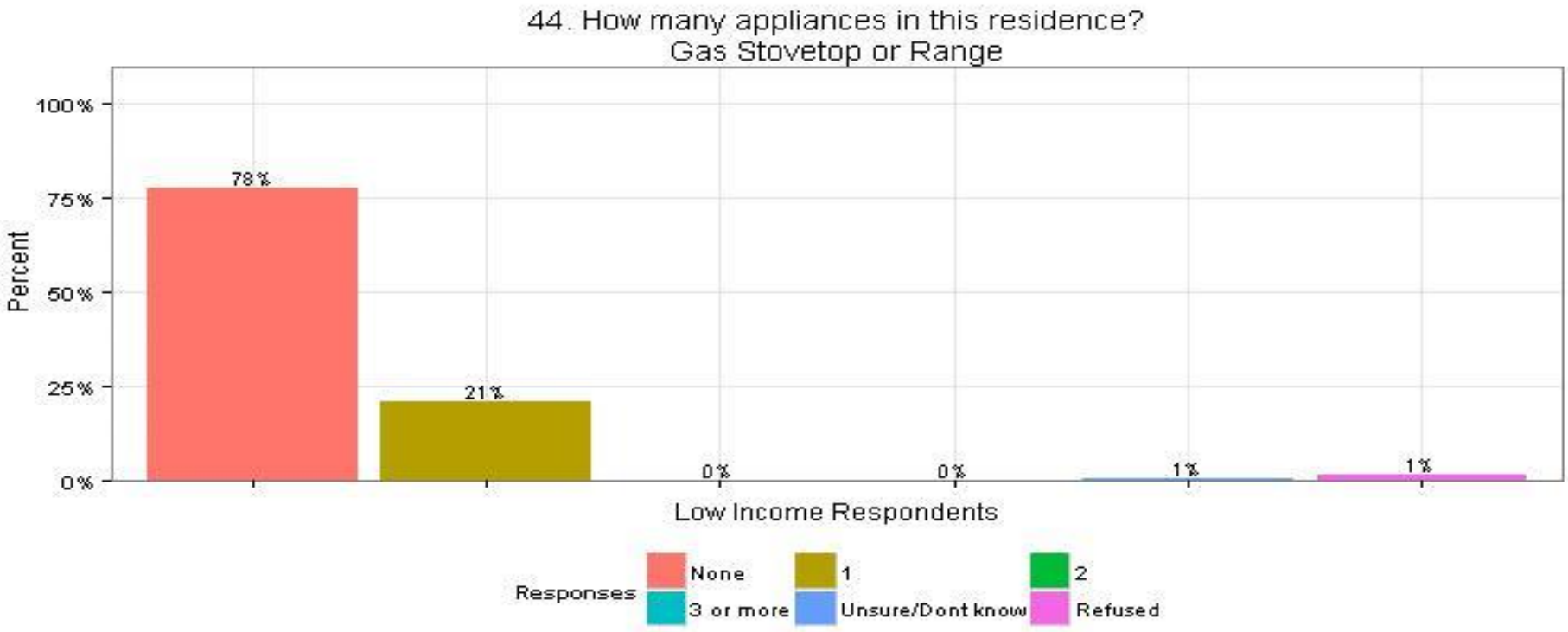
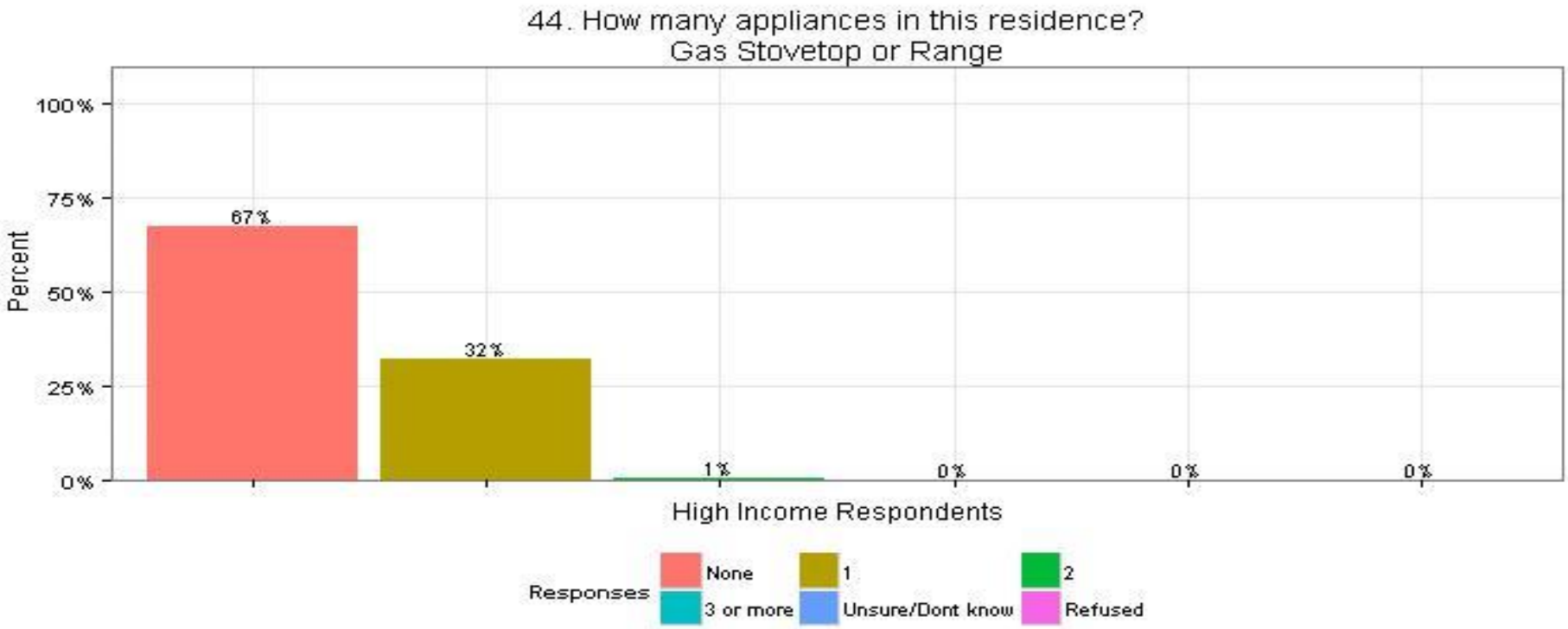
44. How many appliances in this residence? Gas Stovetop or Range Low Income Respondents

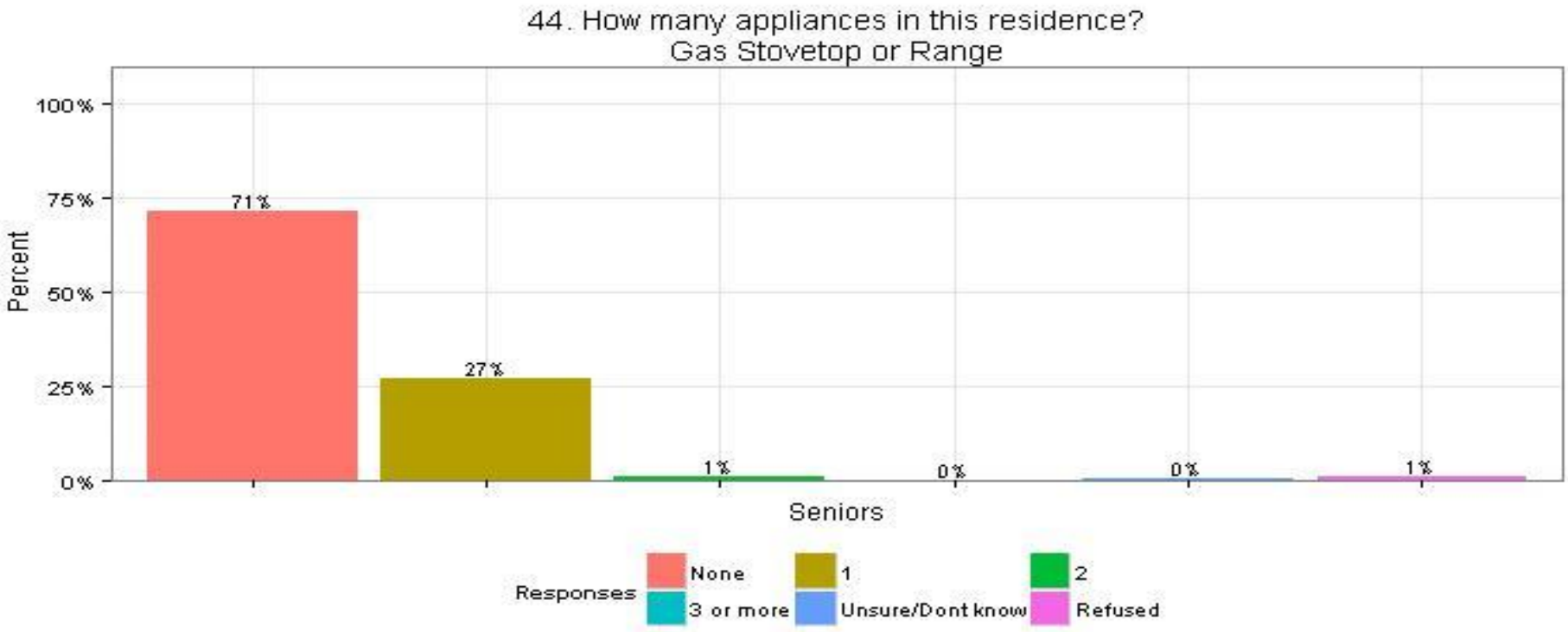


44. How many appliances in this residence?
Gas Stovetop or Range
High Income Respondents

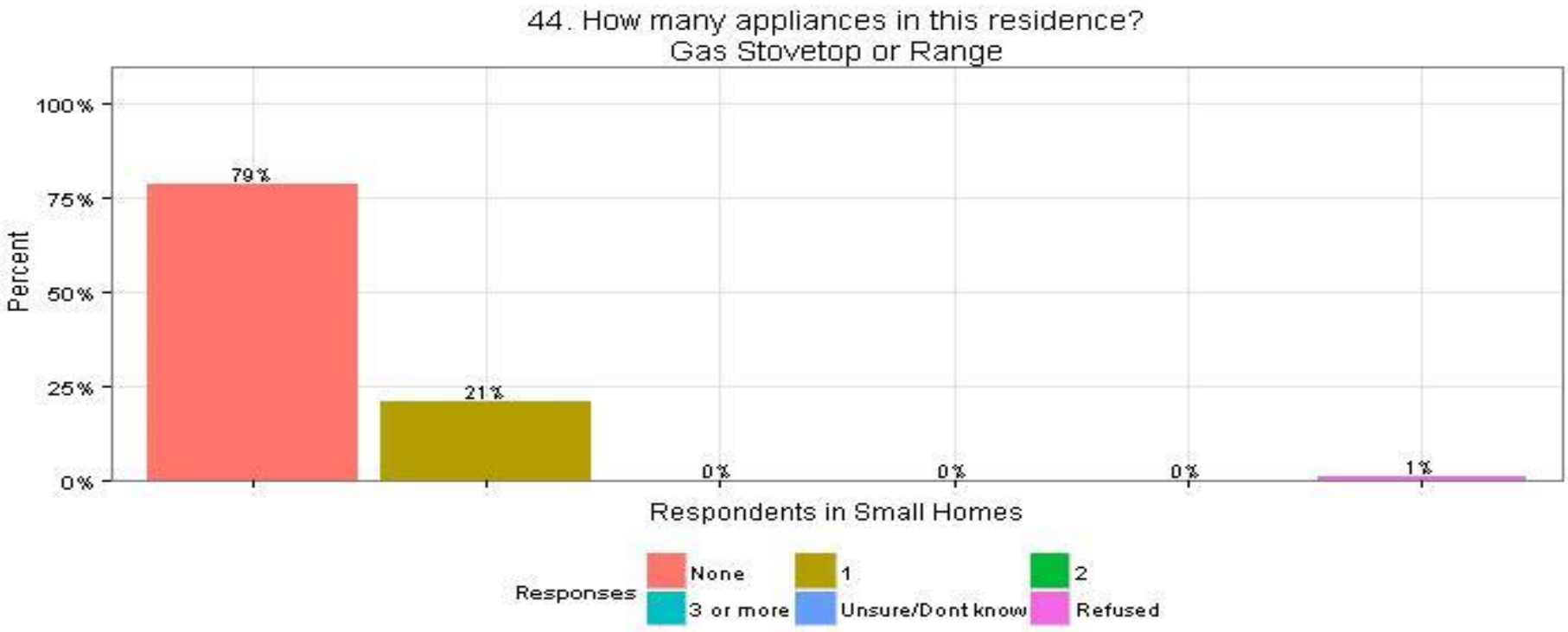


NAVIGANT

44. How many appliances in this residence? Gas Stovetop or Range Seniors

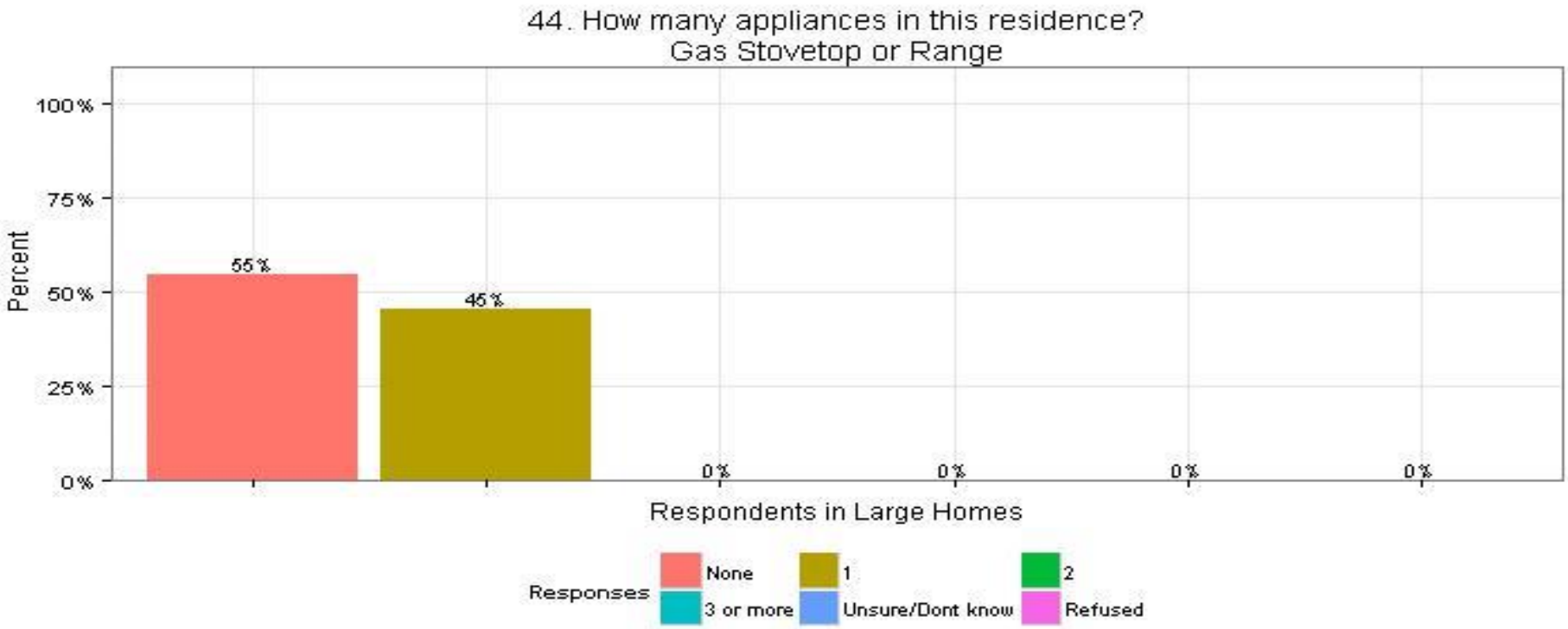


44. How many appliances in this residence? Gas Stovetop or Range Respondents in Small Homes

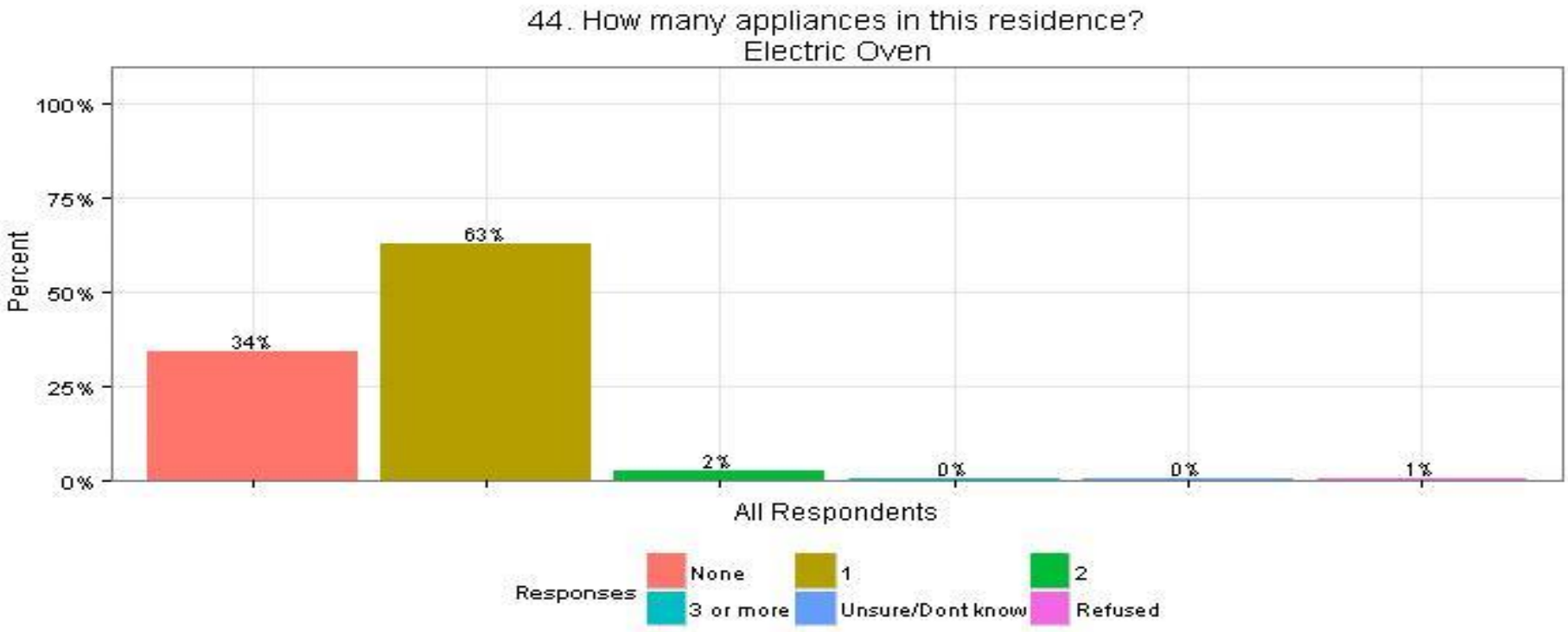


NAVIGANT

44. How many appliances in this residence? Gas Stovetop or Range Respondents in Large Homes

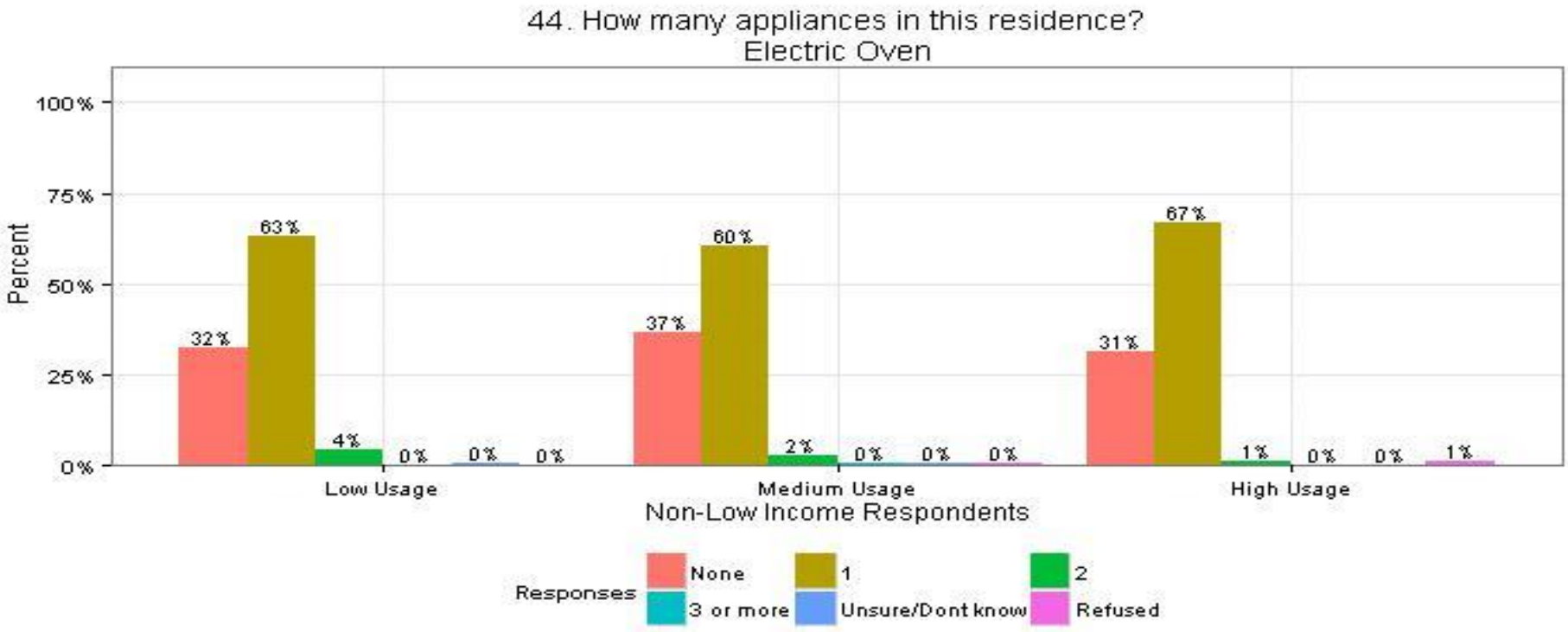


44. How many appliances in this residence? Electric Oven All Respondents



NAVIGANT

44. How many appliances in this residence?
Electric Oven
Non-Low Income Respondents



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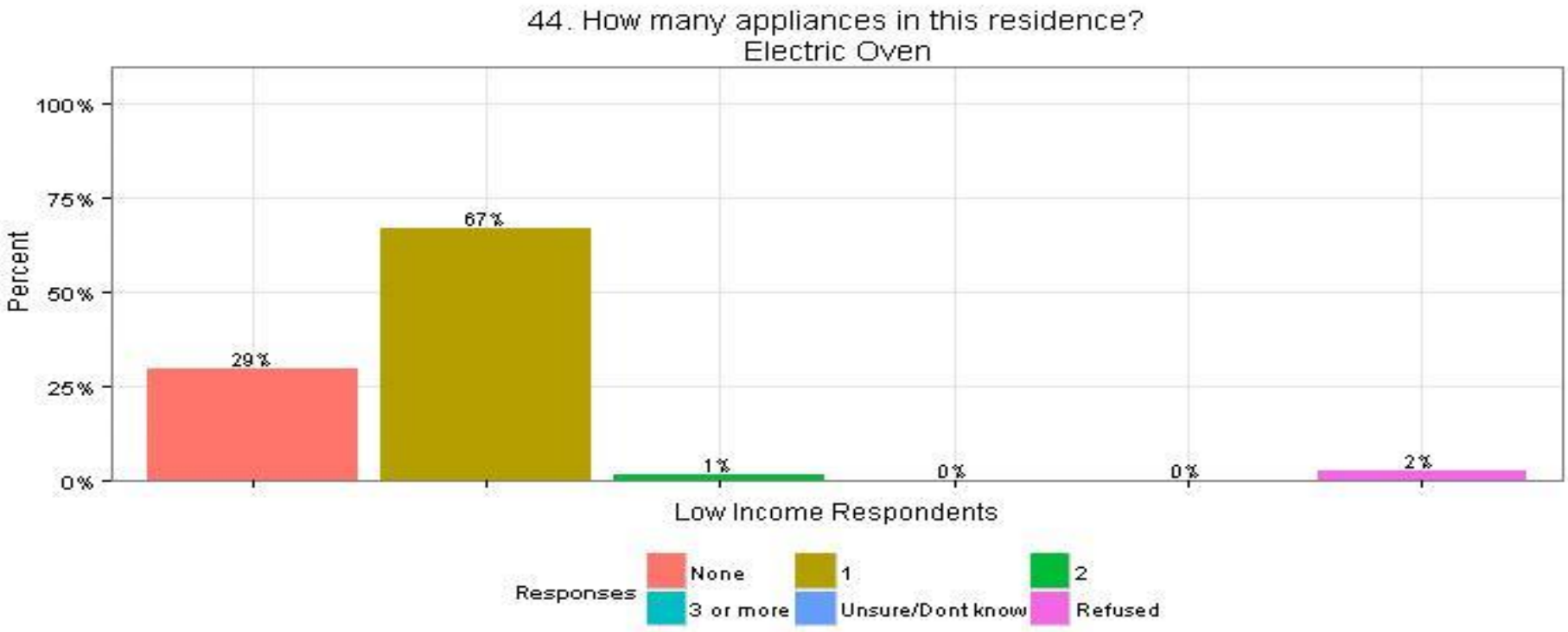
44. How many appliances in this residence?
Electric Oven
Low Income Respondents



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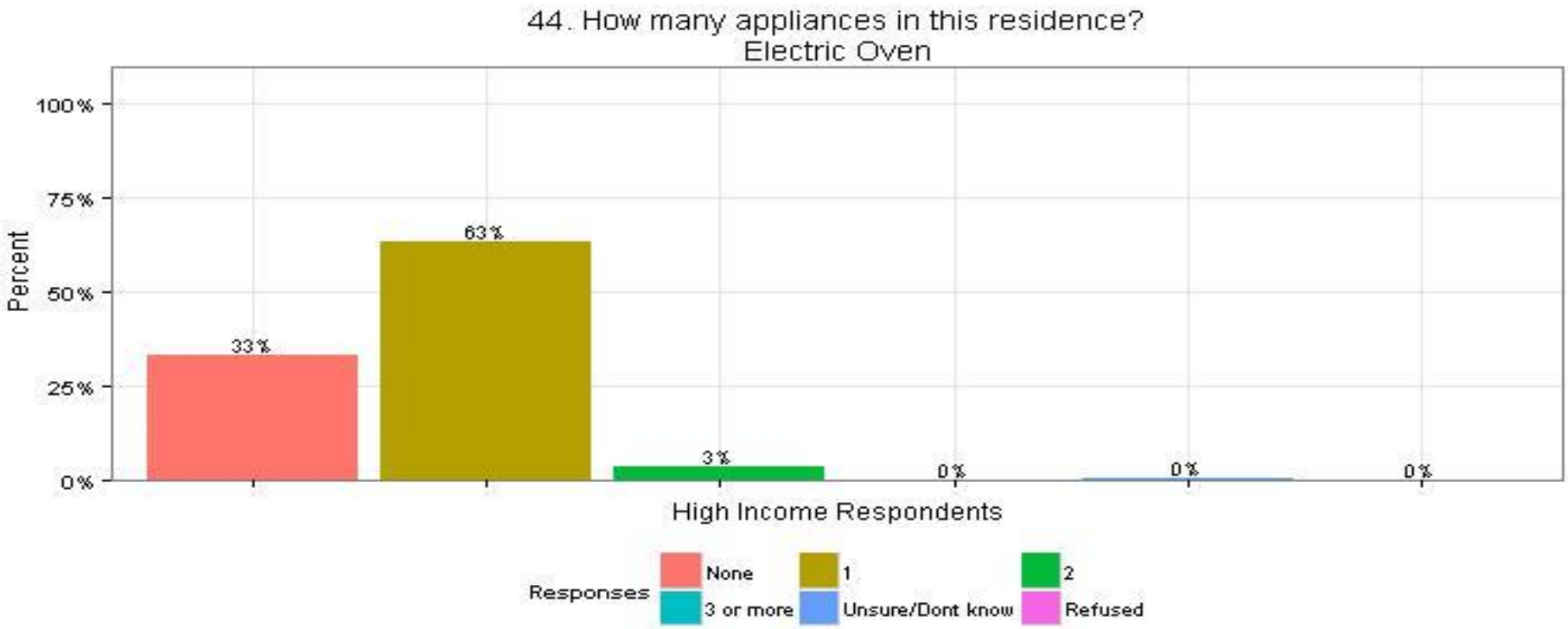
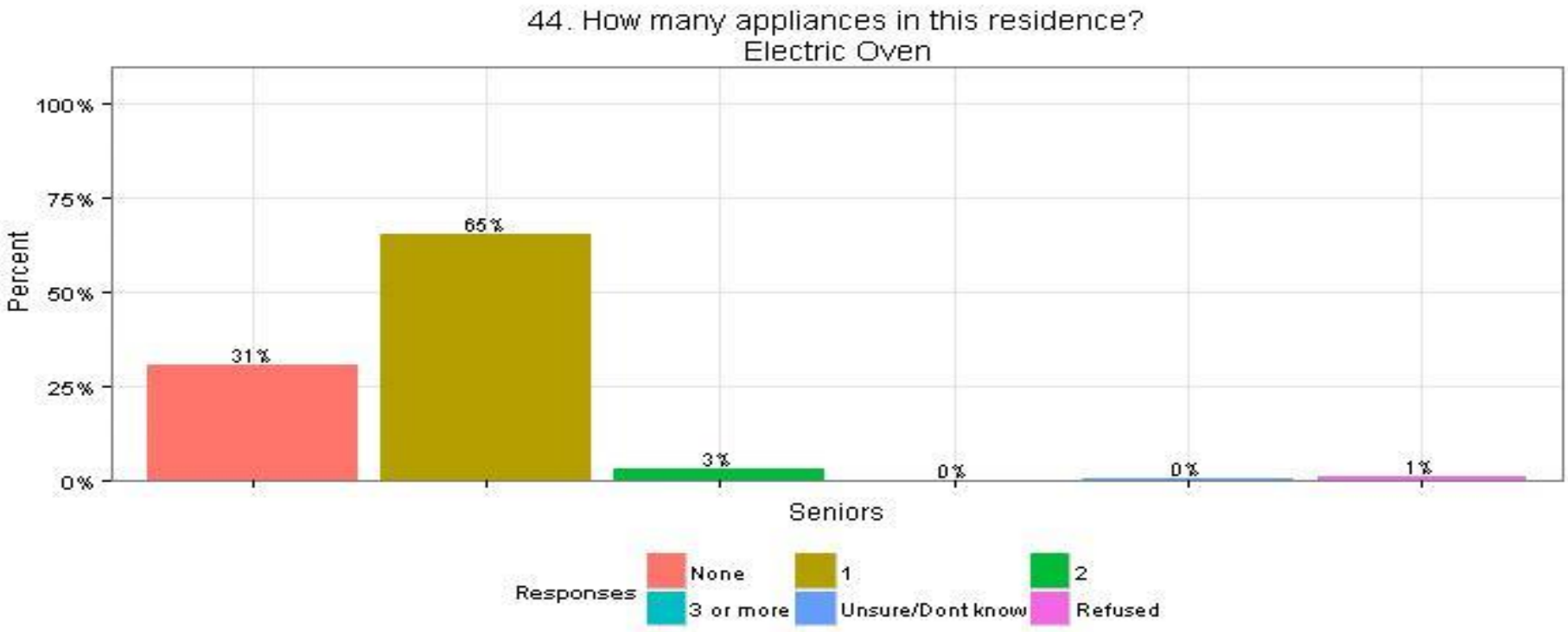
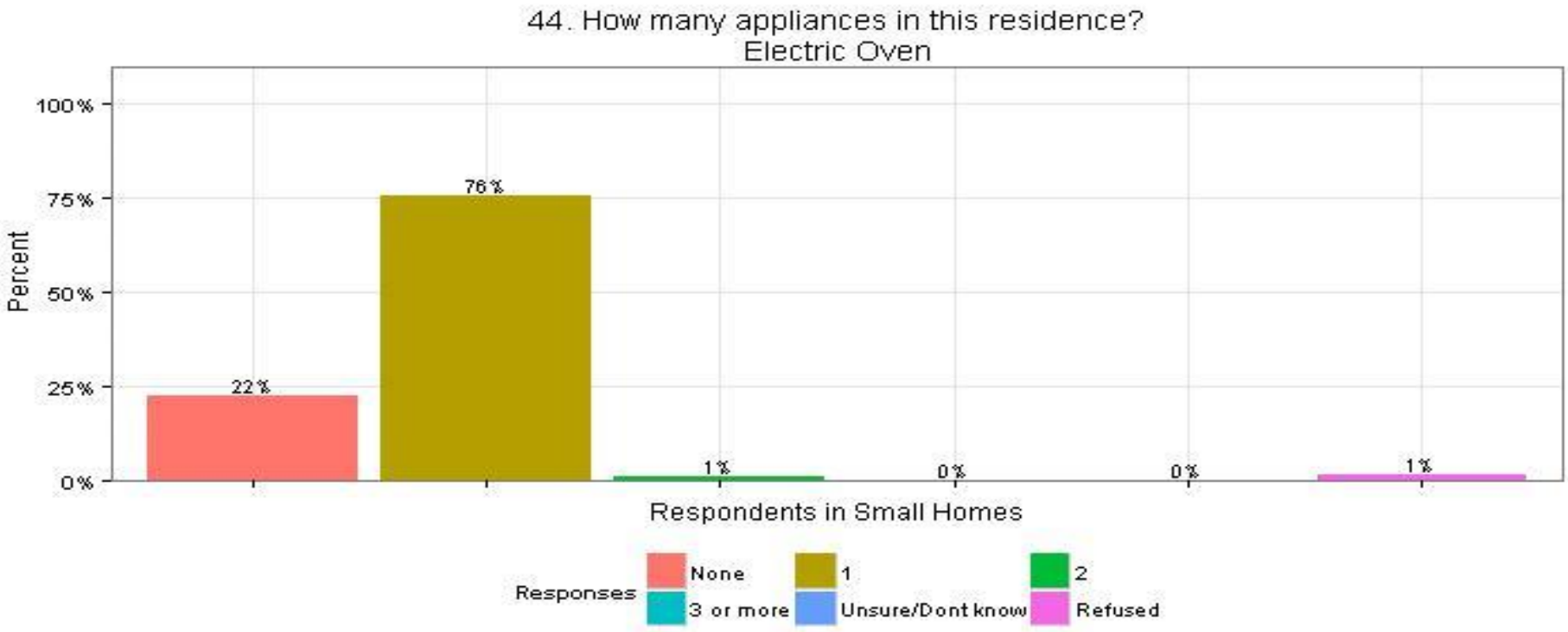
44. How many appliances in this residence?
Electric Oven
High Income Respondents



44. How many appliances in this residence? Electric Oven Seniors



44. How many appliances in this residence? Electric Oven Respondents in Small Homes



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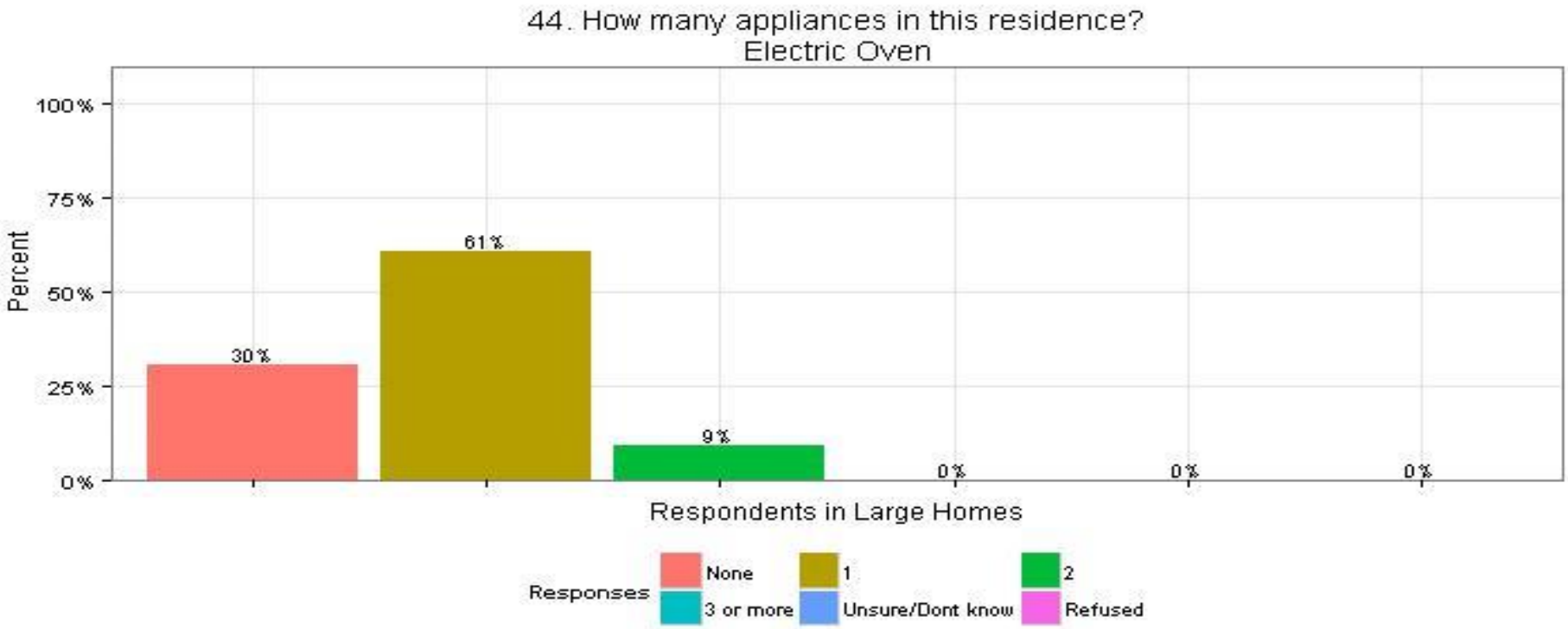
44. How many appliances in this residence? Electric Oven Respondents in Large Homes



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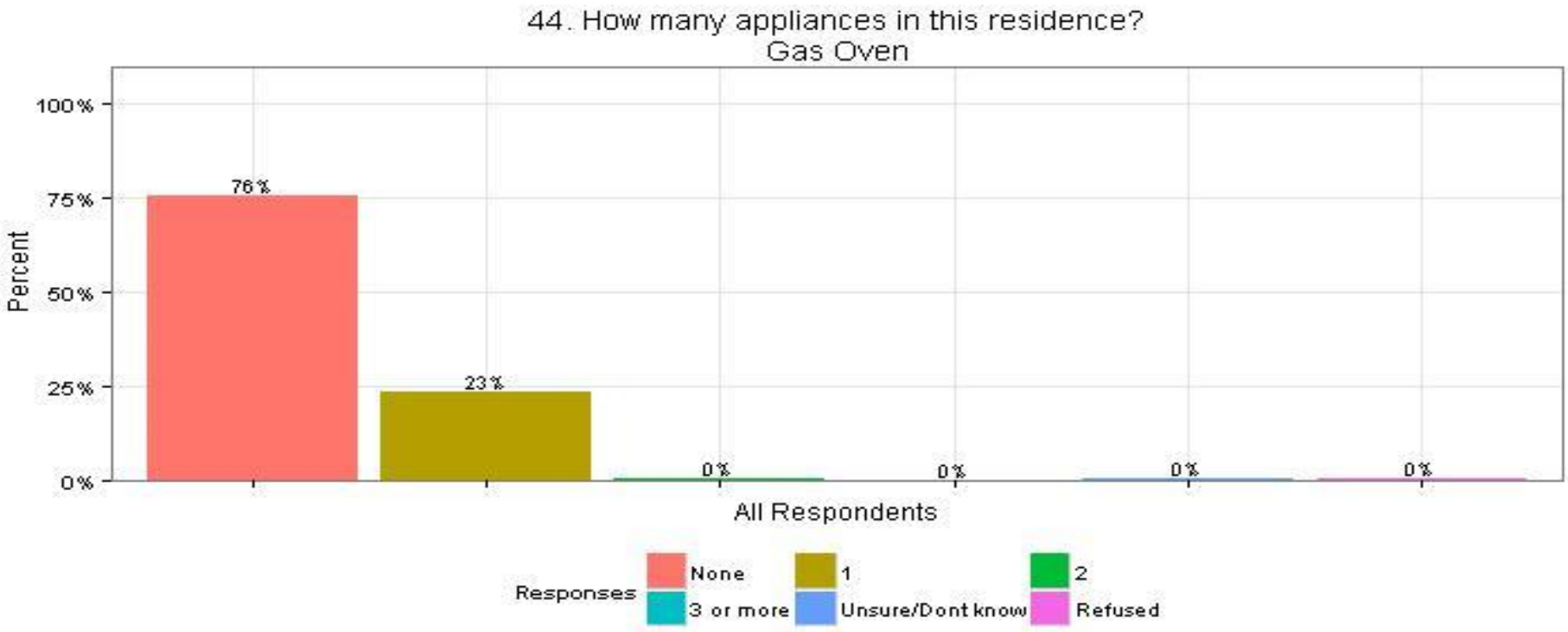
44. How many appliances in this residence? Gas Oven All Respondents



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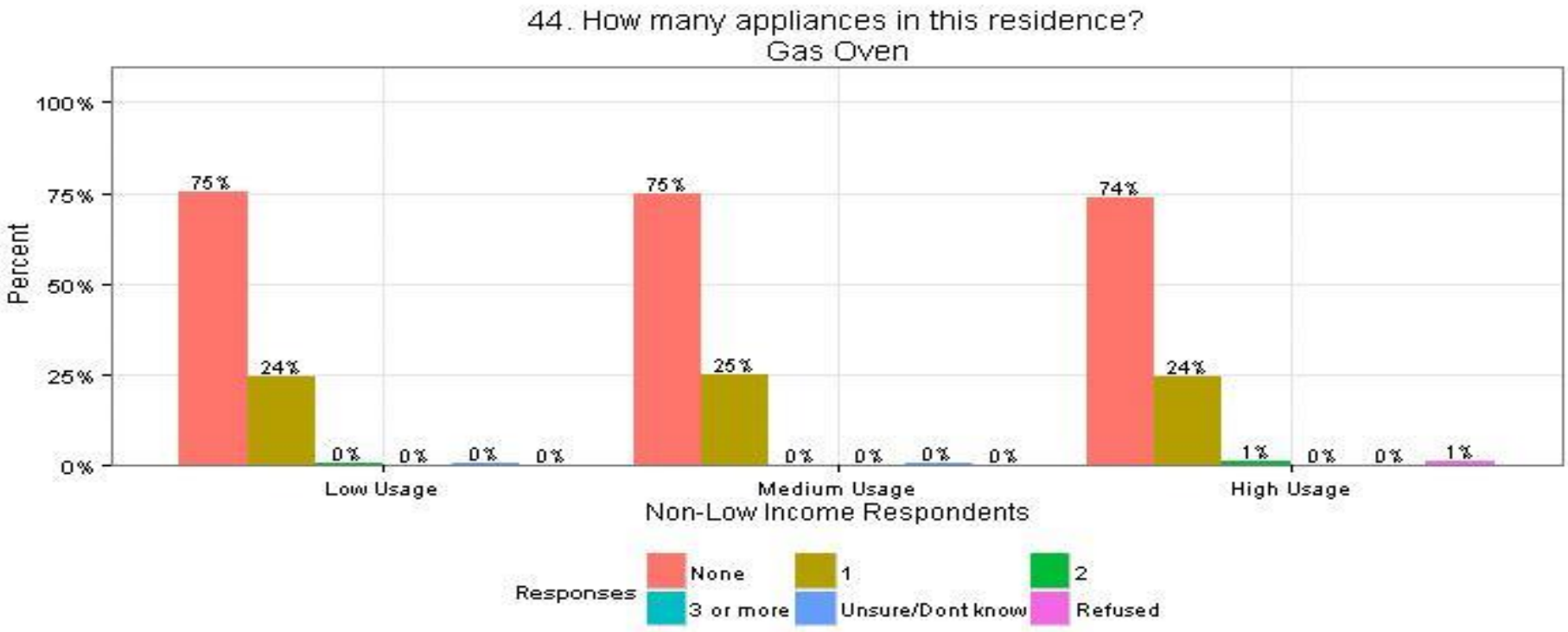
44. How many appliances in this residence? Gas Oven Non-Low Income Respondents



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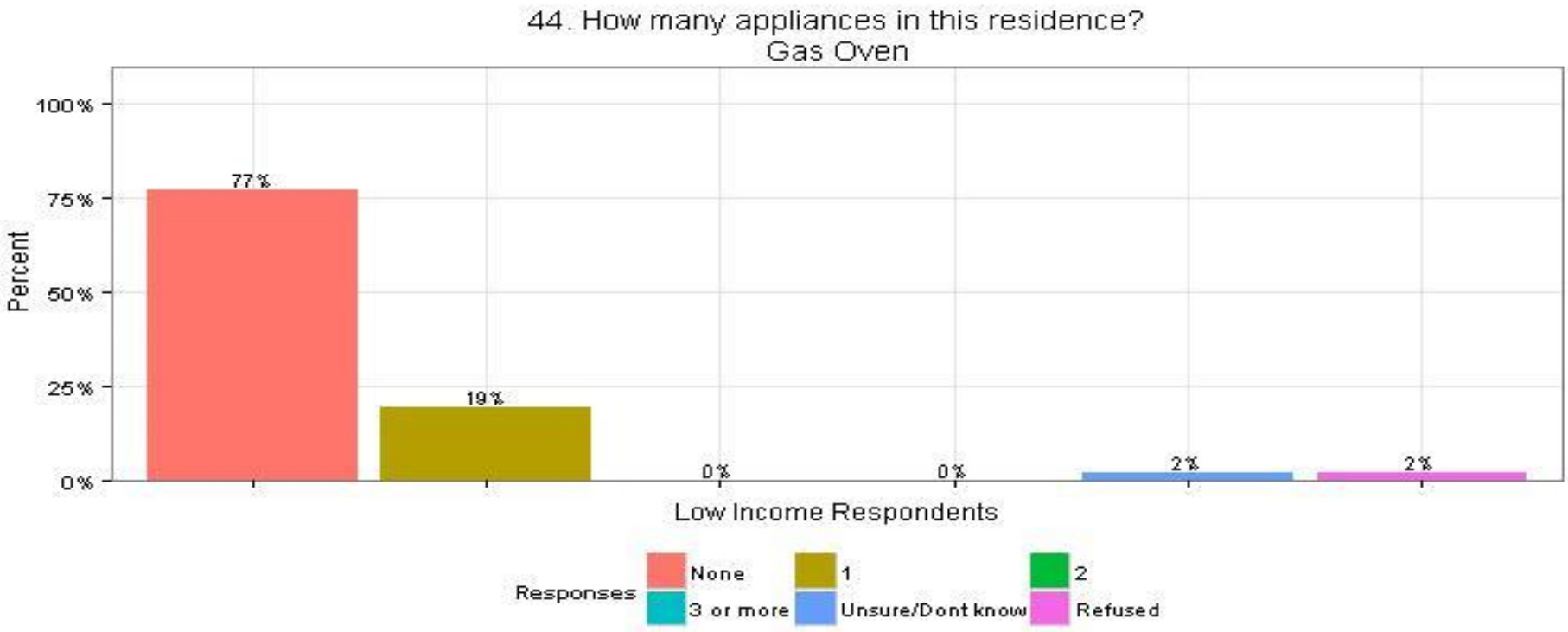
44. How many appliances in this residence? Gas Oven Low Income Respondents



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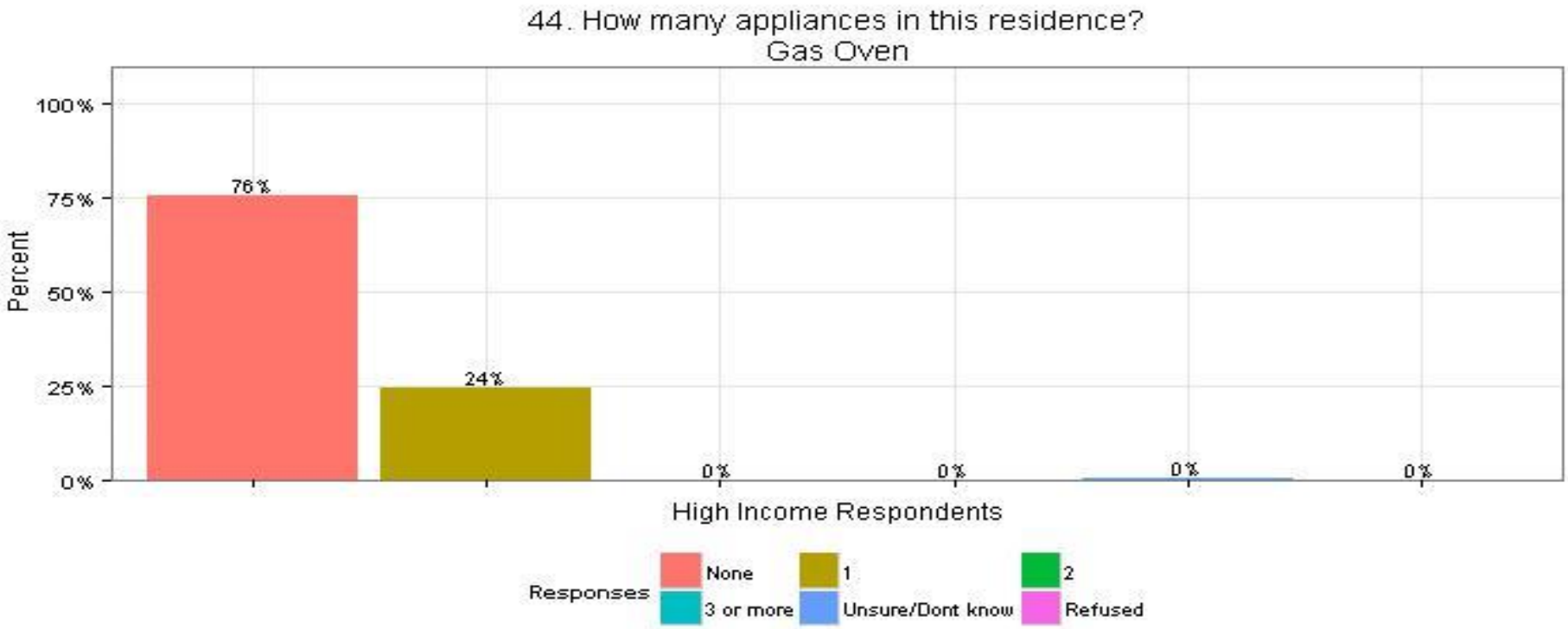
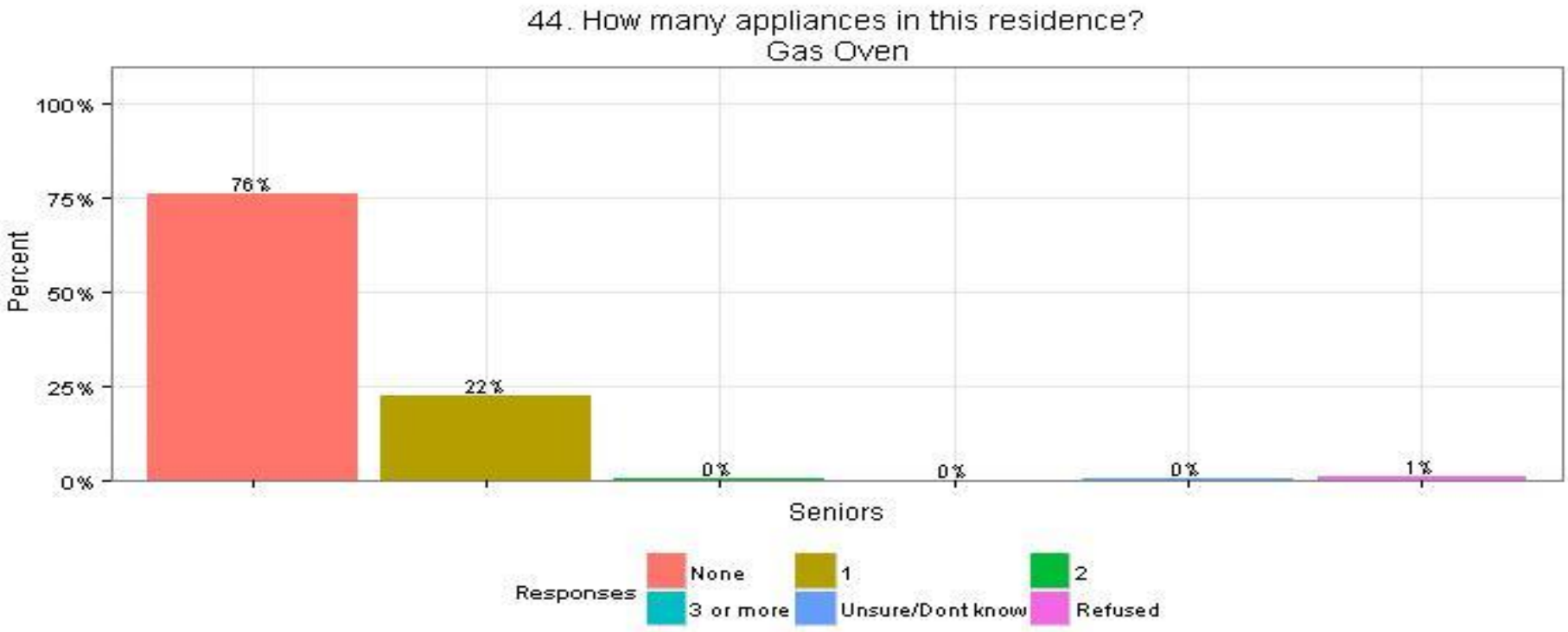
44. How many appliances in this residence?
Gas Oven
High Income Respondents

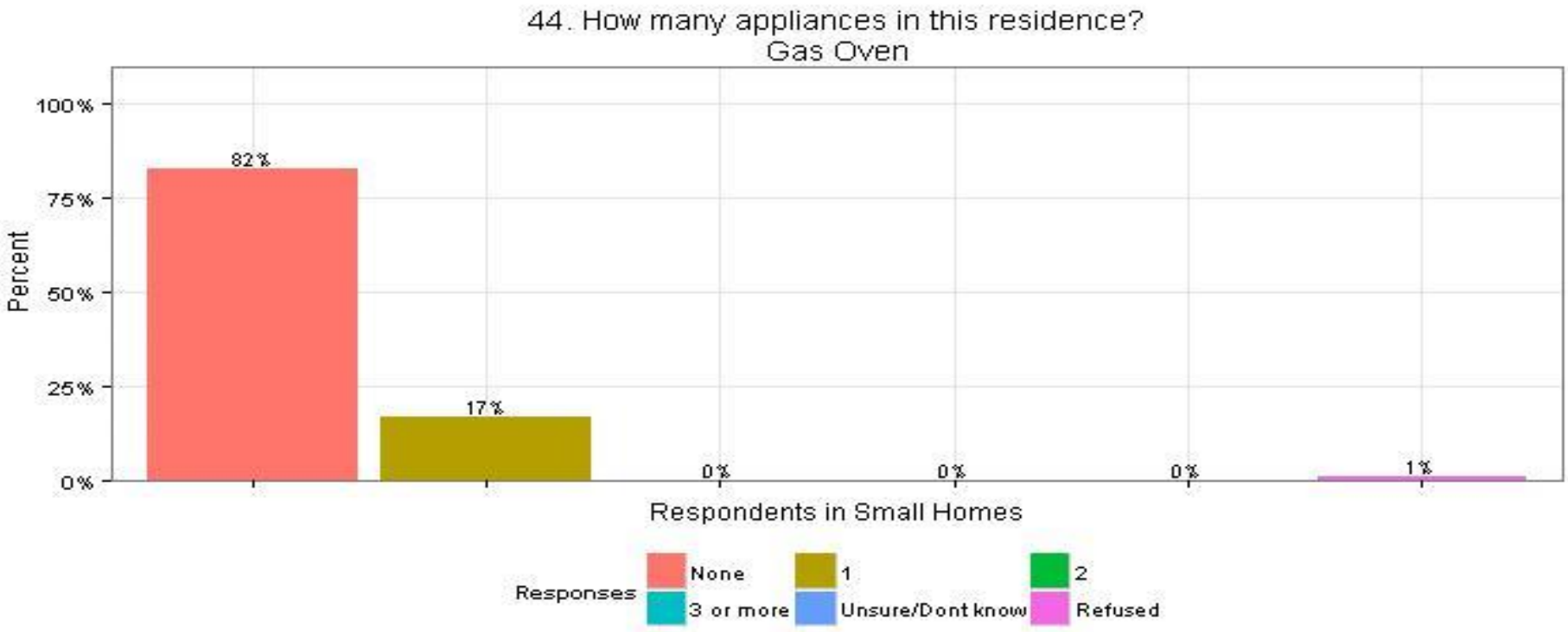


NAVIGANT

44. How many appliances in this residence?
Gas Oven
Seniors

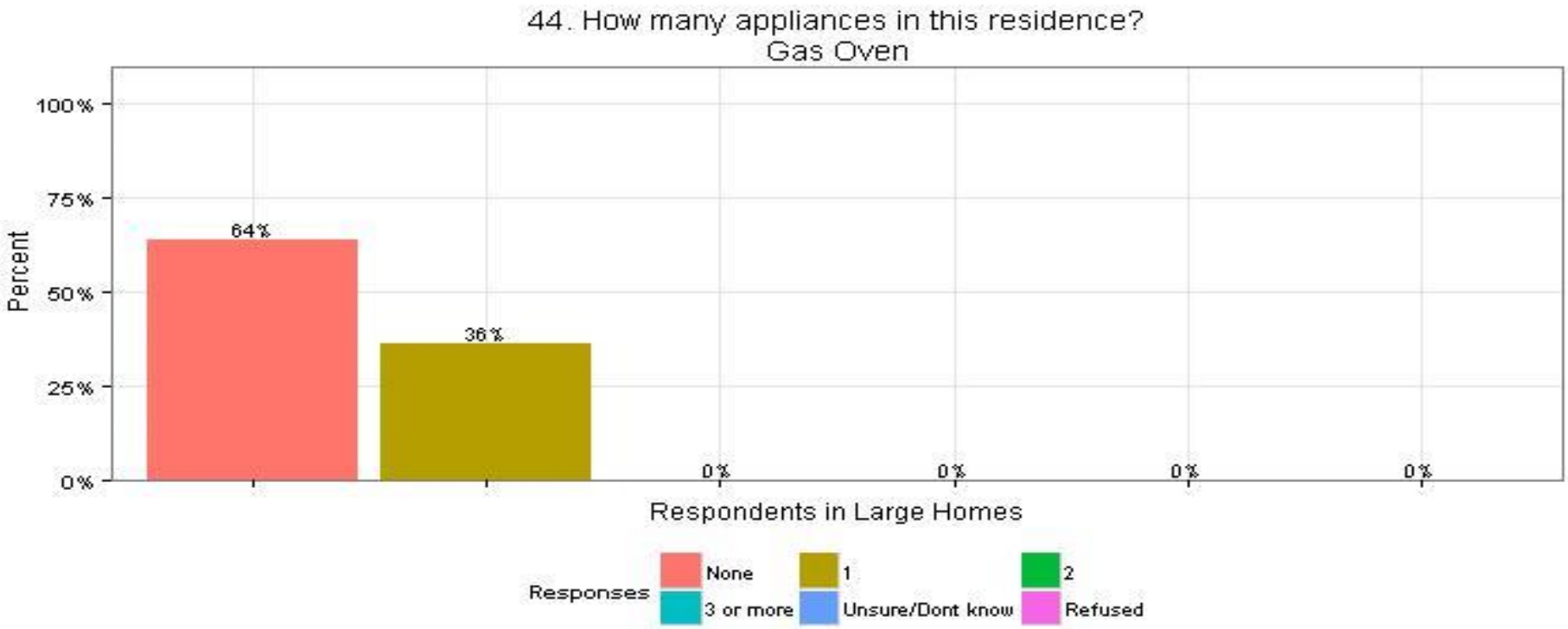


44. How many appliances in this residence? Gas Oven Respondents in Small Homes

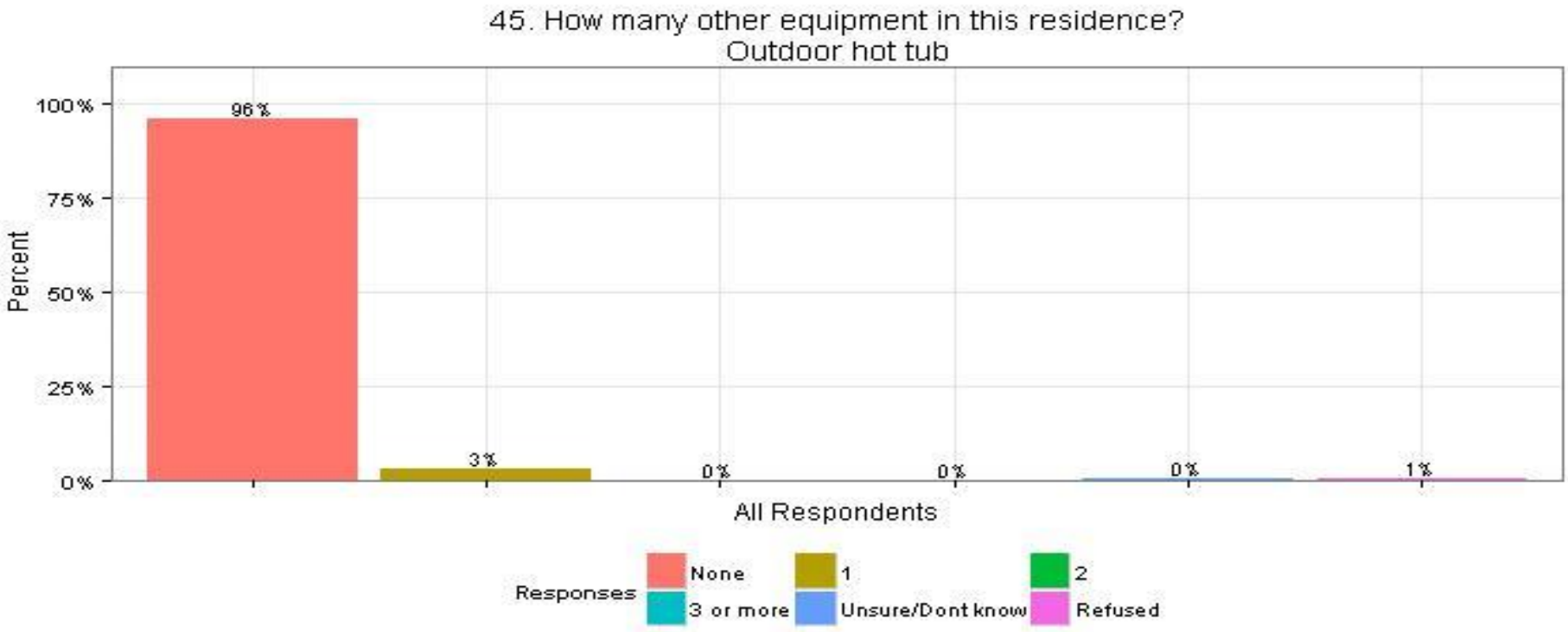


NAVIGANT

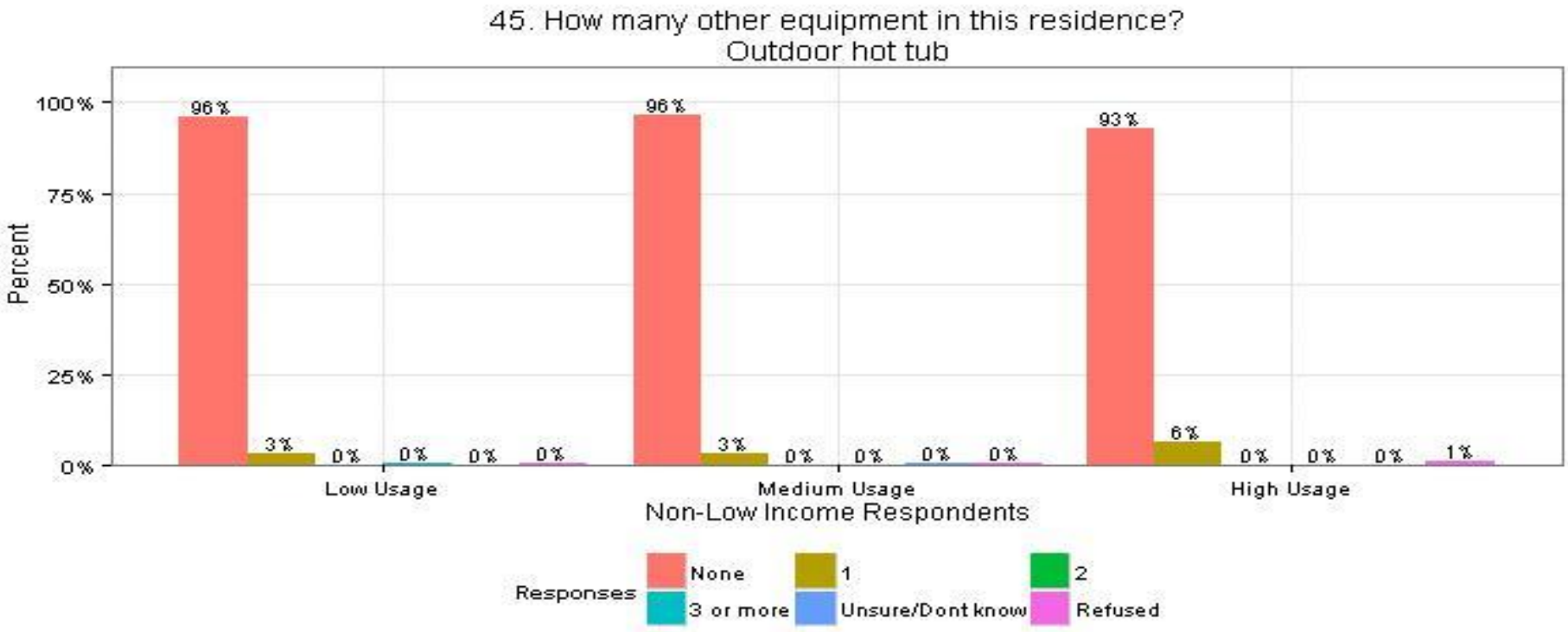
44. How many appliances in this residence? Gas Oven Respondents in Large Homes



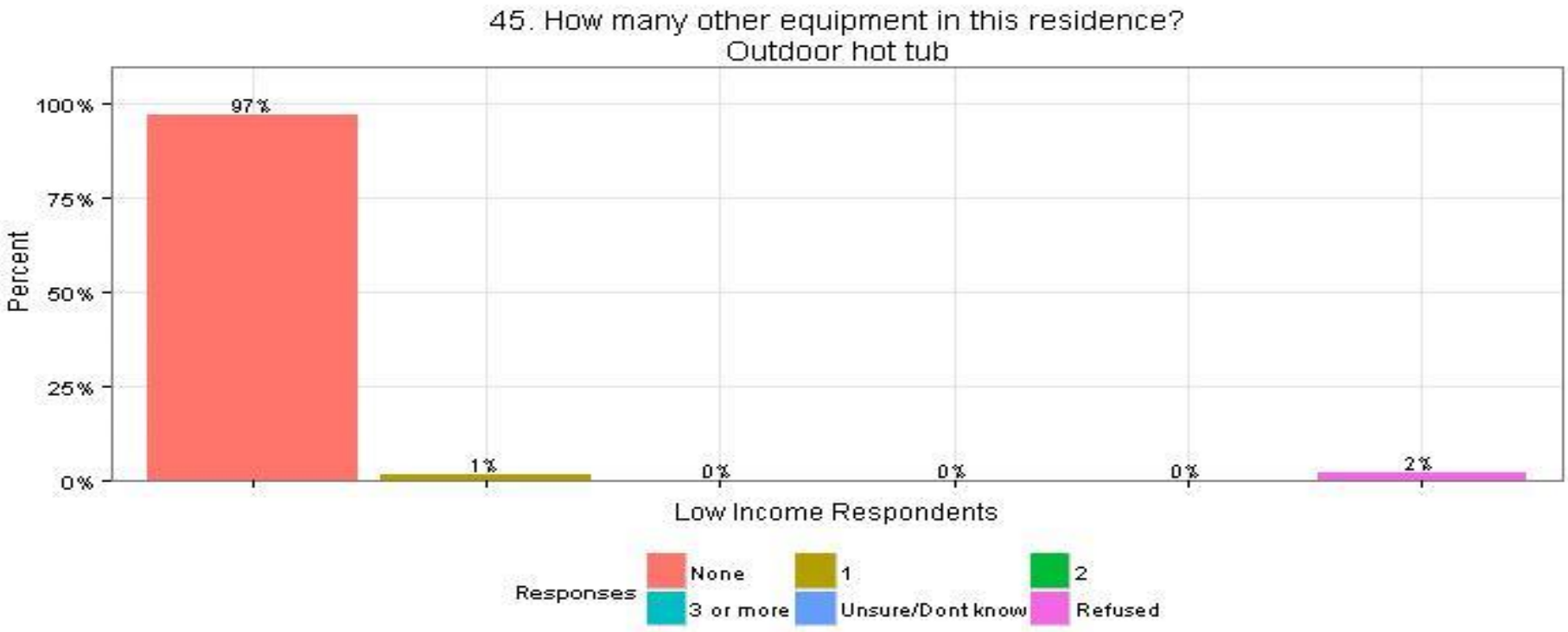
45. How many other equipment in this residence? Outdoor hot tub All Respondents



45. How many other equipment in this residence?
Outdoor hot tub
Non-Low Income Respondents

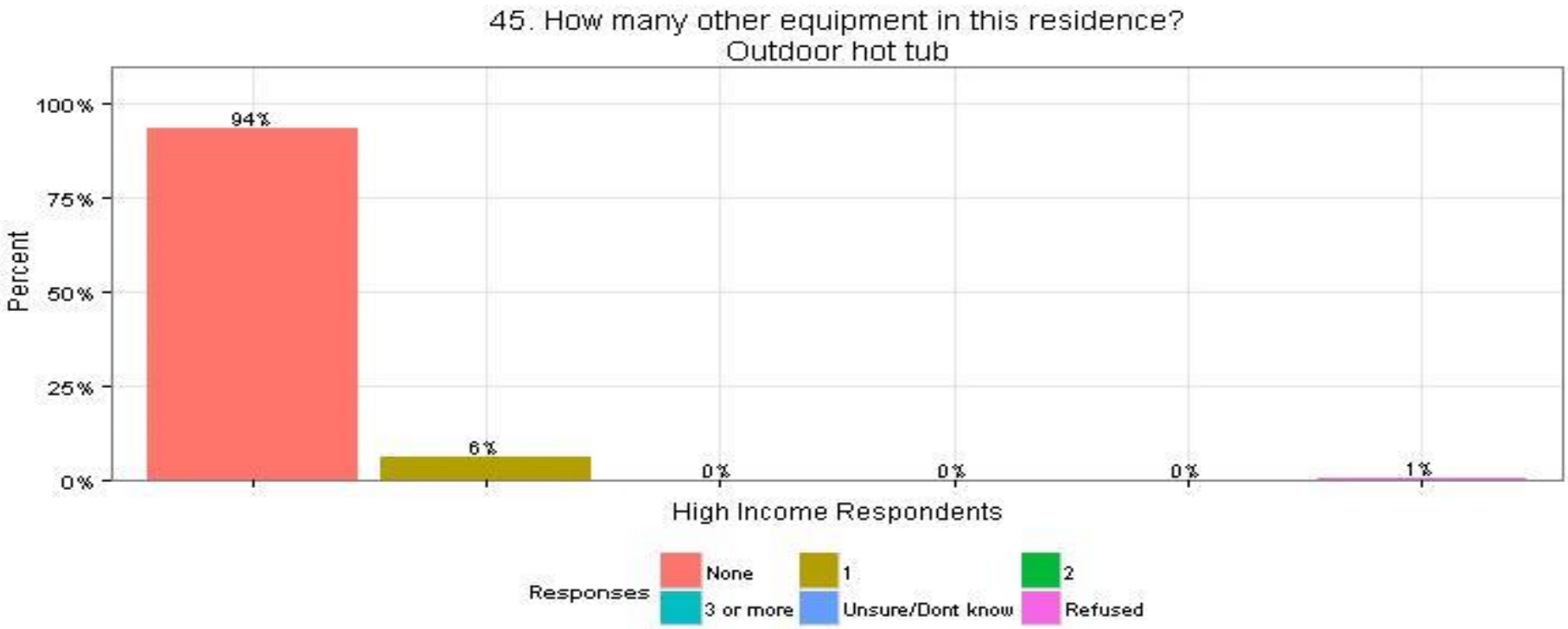


45. How many other equipment in this residence?
Outdoor hot tub
Low Income Respondents



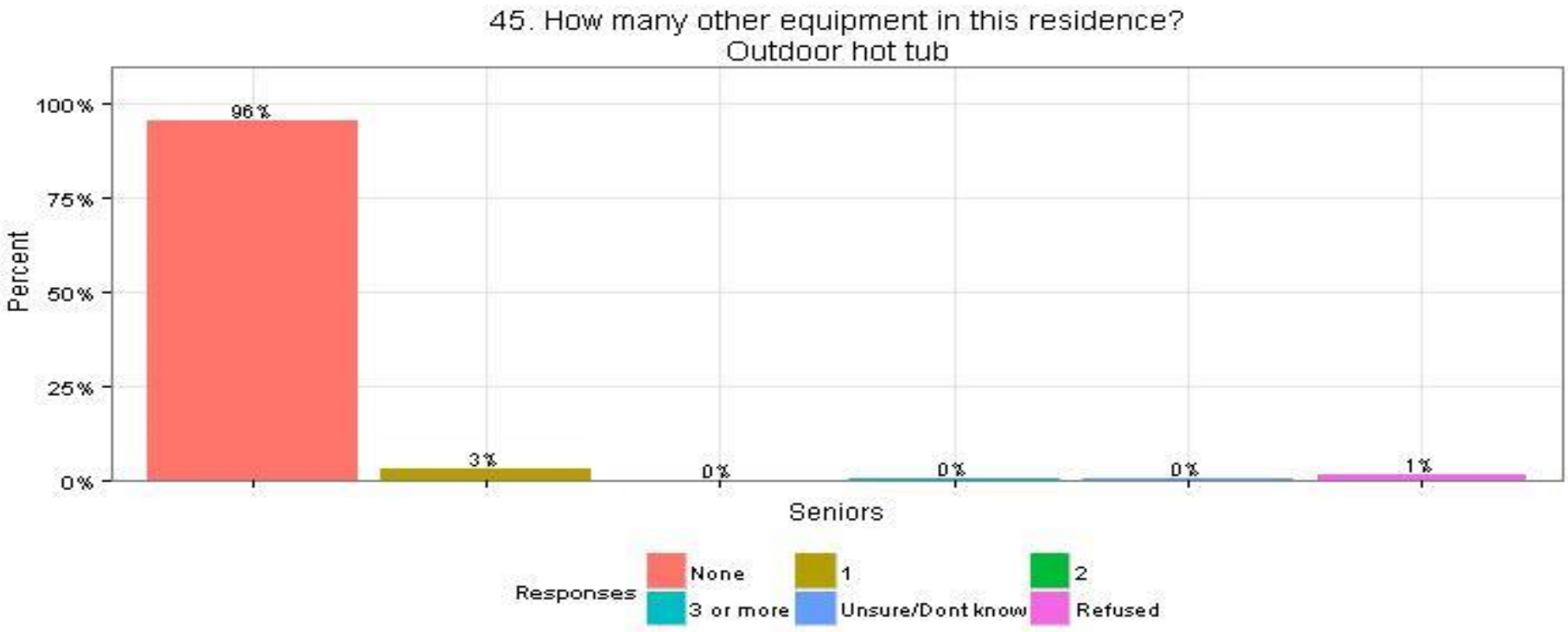
NAVIGANT

45. How many other equipment in this residence? Outdoor hot tub High Income Respondents



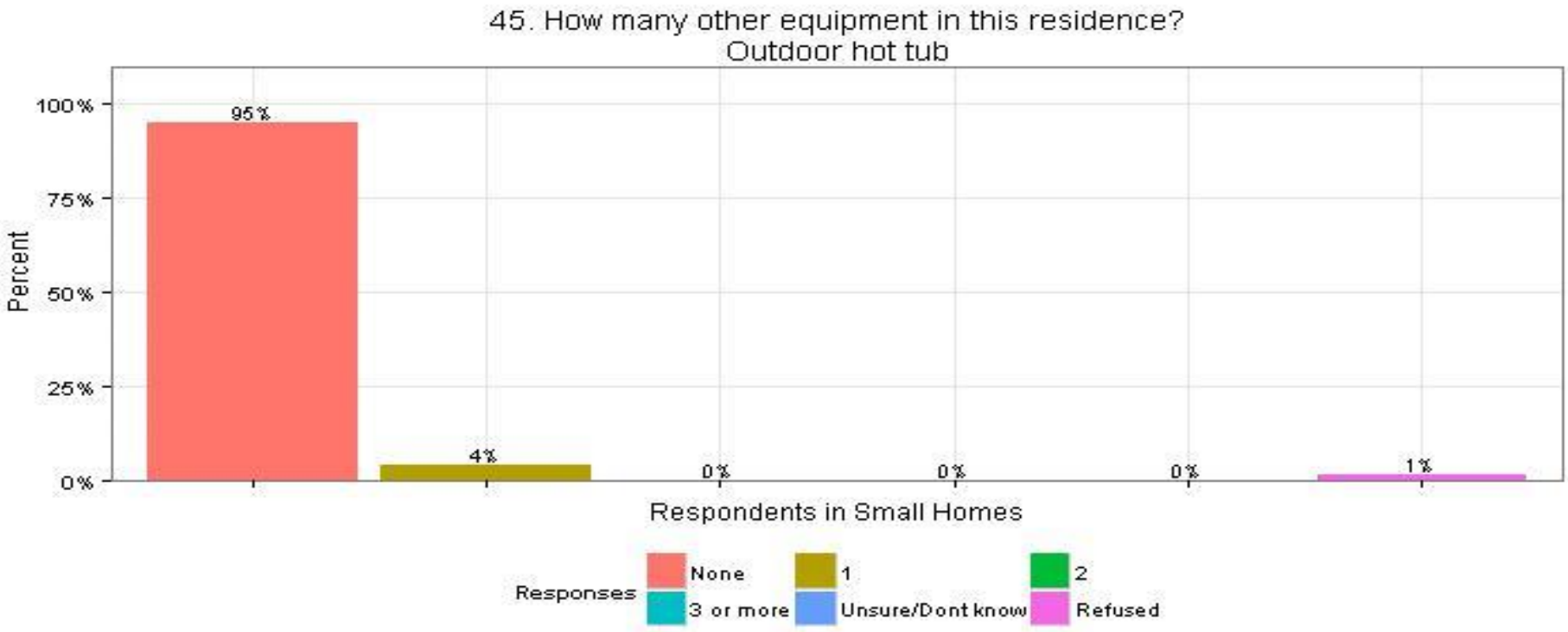
NAVIGANT

45. How many other equipment in this residence? Outdoor hot tub Seniors



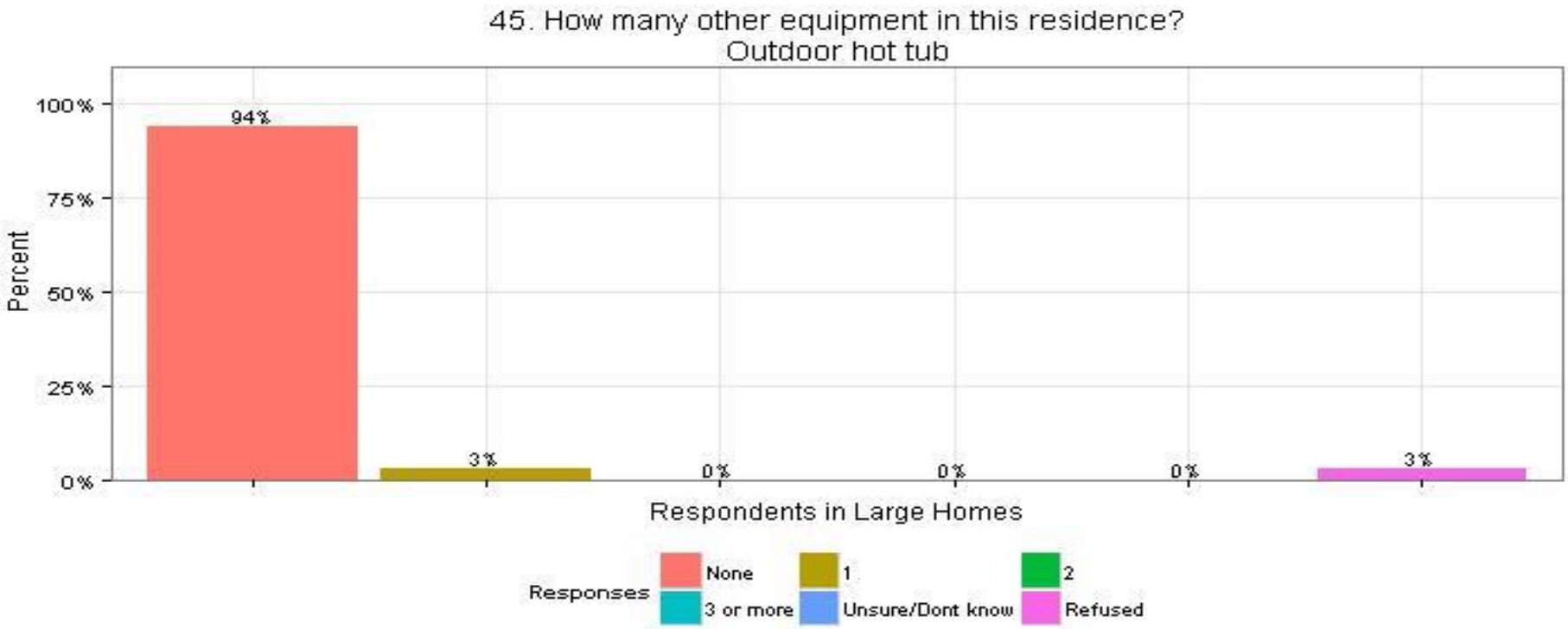
NAVIGANT

45. How many other equipment in this residence? Outdoor hot tub Respondents in Small Homes



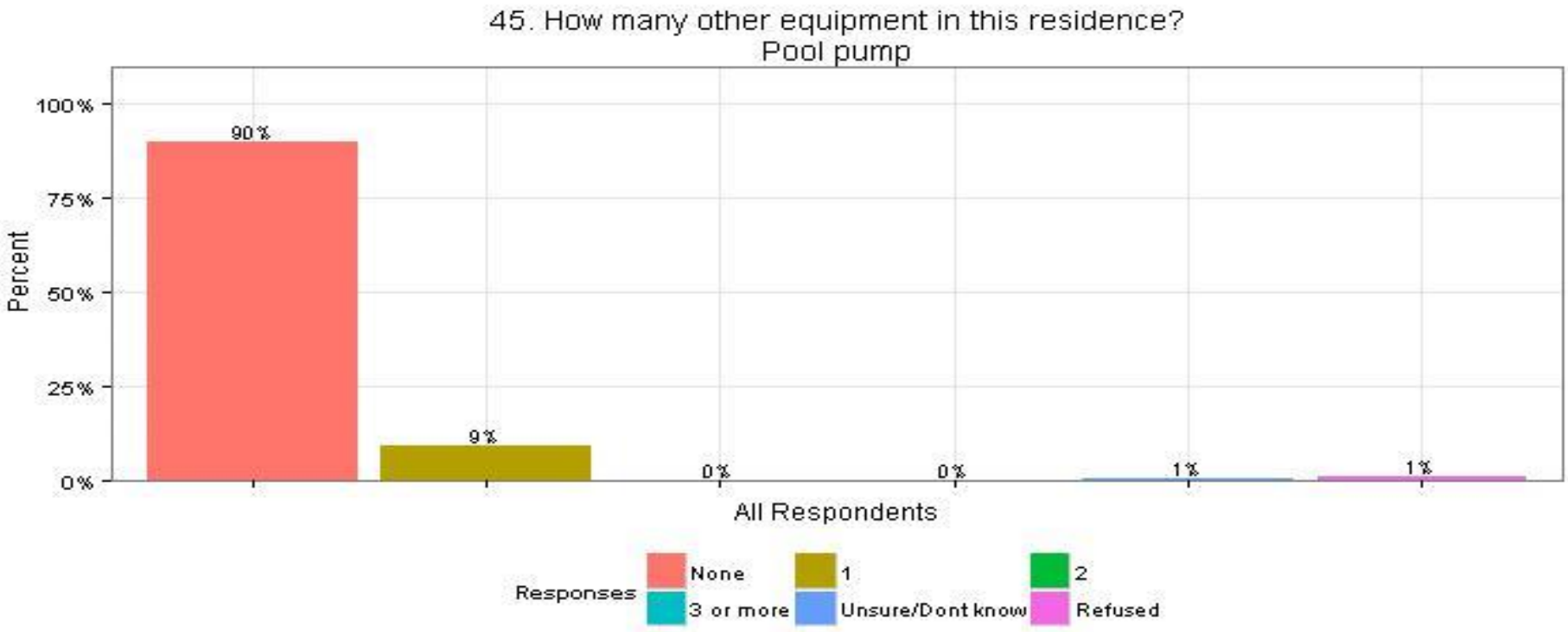
NAVIGANT

45. How many other equipment in this residence? Outdoor hot tub Respondents in Large Homes

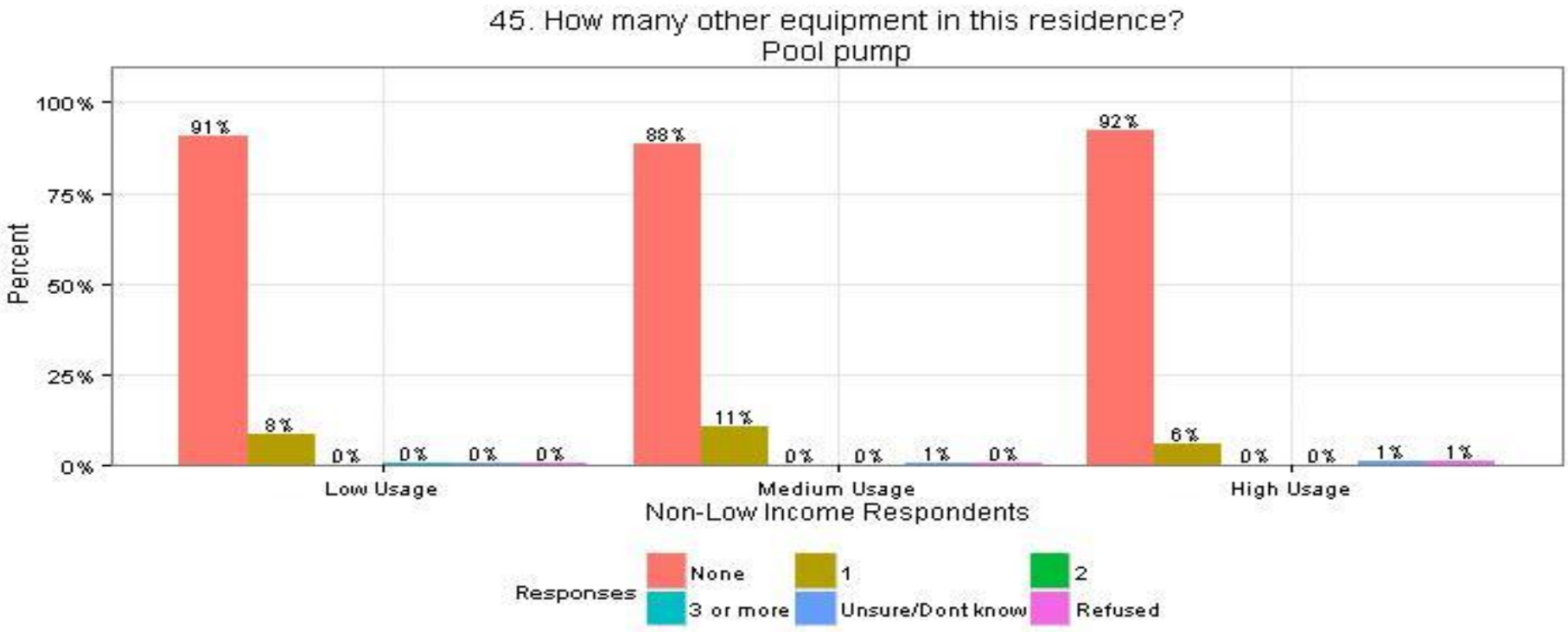


NAVIGANT

45. How many other equipment in this residence? Pool pump All Respondents

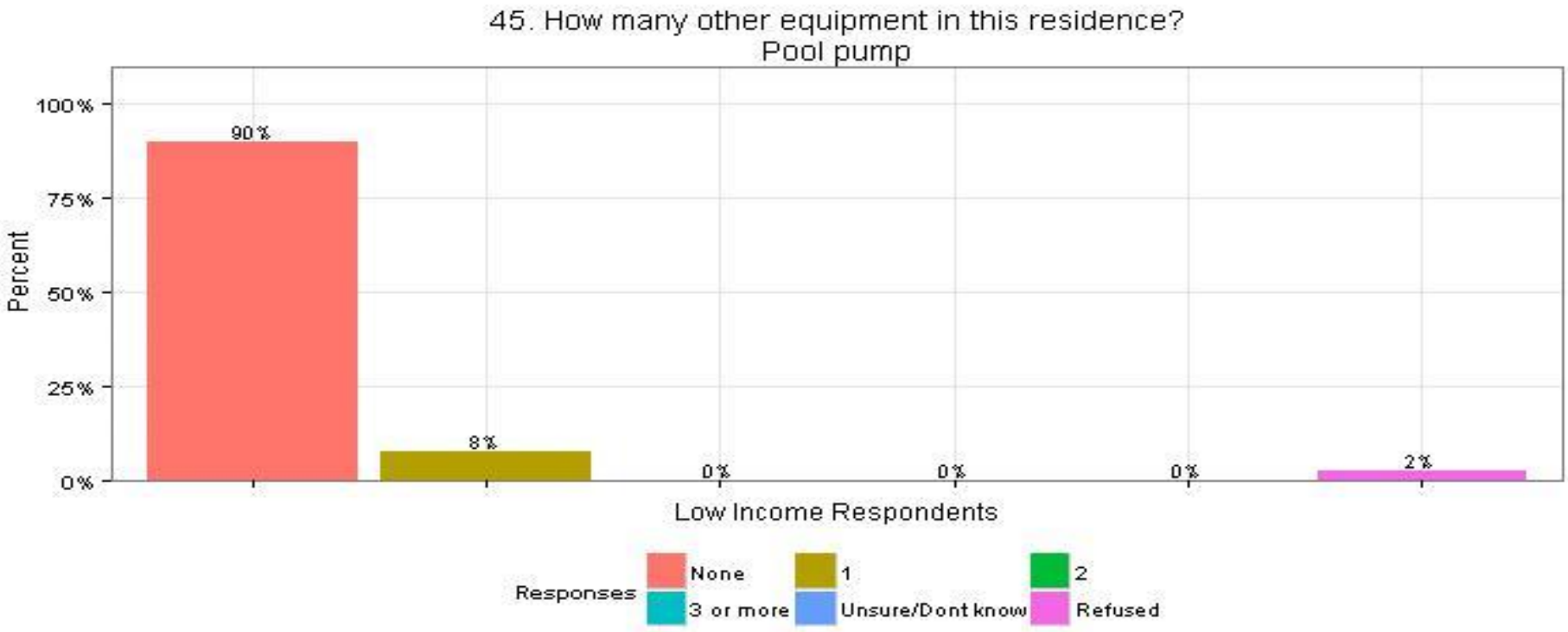


45. How many other equipment in this residence?
Pool pump
Non-Low Income Respondents

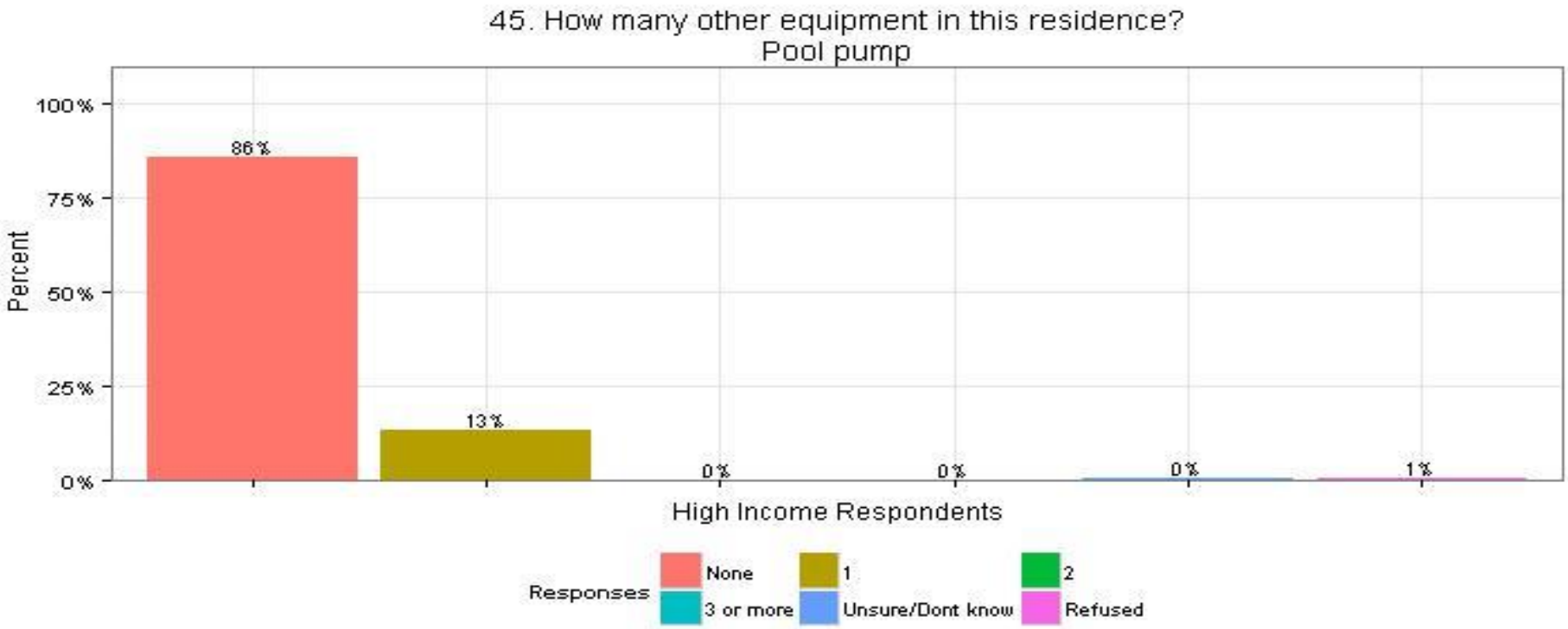


NAVIGANT

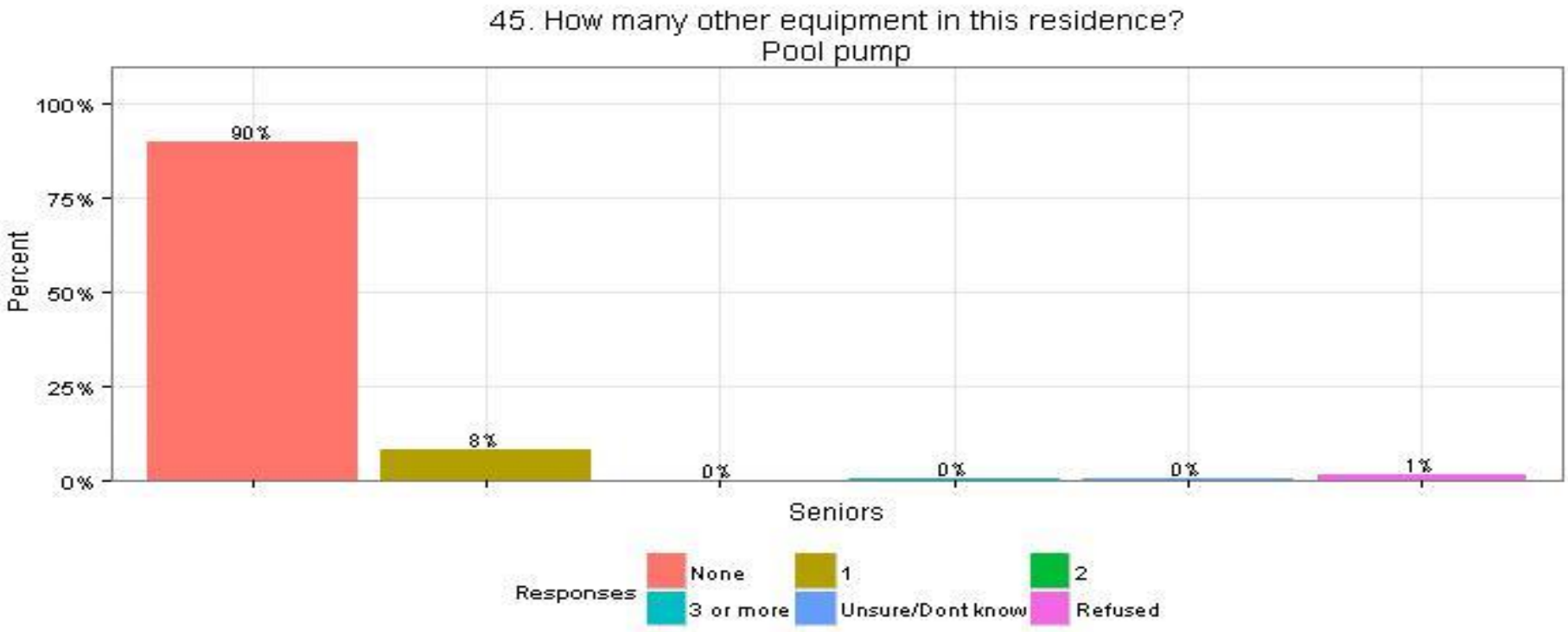
45. How many other equipment in this residence? Pool pump Low Income Respondents



45. How many other equipment in this residence? Pool pump High Income Respondents

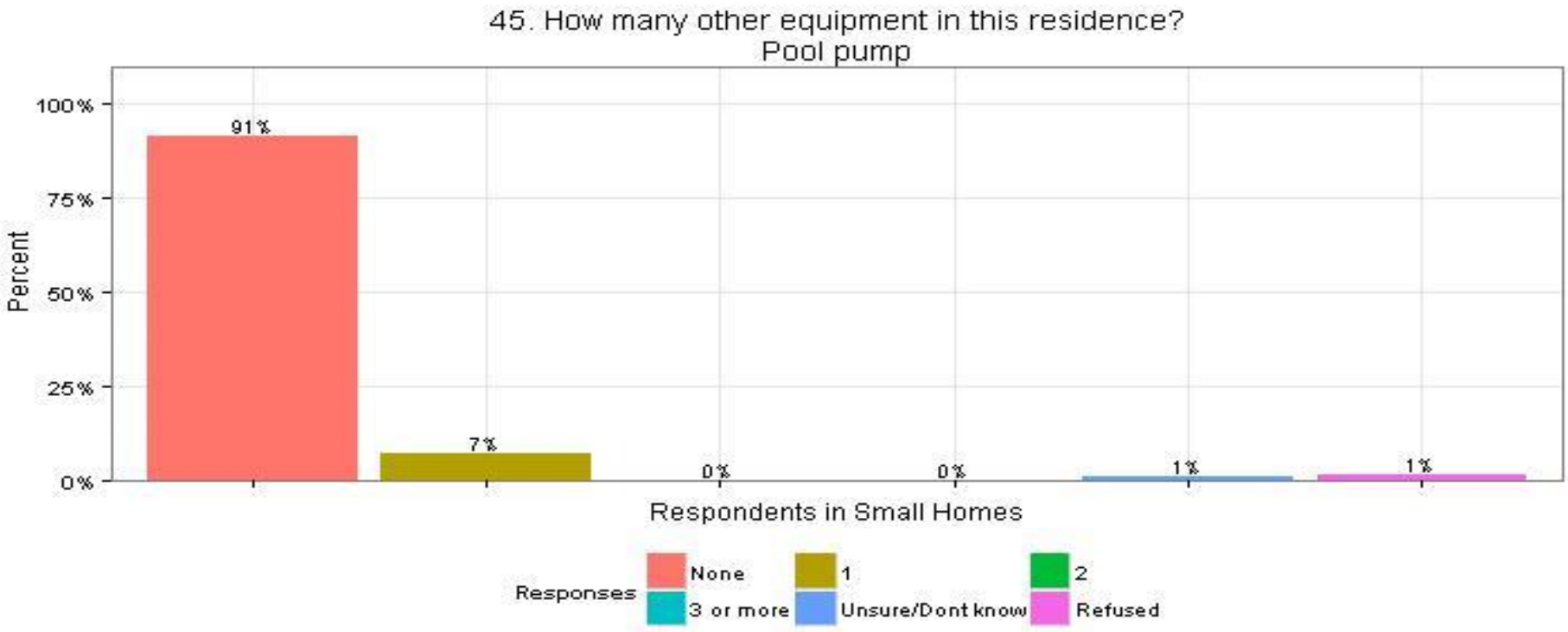


45. How many other equipment in this residence?
Pool pump
Seniors



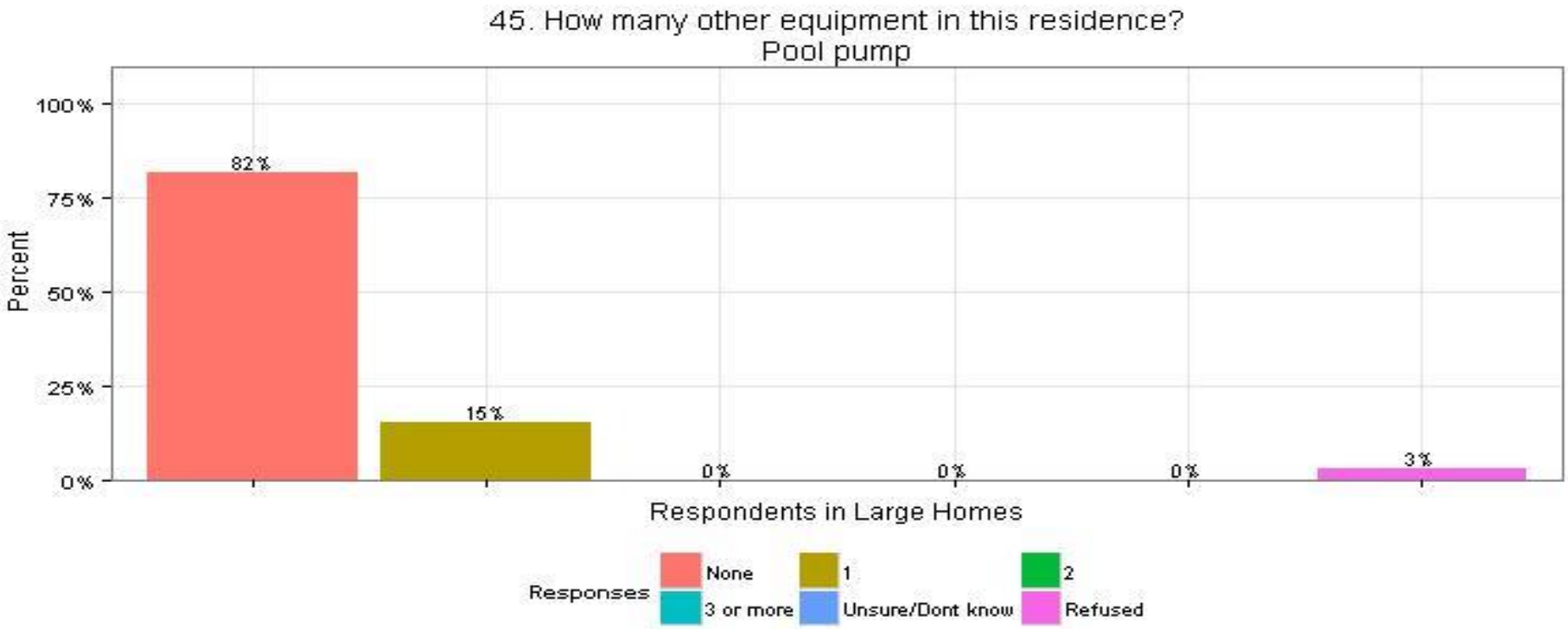
NAVIGANT

45. How many other equipment in this residence? Pool pump Respondents in Small Homes

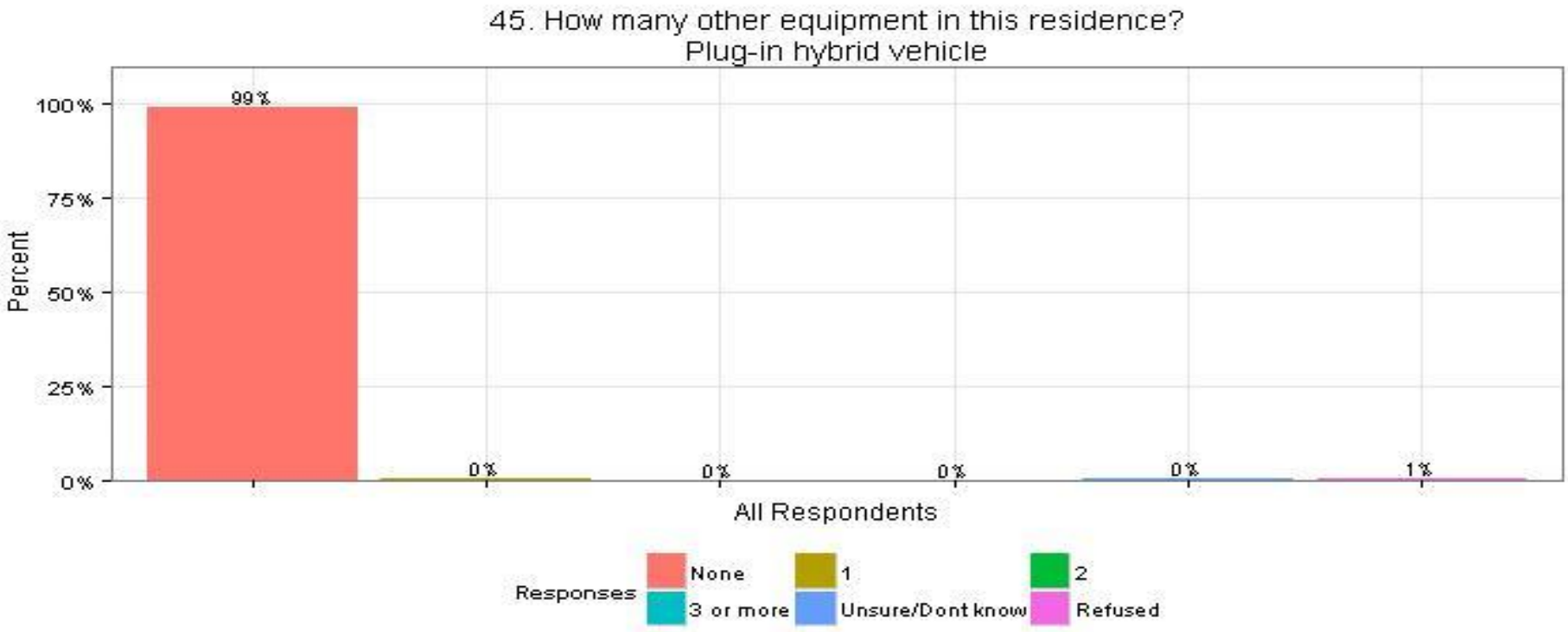


NAVIGANT

45. How many other equipment in this residence? Pool pump Respondents in Large Homes

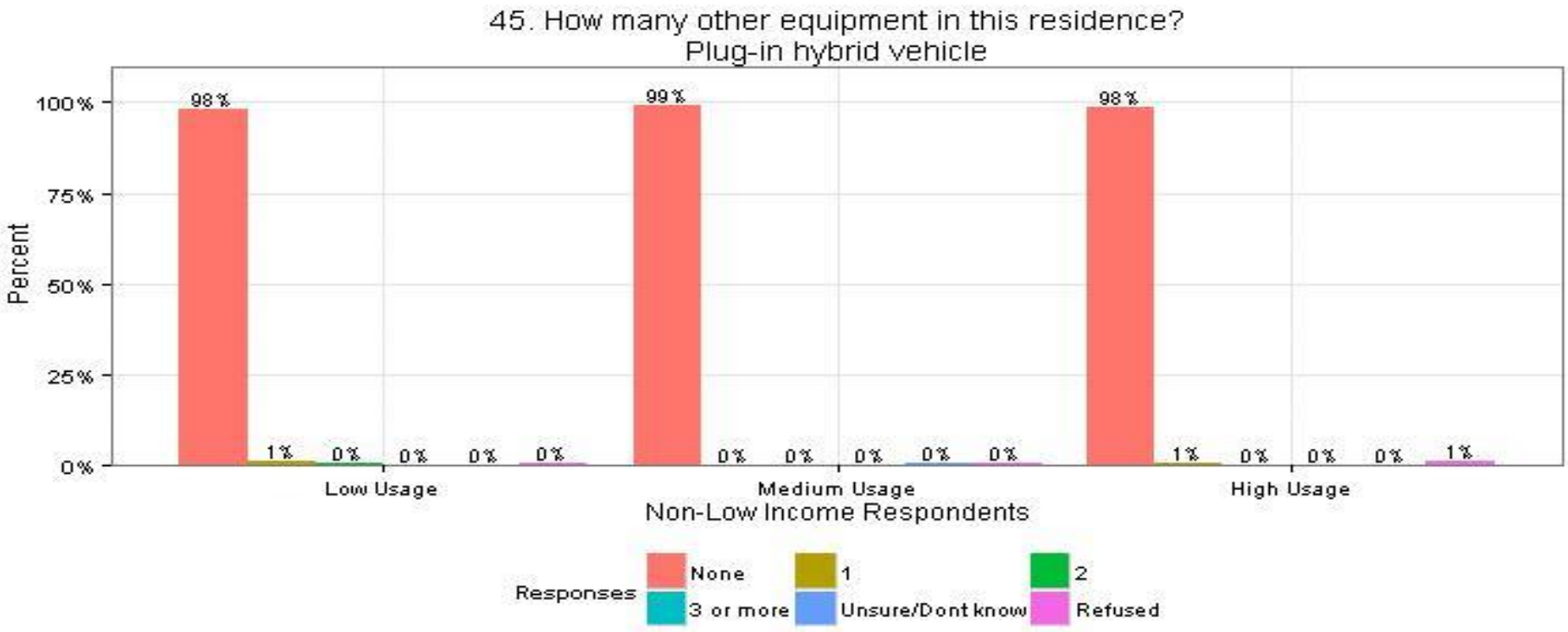


45. How many other equipment in this residence? Plug-in hybrid vehicle All Respondents



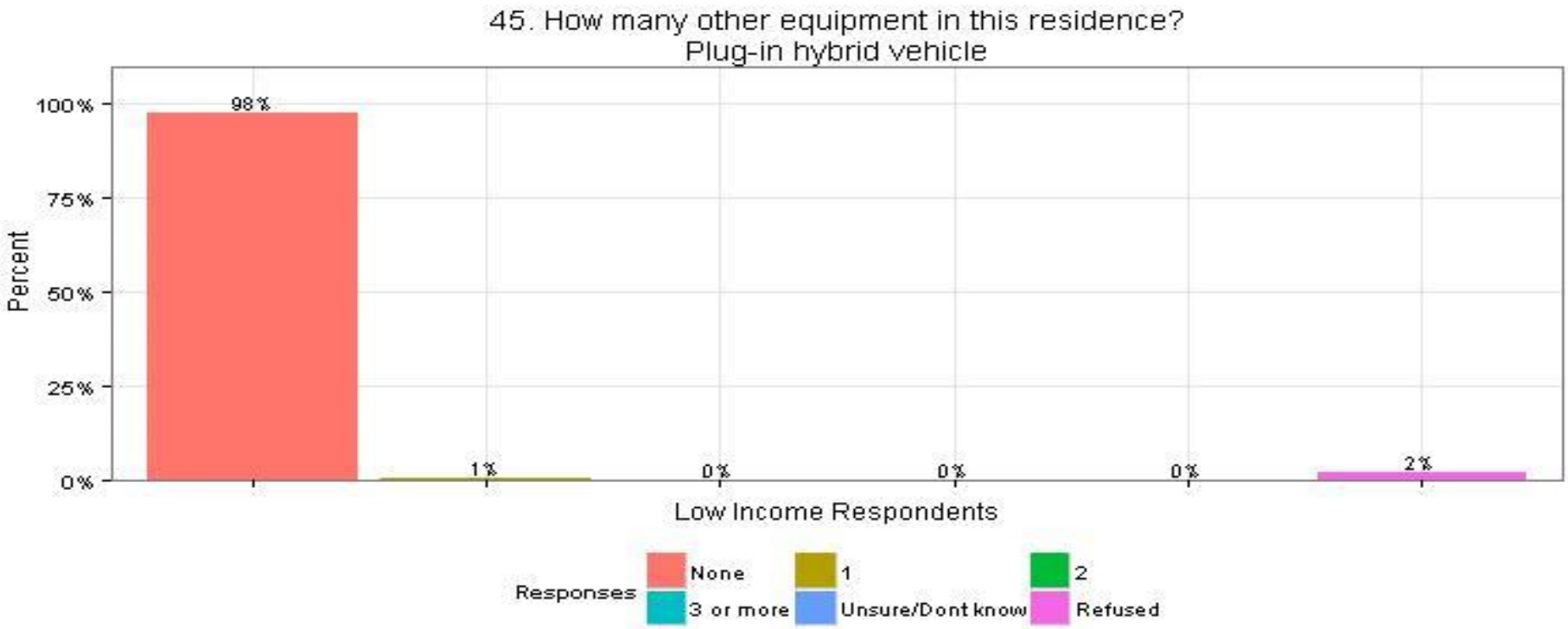
NAVIGANT

45. How many other equipment in this residence?
Plug-in hybrid vehicle
Non-Low Income Respondents



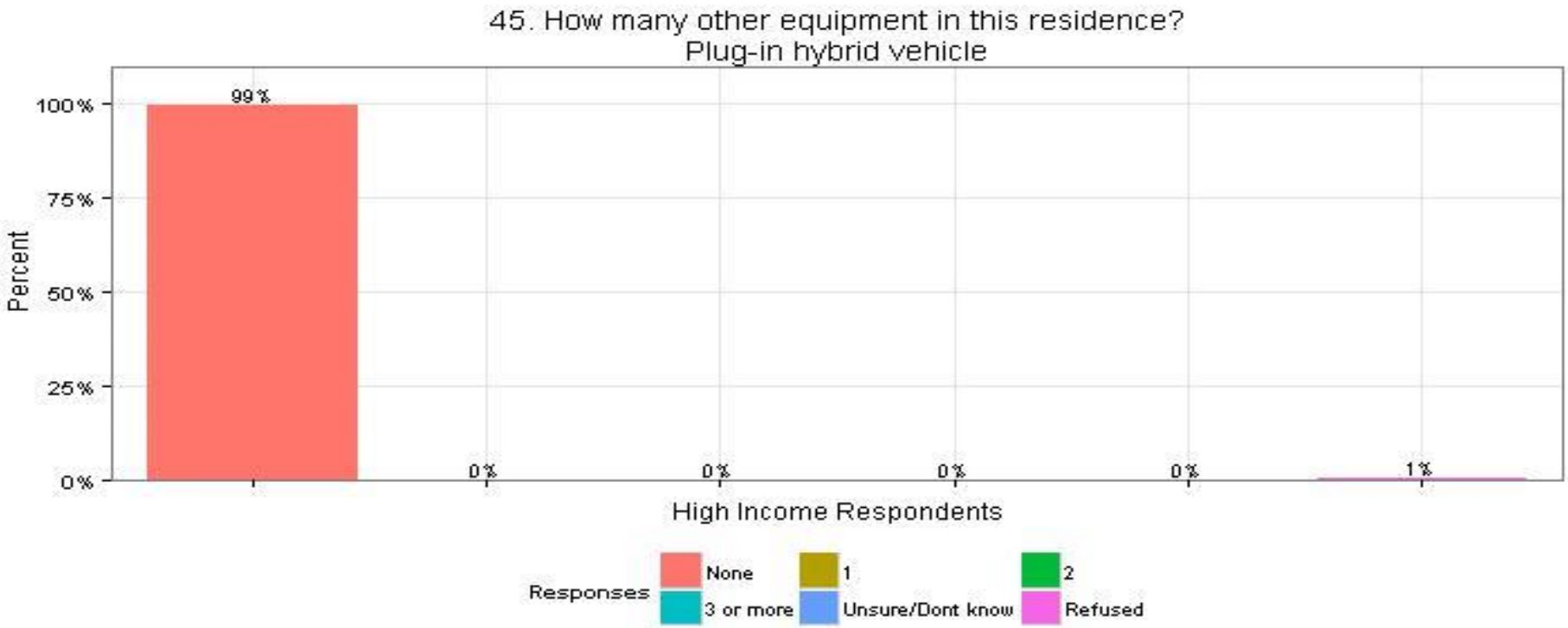
NAVIGANT

45. How many other equipment in this residence? Plug-in hybrid vehicle Low Income Respondents



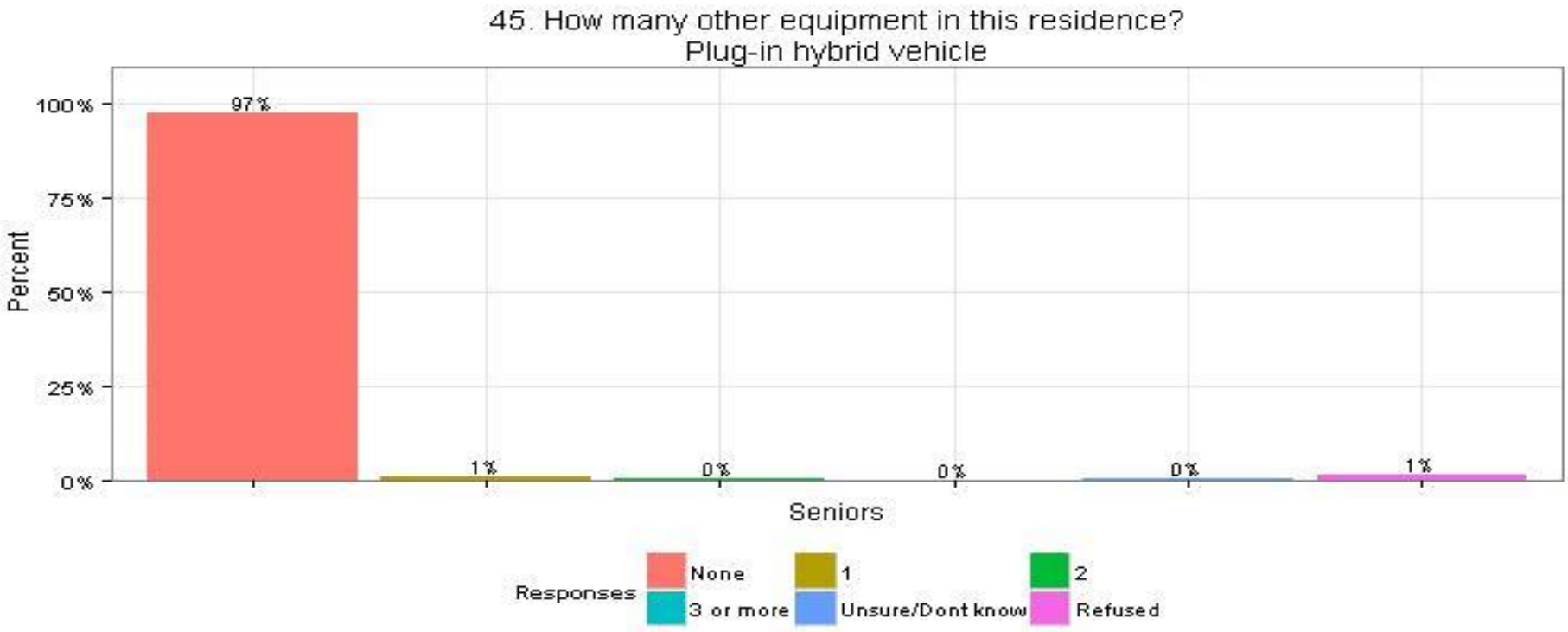
NAVIGANT

45. How many other equipment in this residence?
Plug-in hybrid vehicle
High Income Respondents



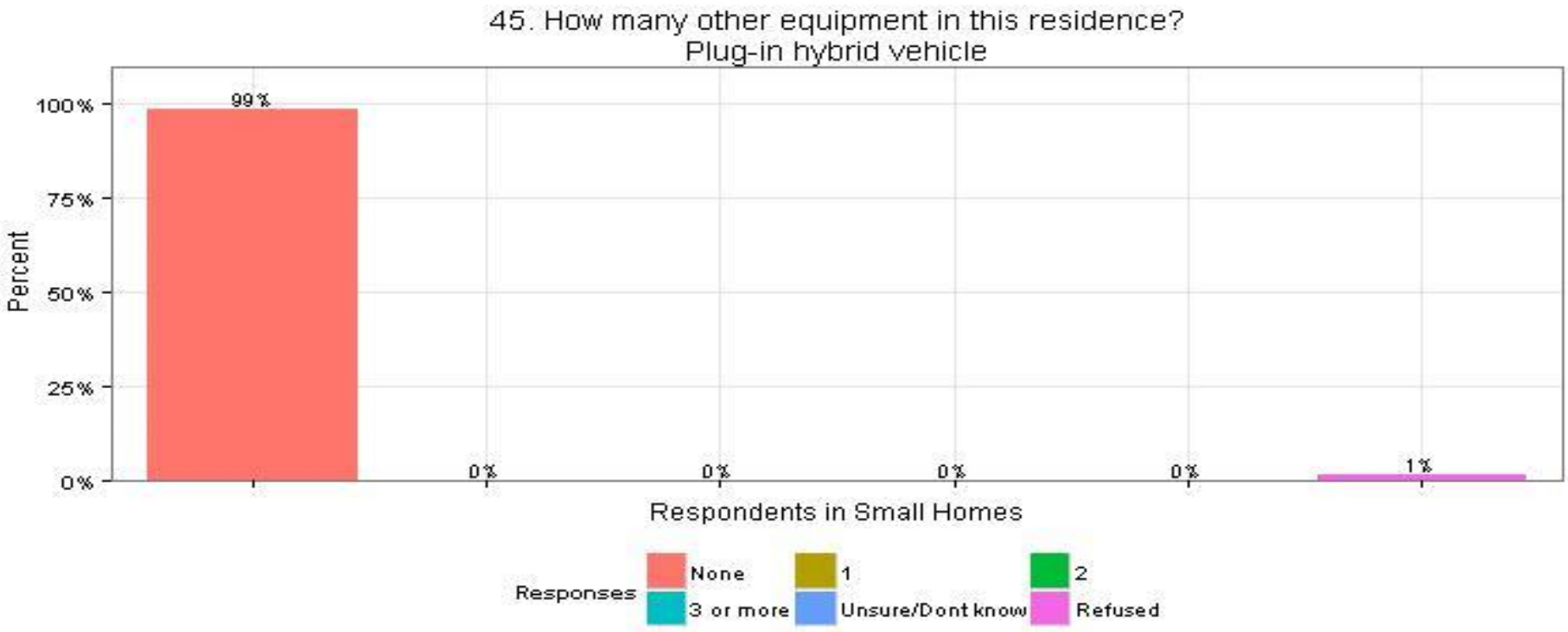
NAVIGANT

45. How many other equipment in this residence? Plug-in hybrid vehicle Seniors



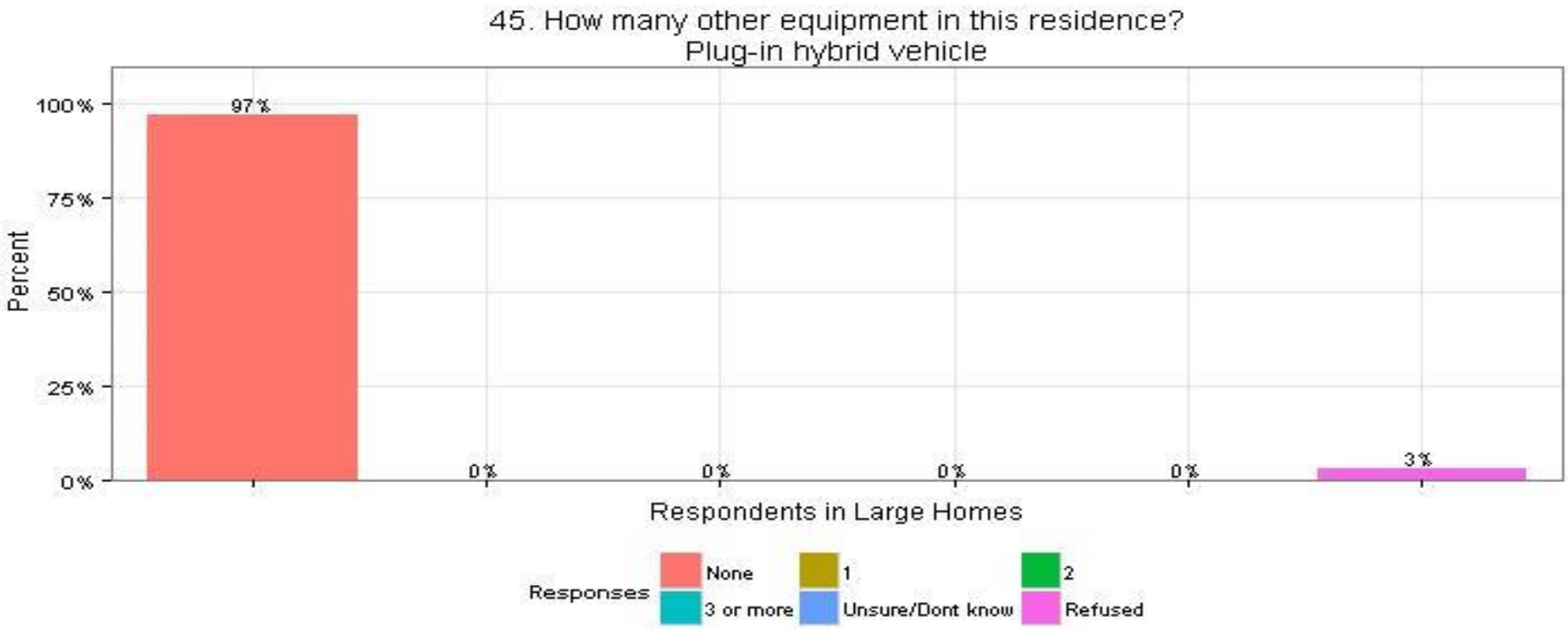
NAVIGANT

45. How many other equipment in this residence? Plug-in hybrid vehicle Respondents in Small Homes



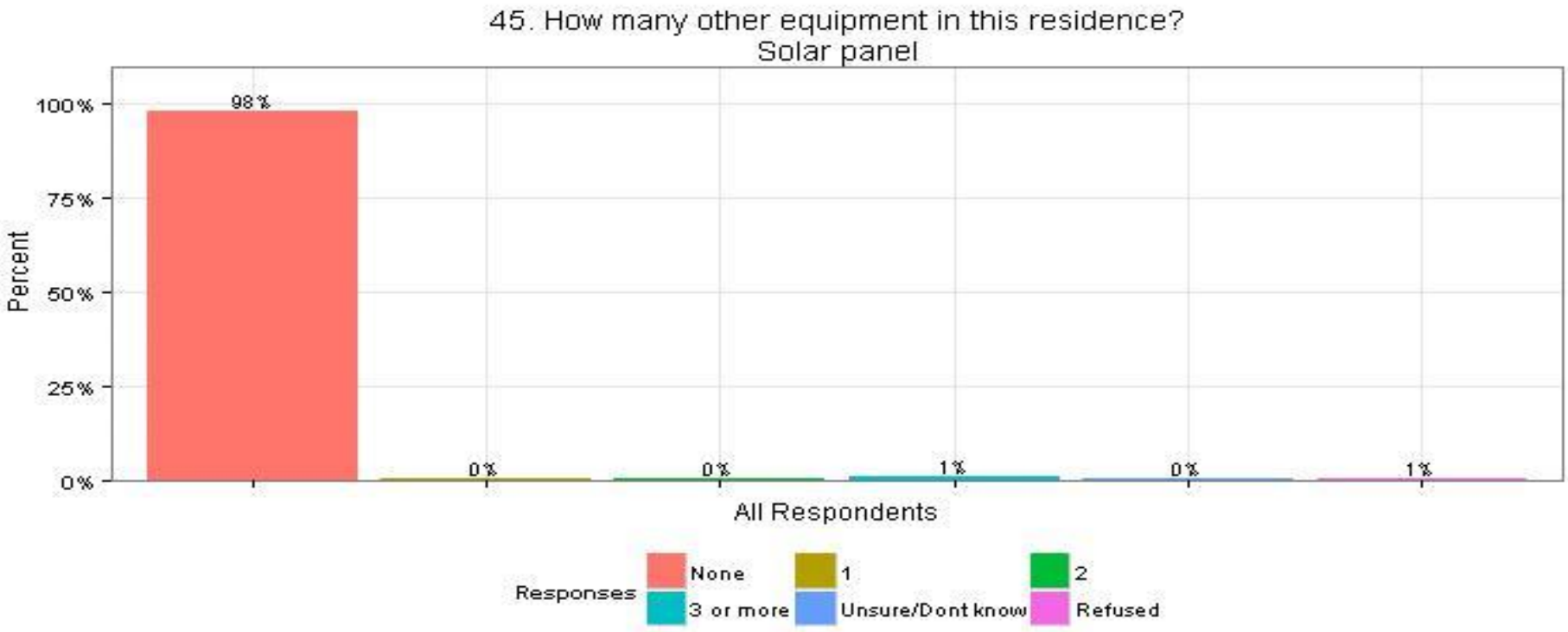
NAVIGANT

45. How many other equipment in this residence? Plug-in hybrid vehicle Respondents in Large Homes

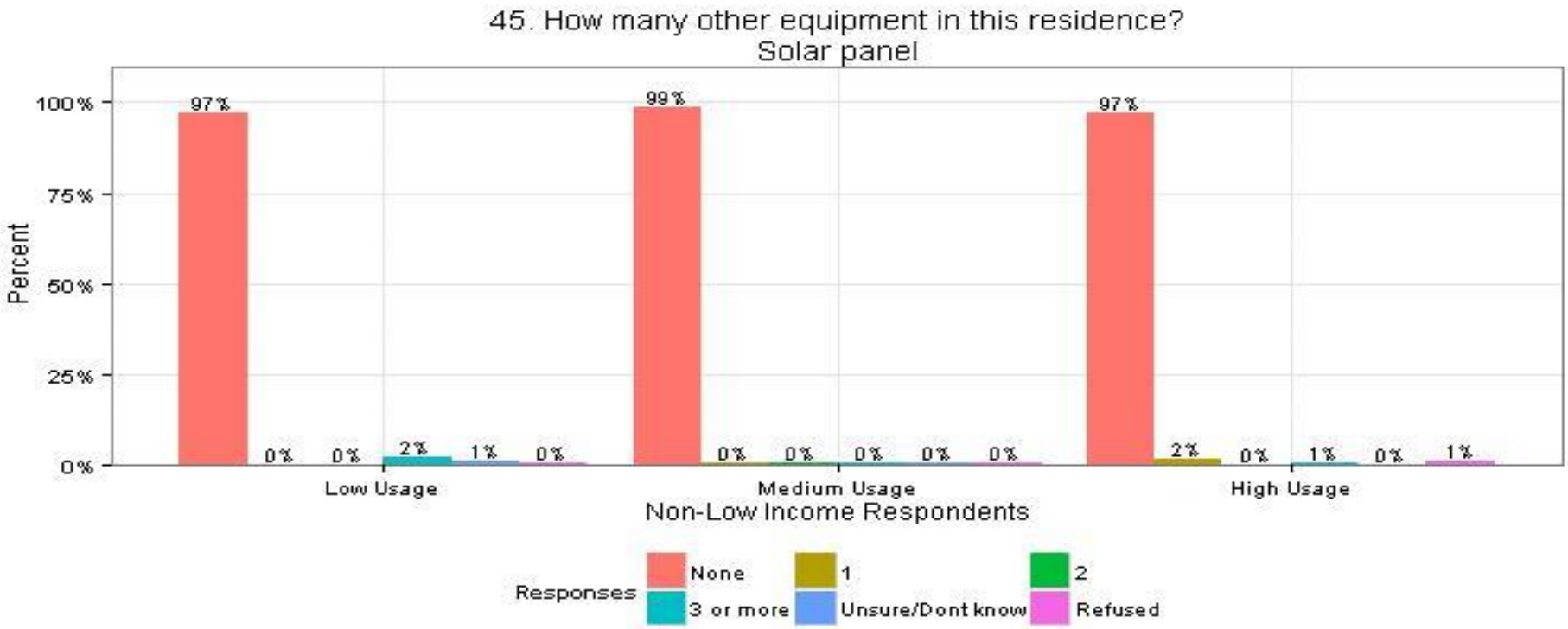


NAVIGANT

45. How many other equipment in this residence? Solar panel All Respondents

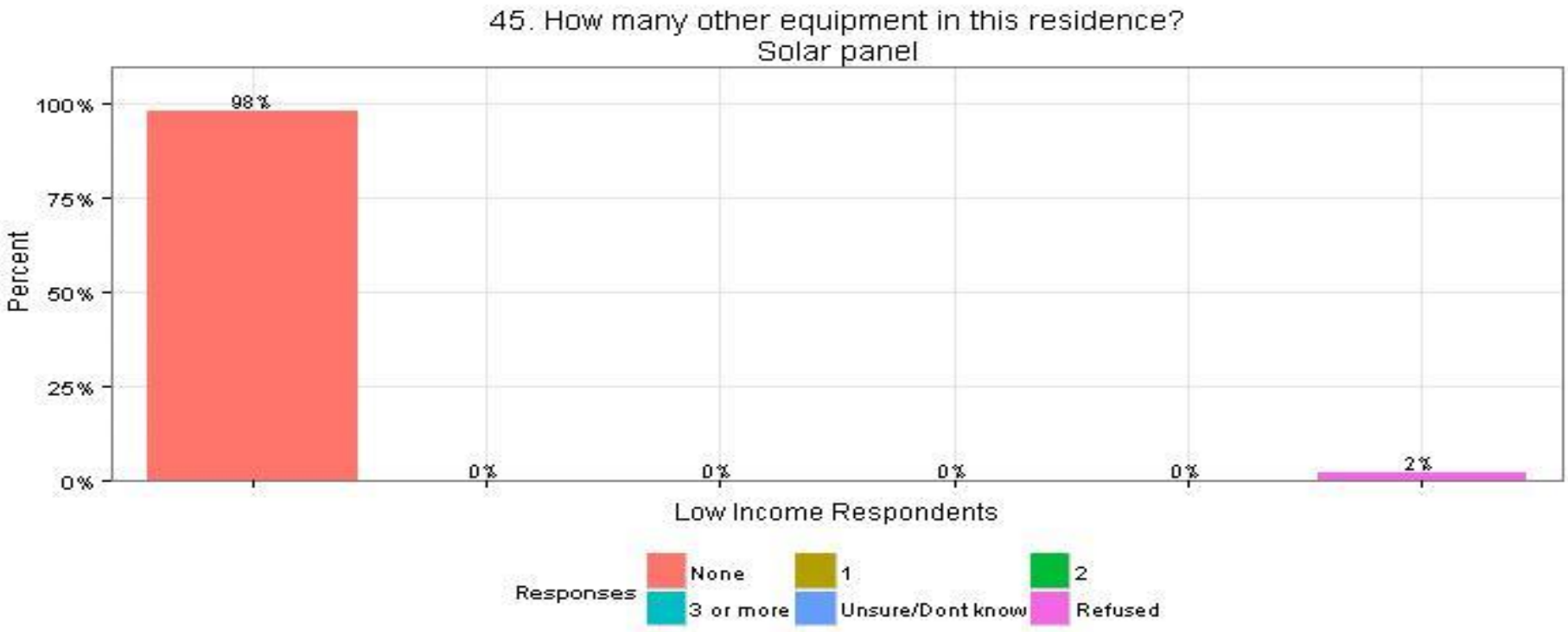


45. How many other equipment in this residence?
Solar panel
Non-Low Income Respondents

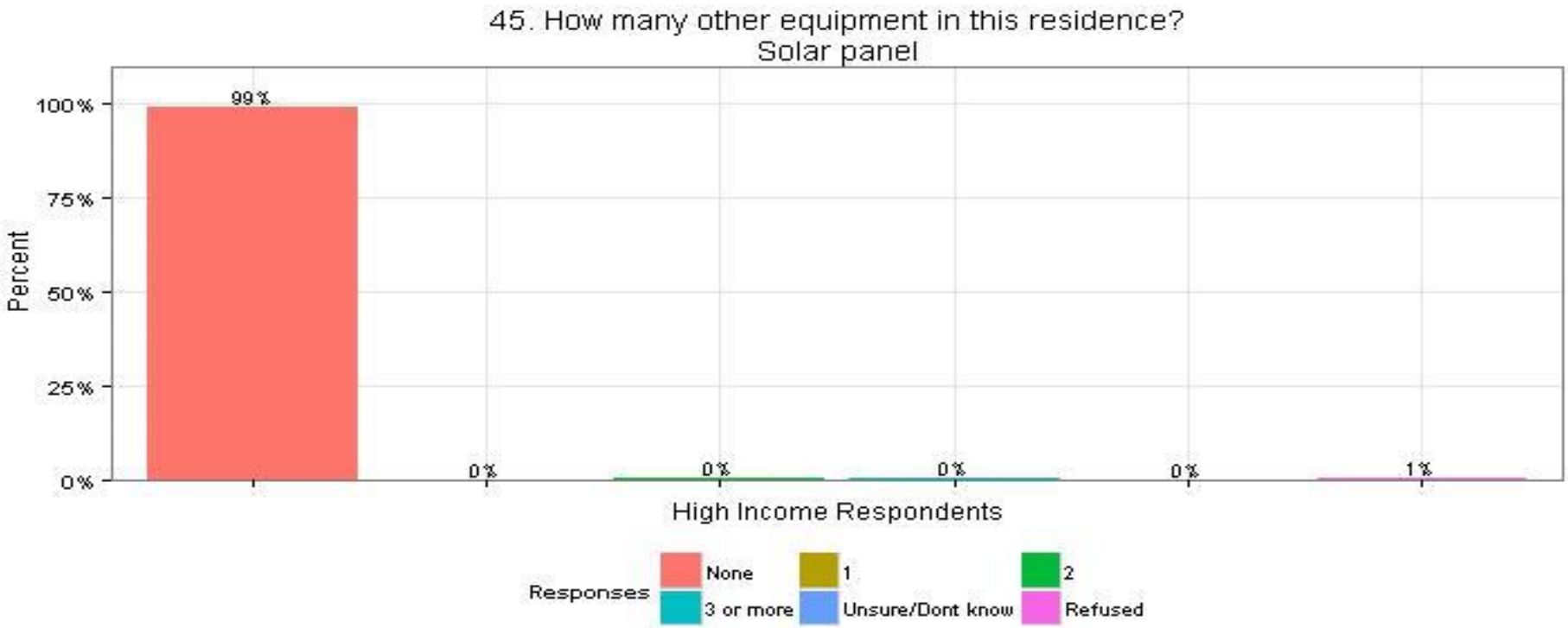


NAVIGANT

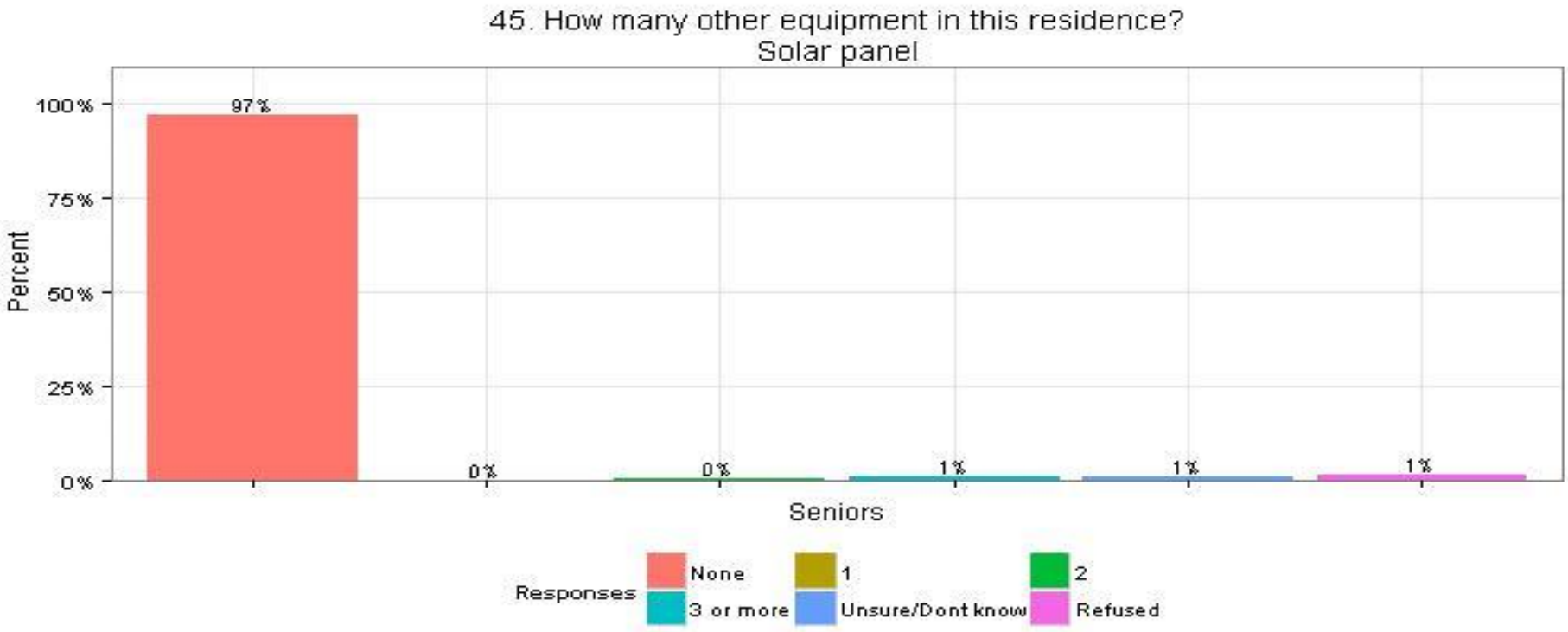
45. How many other equipment in this residence? Solar panel Low Income Respondents



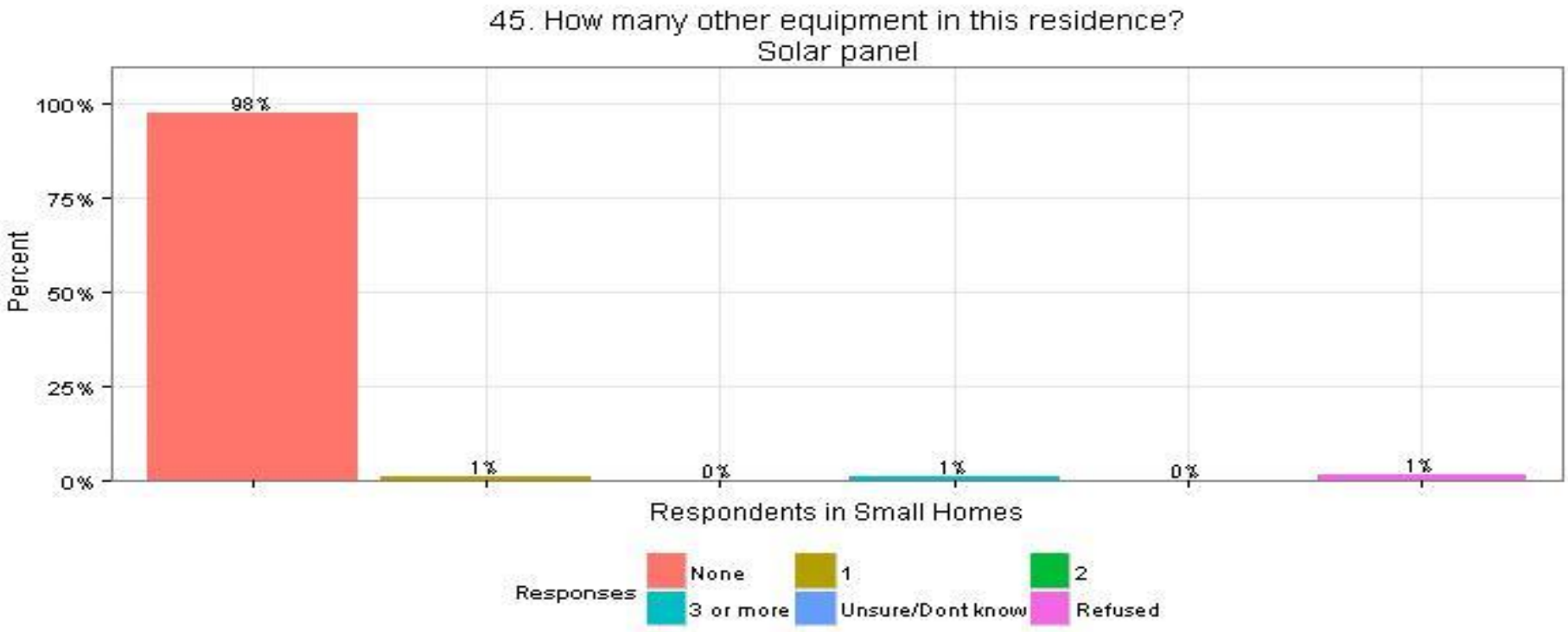
45. How many other equipment in this residence? Solar panel High Income Respondents



45. How many other equipment in this residence? Solar panel Seniors

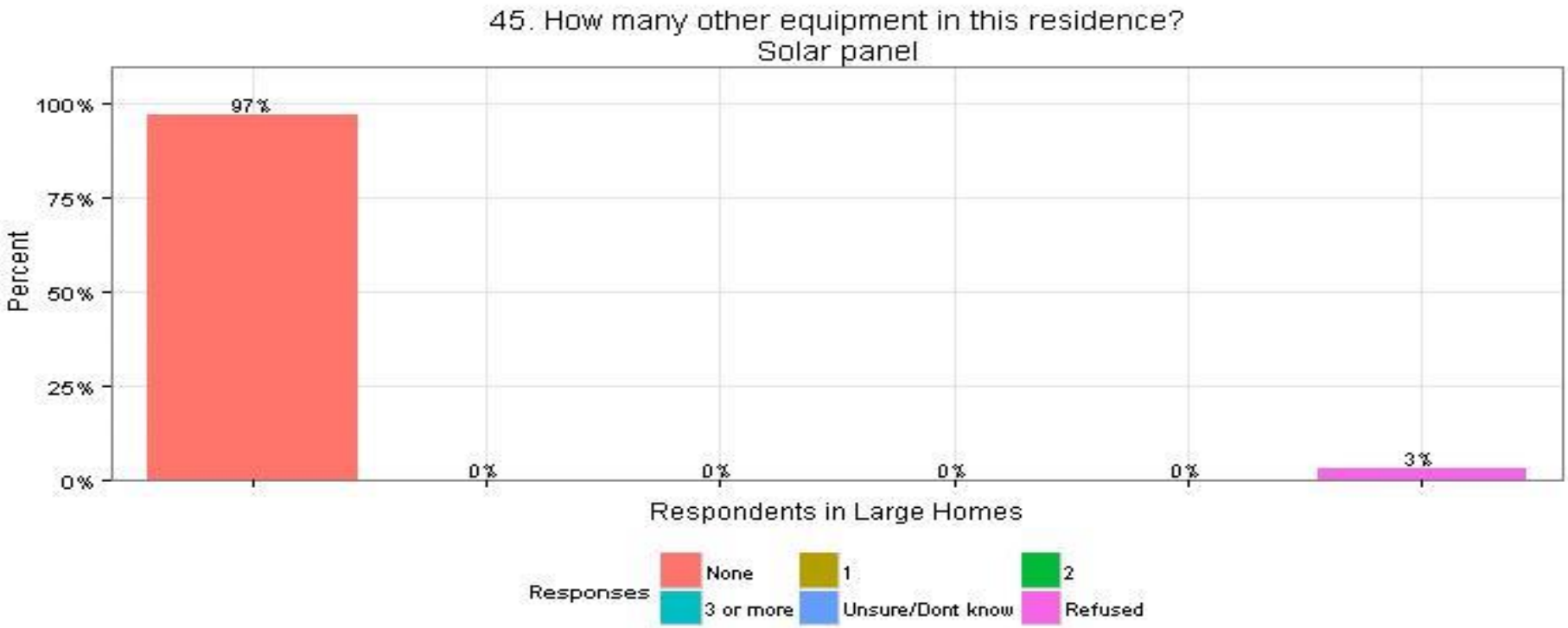


45. How many other equipment in this residence? Solar panel Respondents in Small Homes

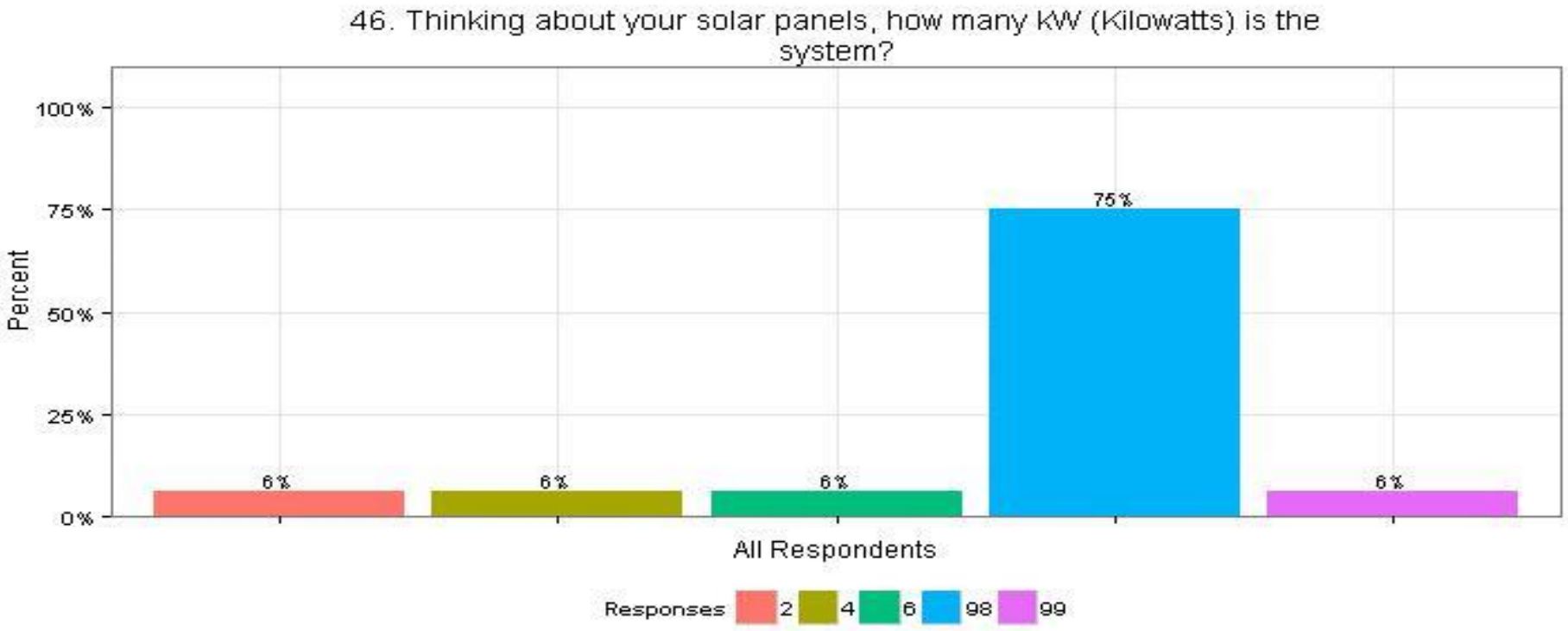


NAVIGANT

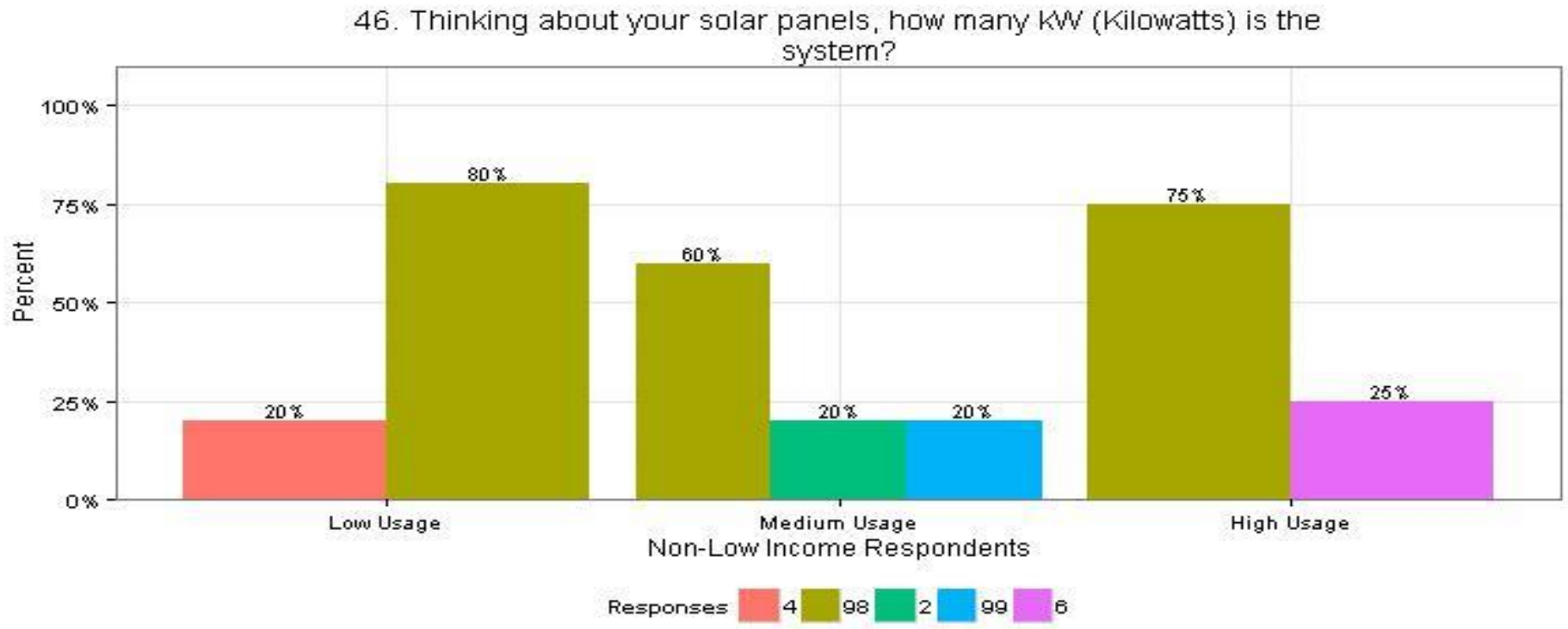
45. How many other equipment in this residence? Solar panel Respondents in Large Homes



46. Thinking about your solar panels, how many kW (Kilowatts) is the system?
All Respondents

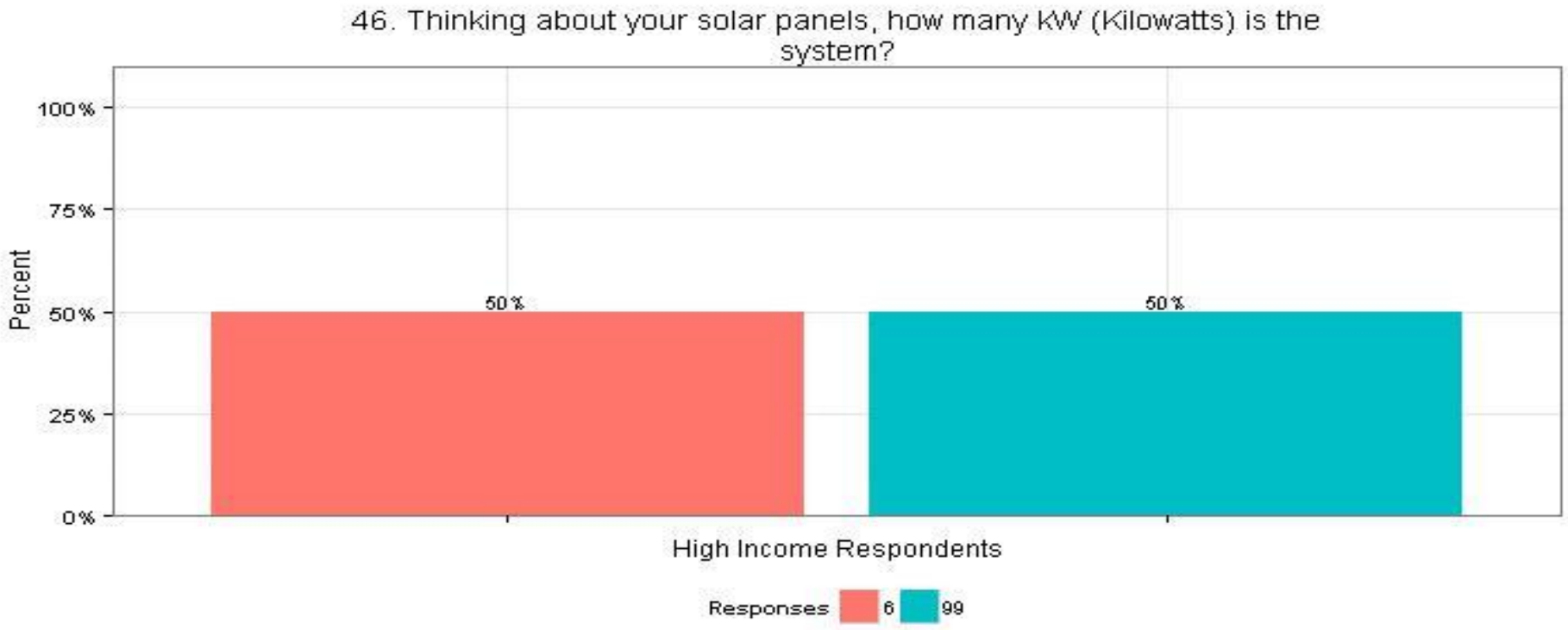


46. Thinking about your solar panels, how many kW (Kilowatts) is the system?
Non-Low Income Respondents

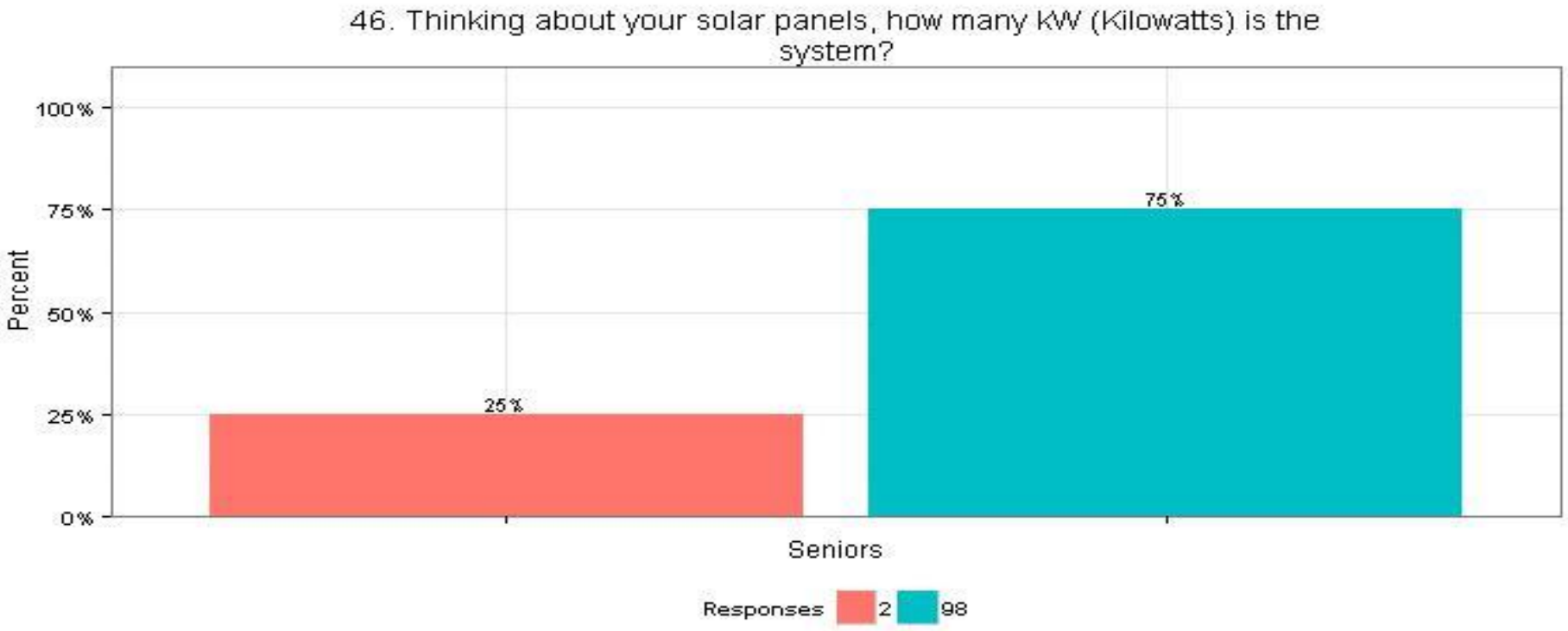


NAVIGANT

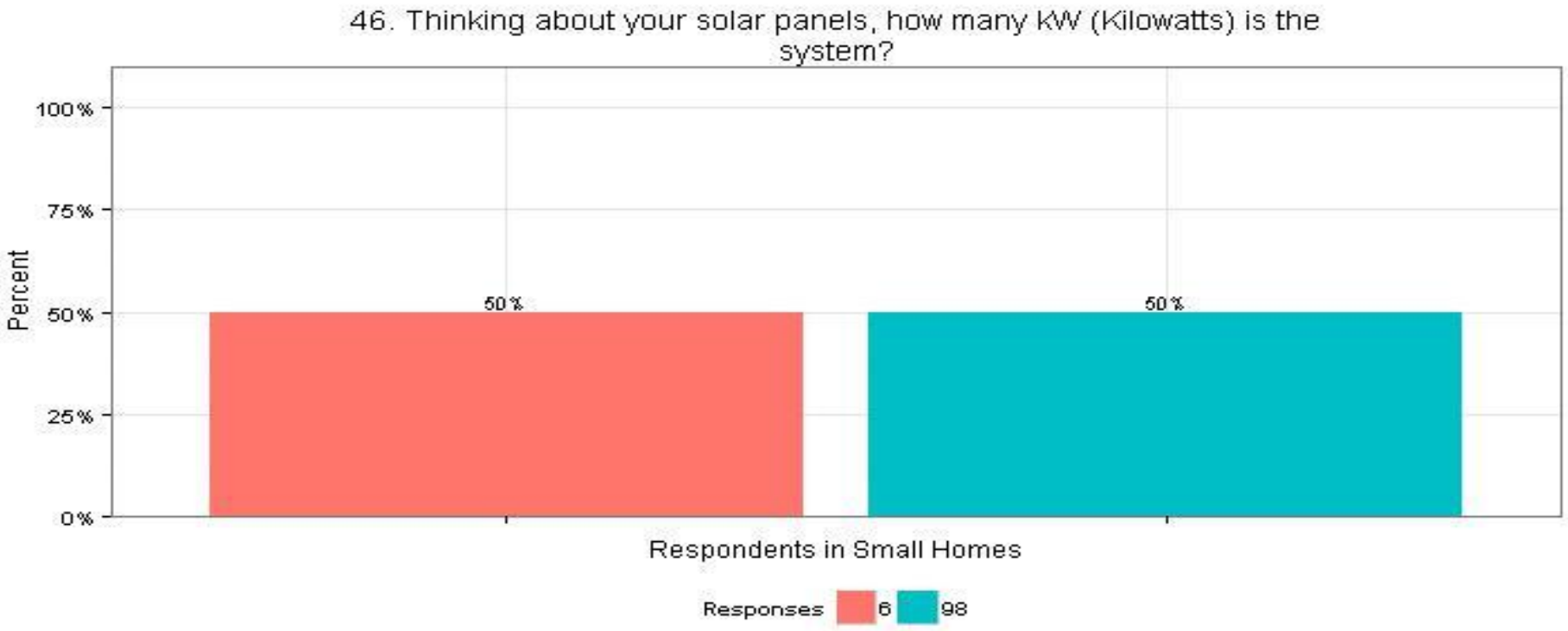
46. Thinking about your solar panels, how many kW (Kilowatts) is the system?
High Income Respondents



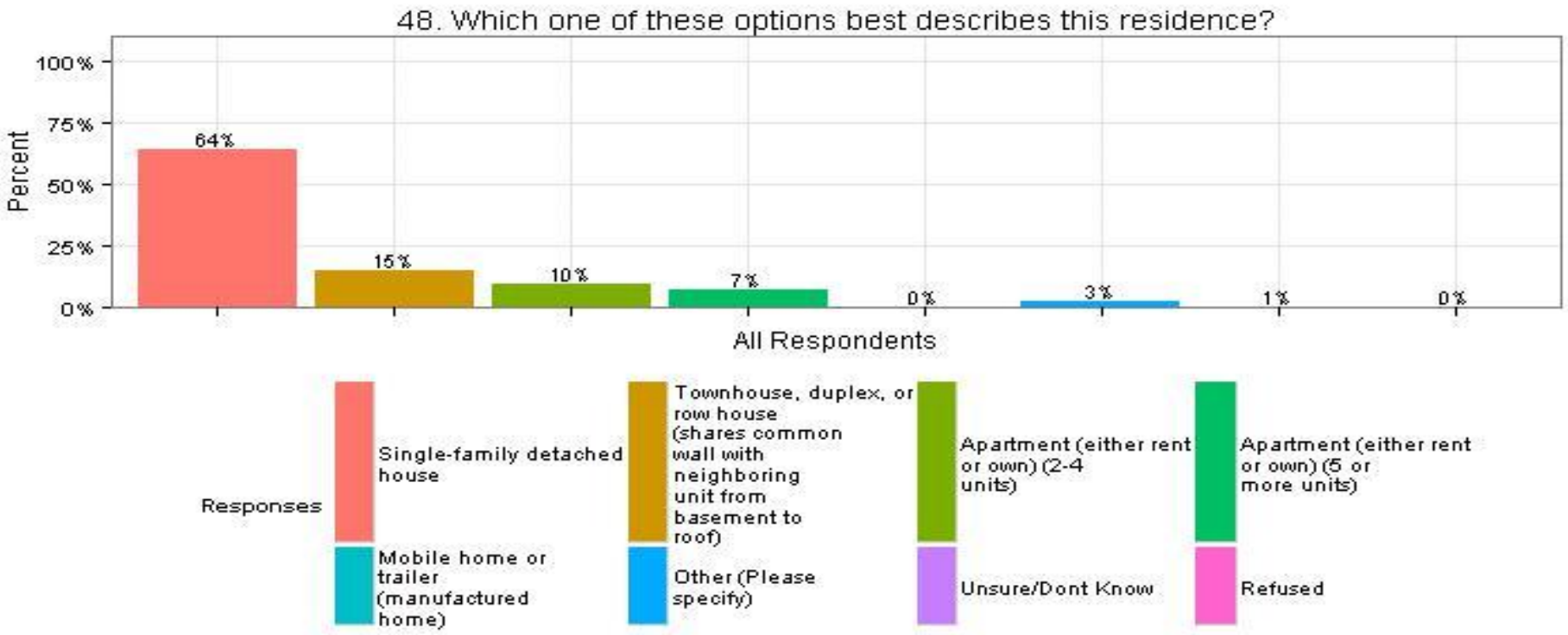
46. Thinking about your solar panels, how many kW (Kilowatts) is the system?
Seniors



46. Thinking about your solar panels, how many kW (Kilowatts) is the system?
Respondents in Small Homes

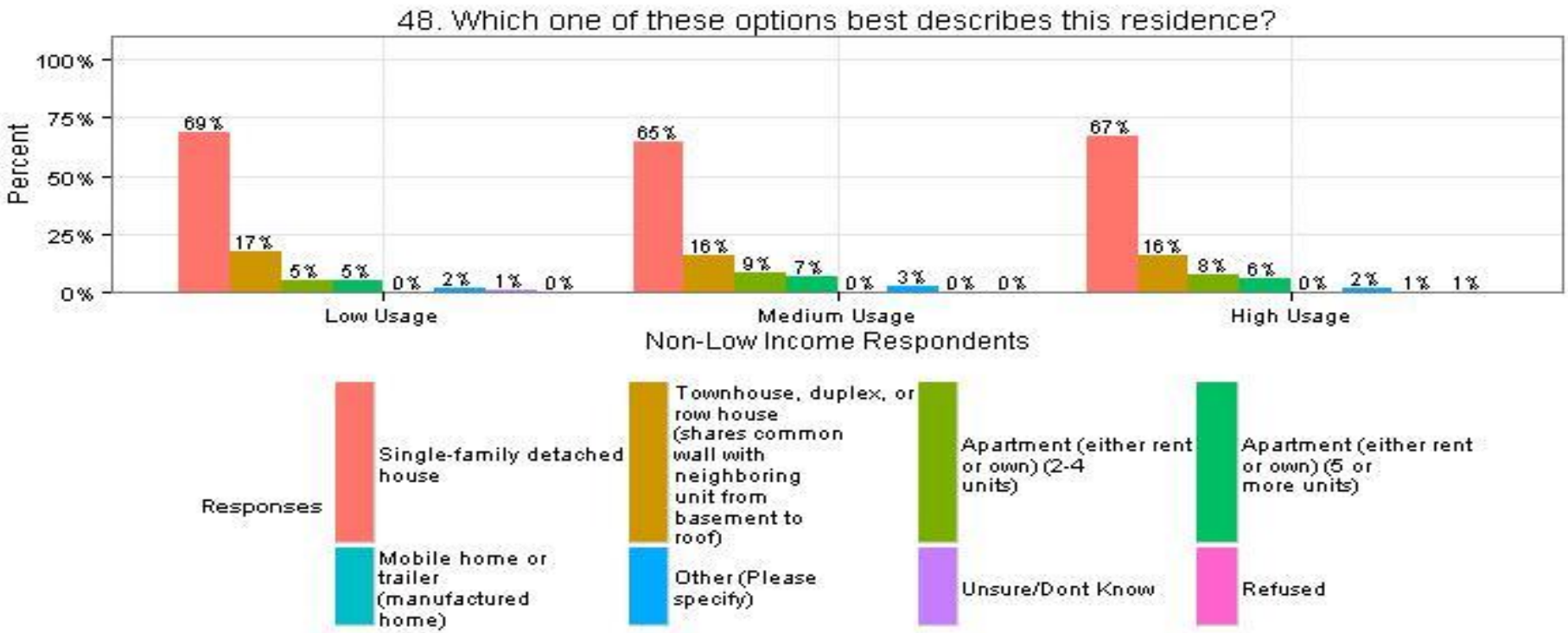


48. Which one of these options best describes this residence? All Respondents



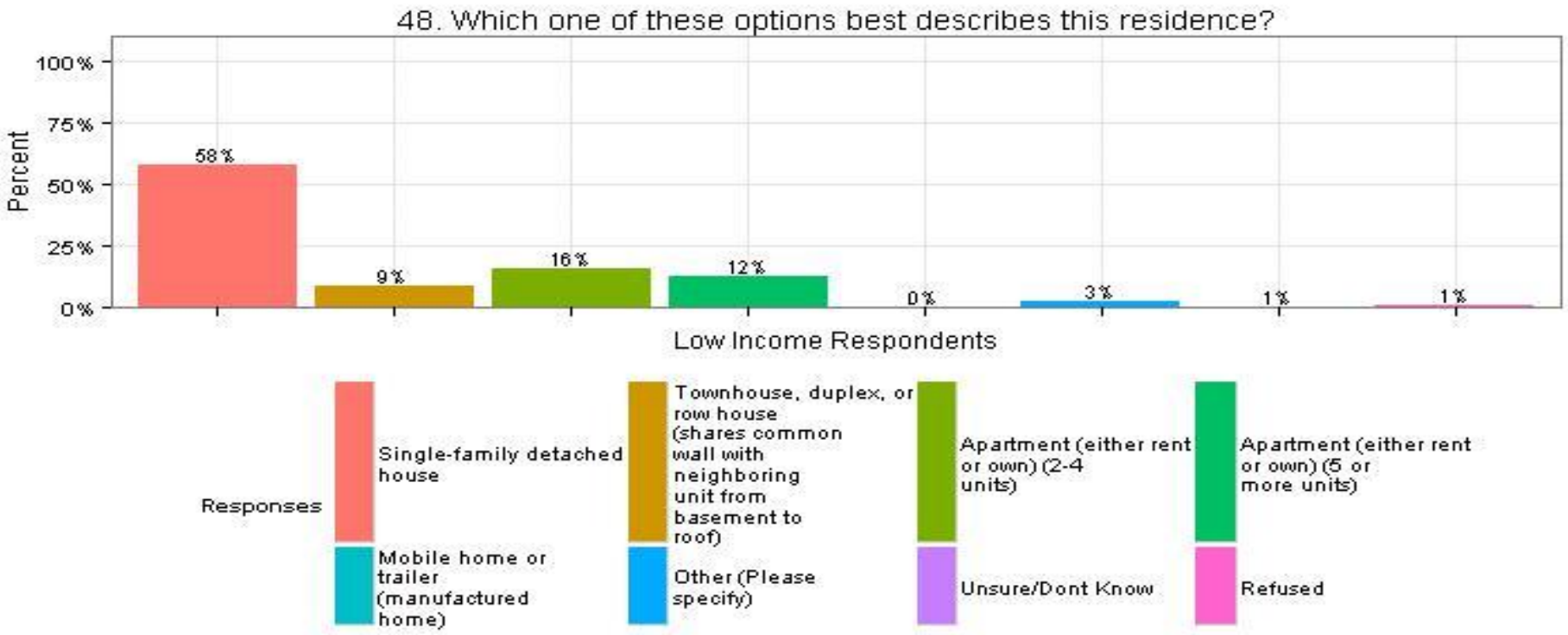
NAVIGANT

48. Which one of these options best describes this residence? Non-Low Income Respondents



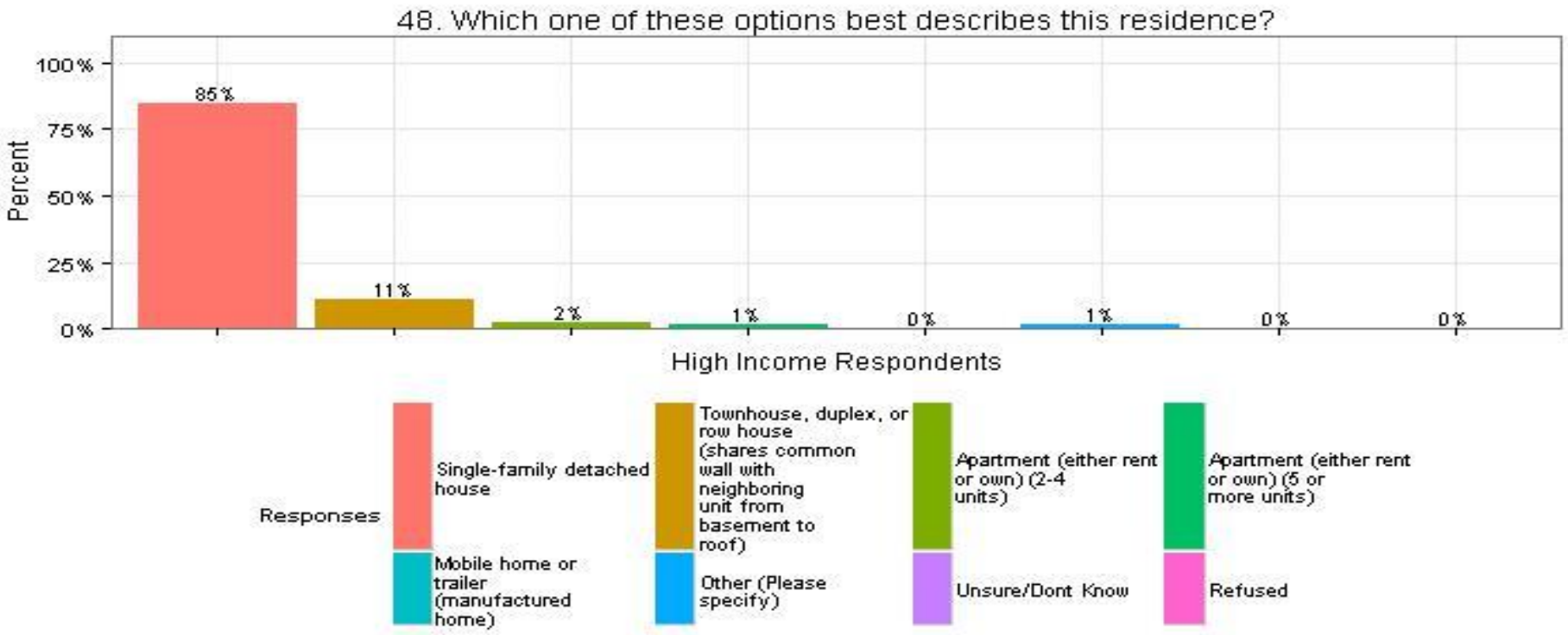
NAVIGANT

48. Which one of these options best describes this residence? Low Income Respondents



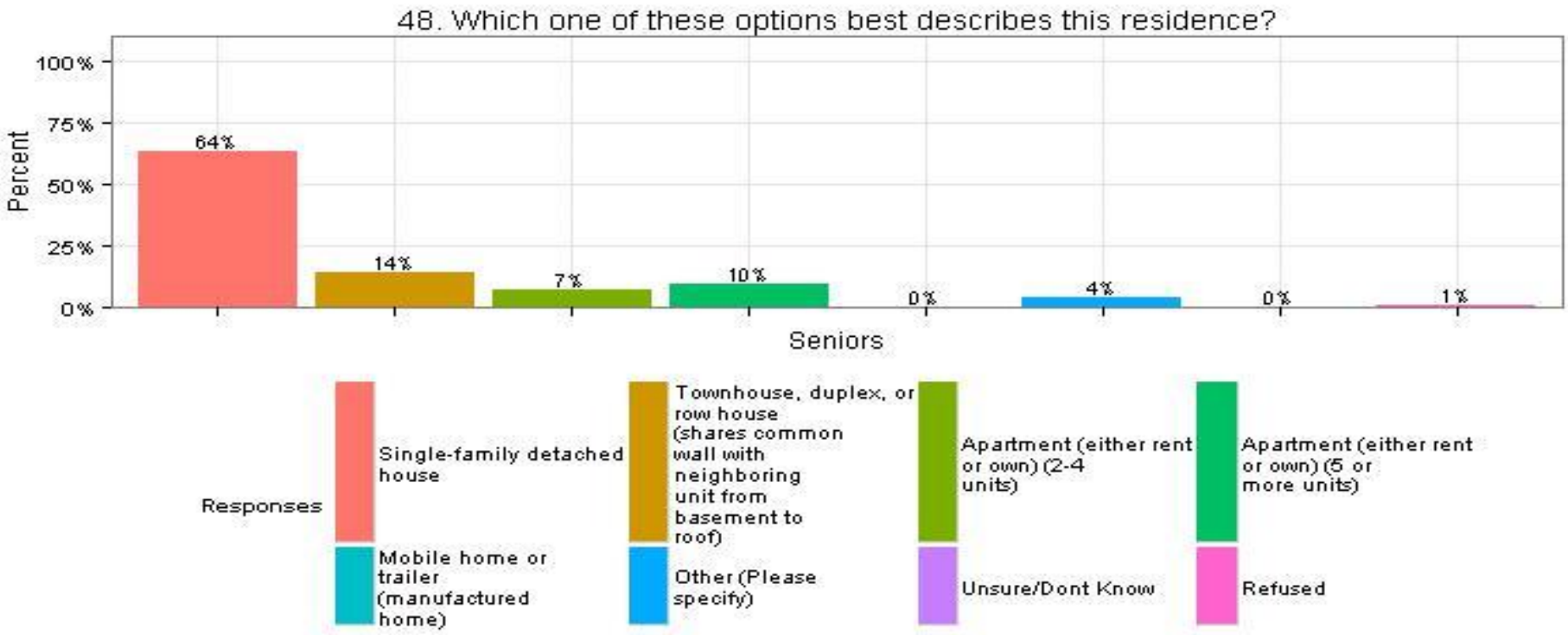
NAVIGANT

48. Which one of these options best describes this residence? High Income Respondents



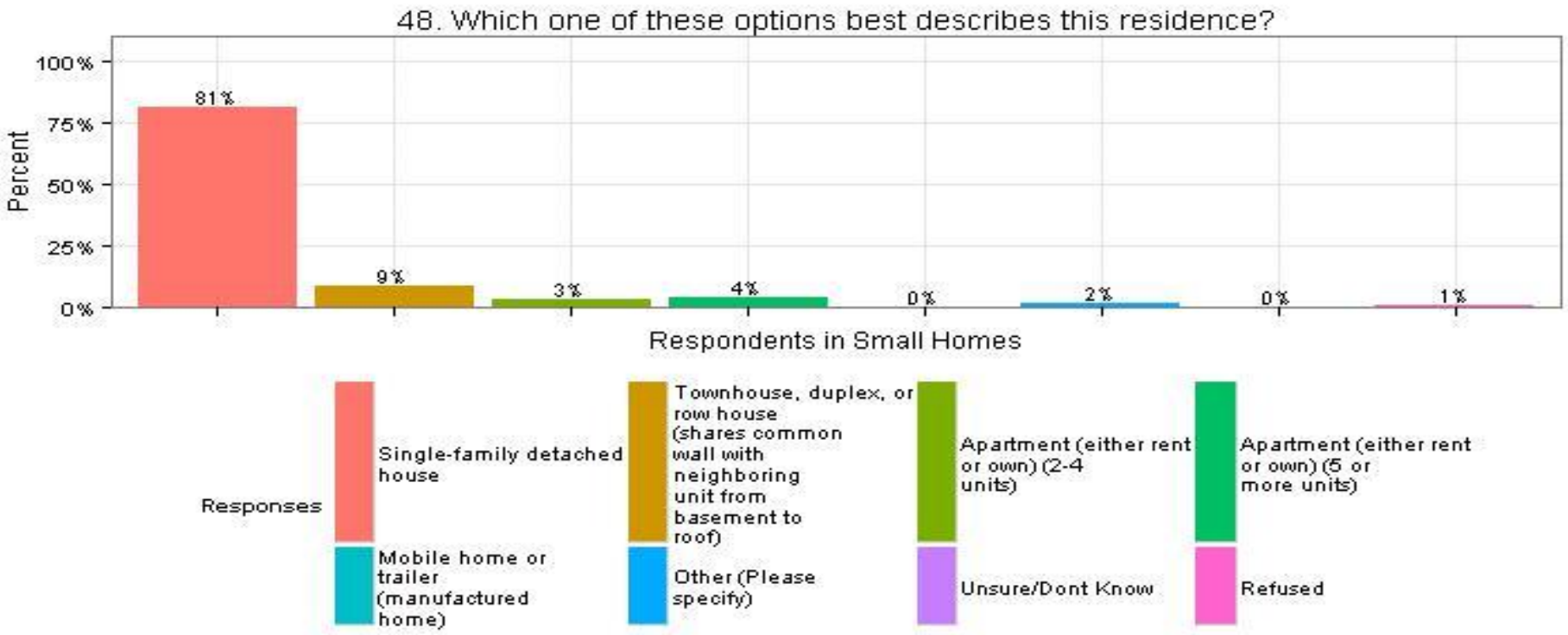
NAVIGANT

48. Which one of these options best describes this residence? Seniors



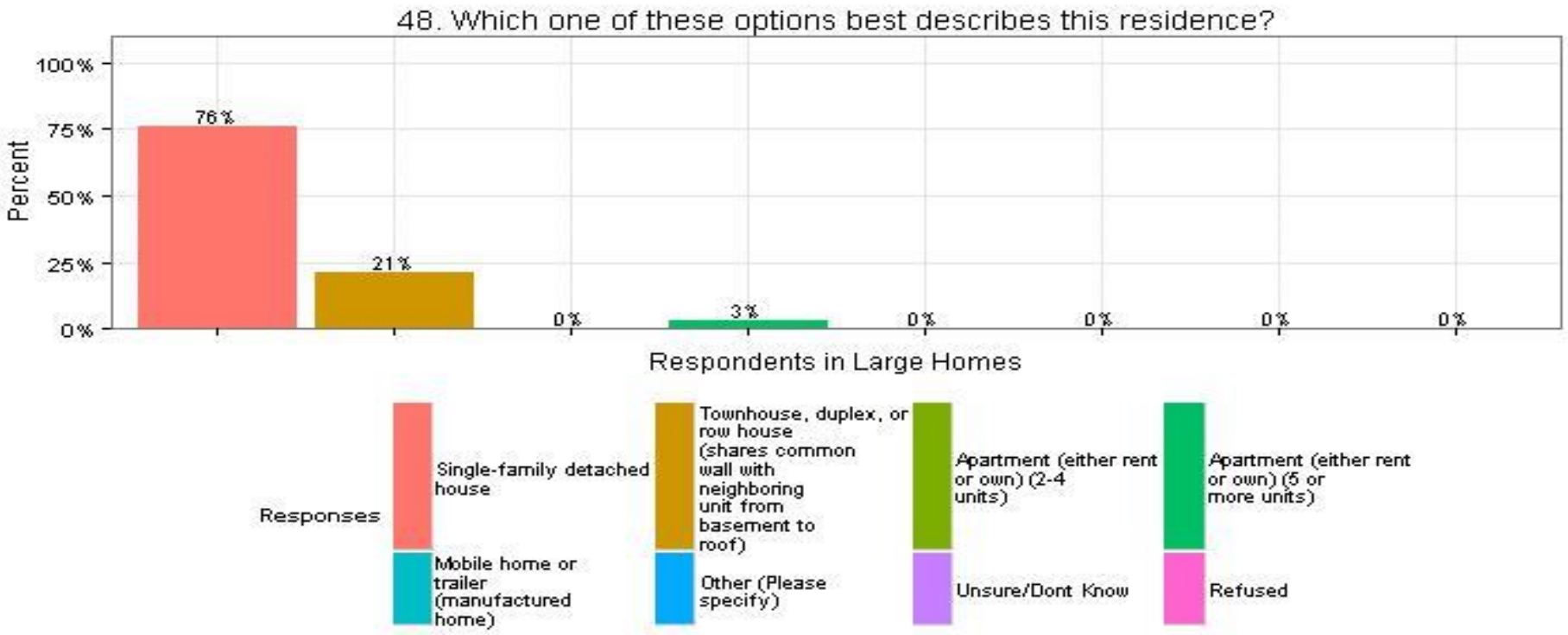
NAVIGANT

48. Which one of these options best describes this residence? Respondents in Small Homes



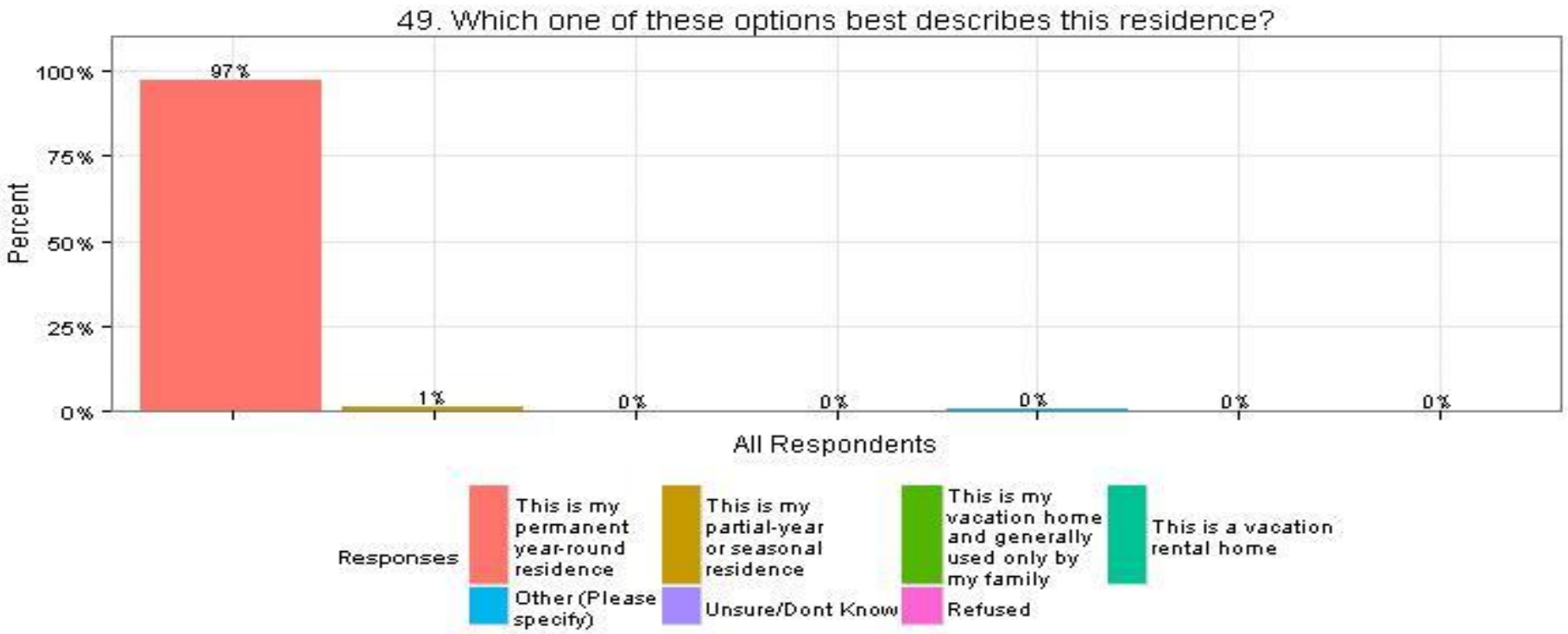
NAVIGANT

48. Which one of these options best describes this residence? Respondents in Large Homes



NAVIGANT

49. Which one of these options best describes this residence? All Respondents



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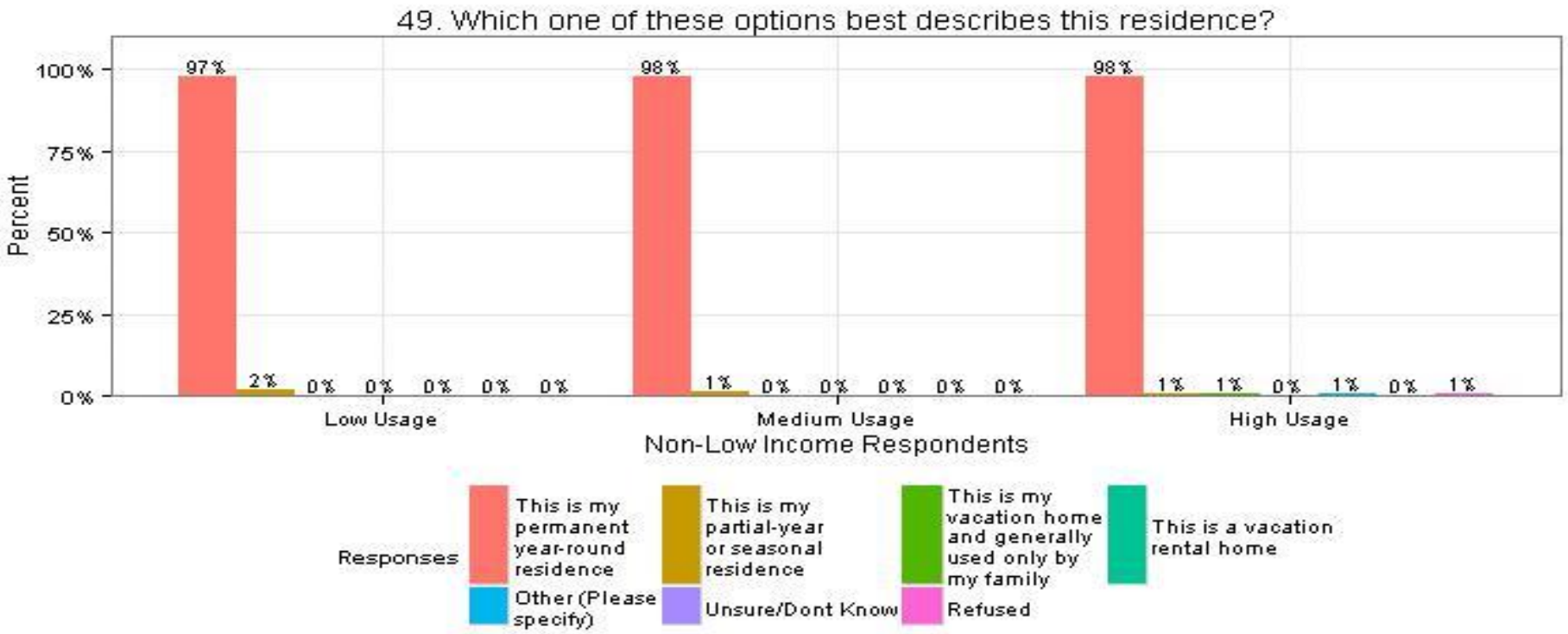
49. Which one of these options best describes this residence? Non-Low Income Respondents



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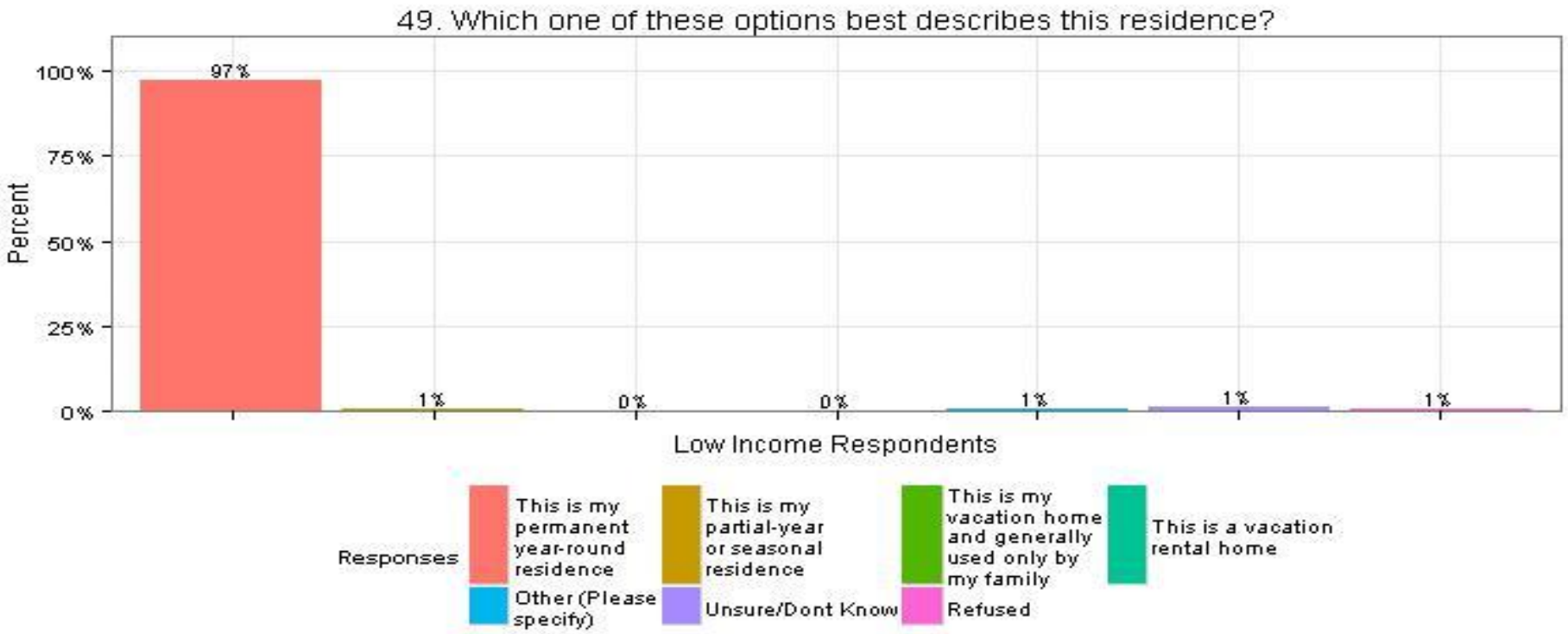
49. Which one of these options best describes this residence? Low Income Respondents



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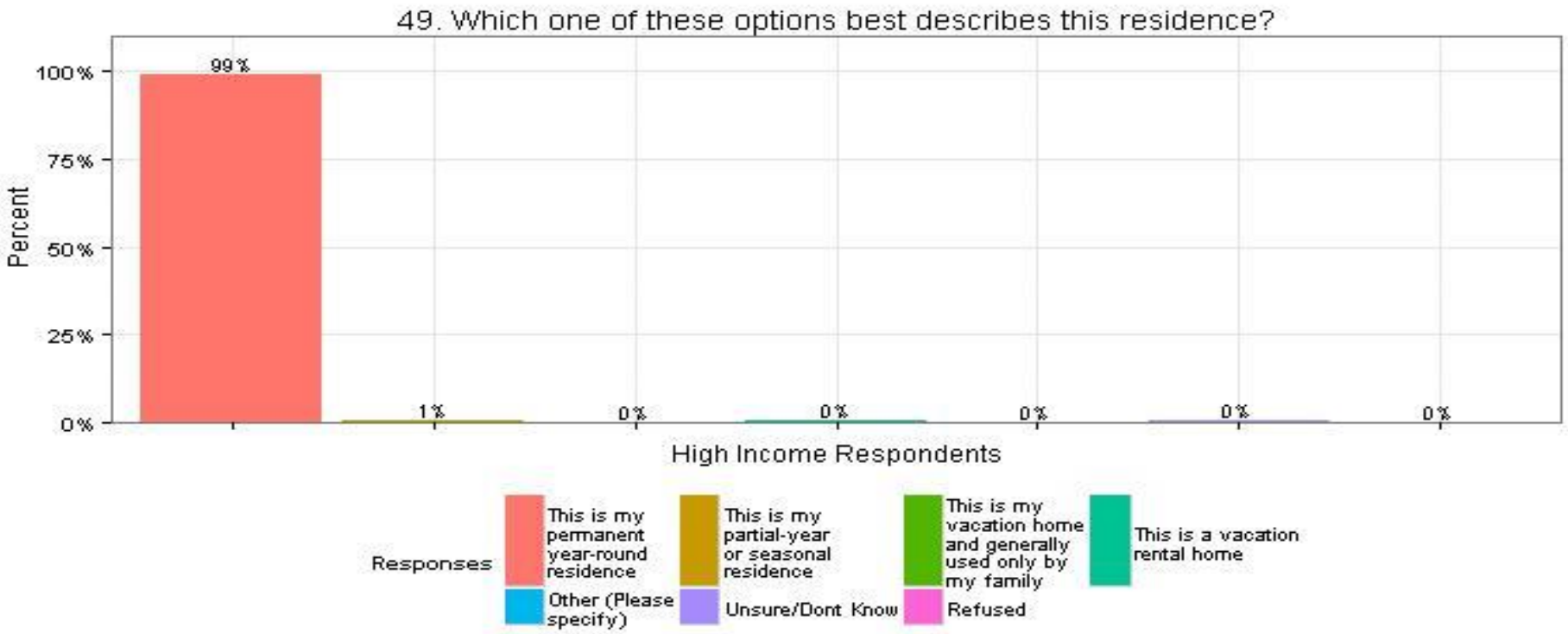
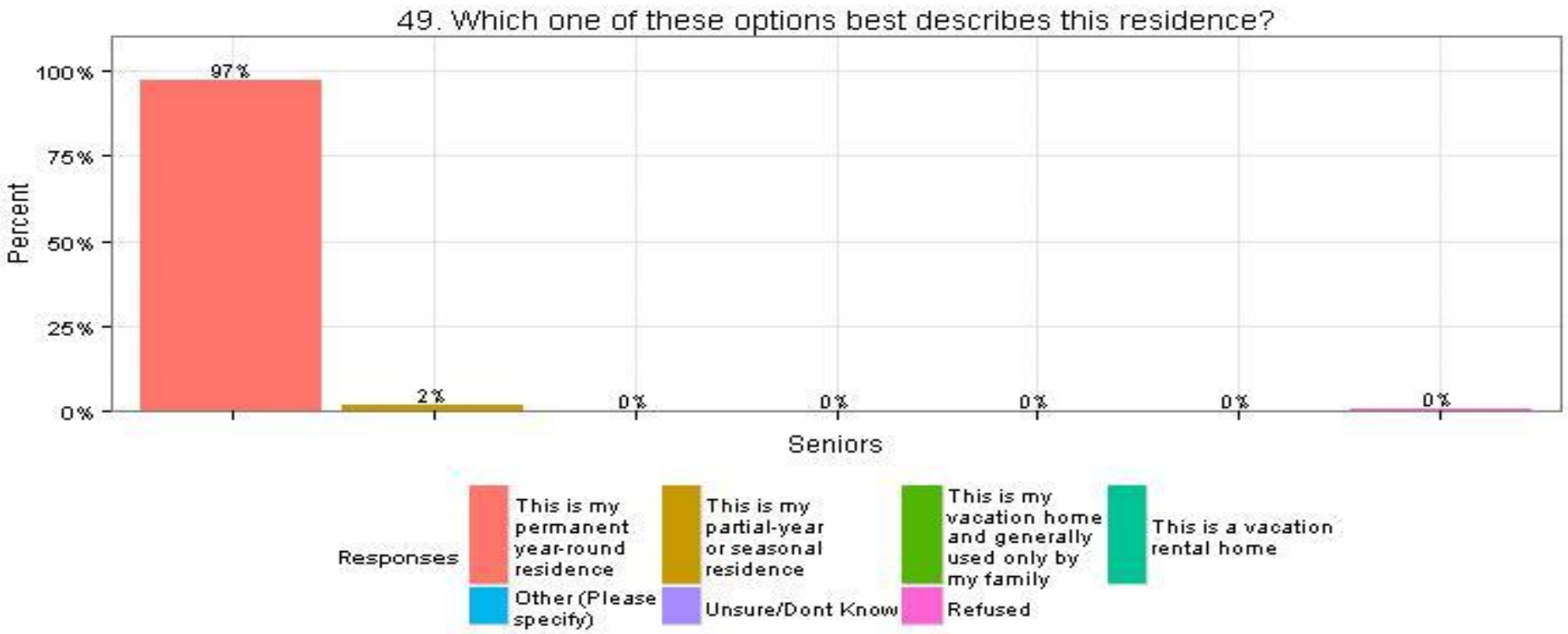
49. Which one of these options best describes this residence? High Income Respondents

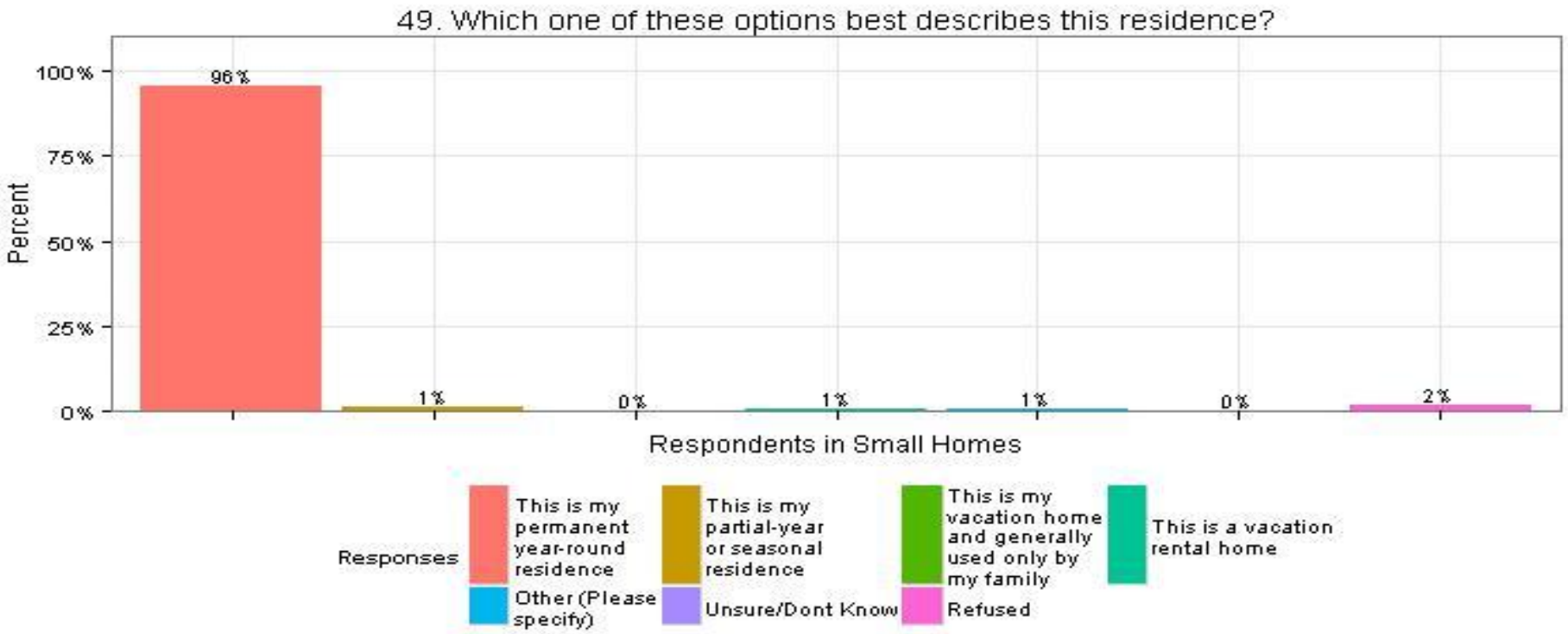


NAVIGANT

49. Which one of these options best describes this residence? Seniors

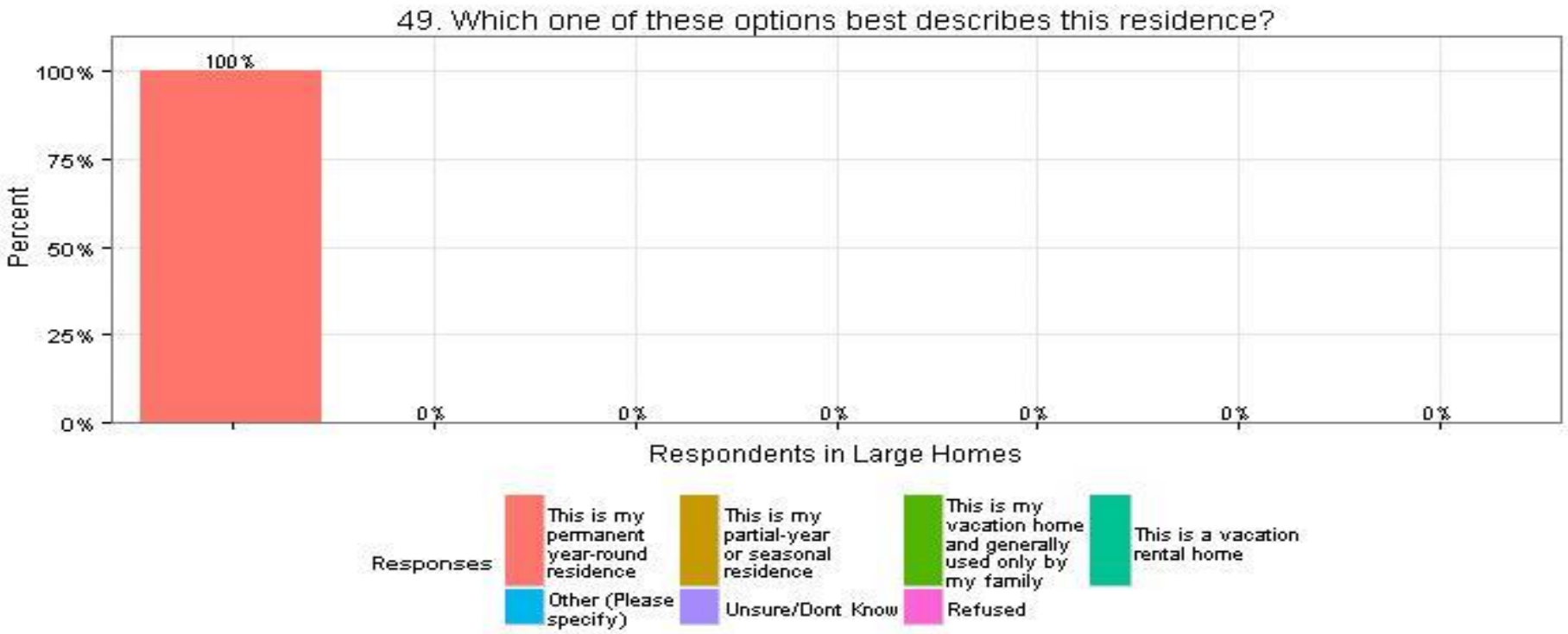


49. Which one of these options best describes this residence? Respondents in Small Homes



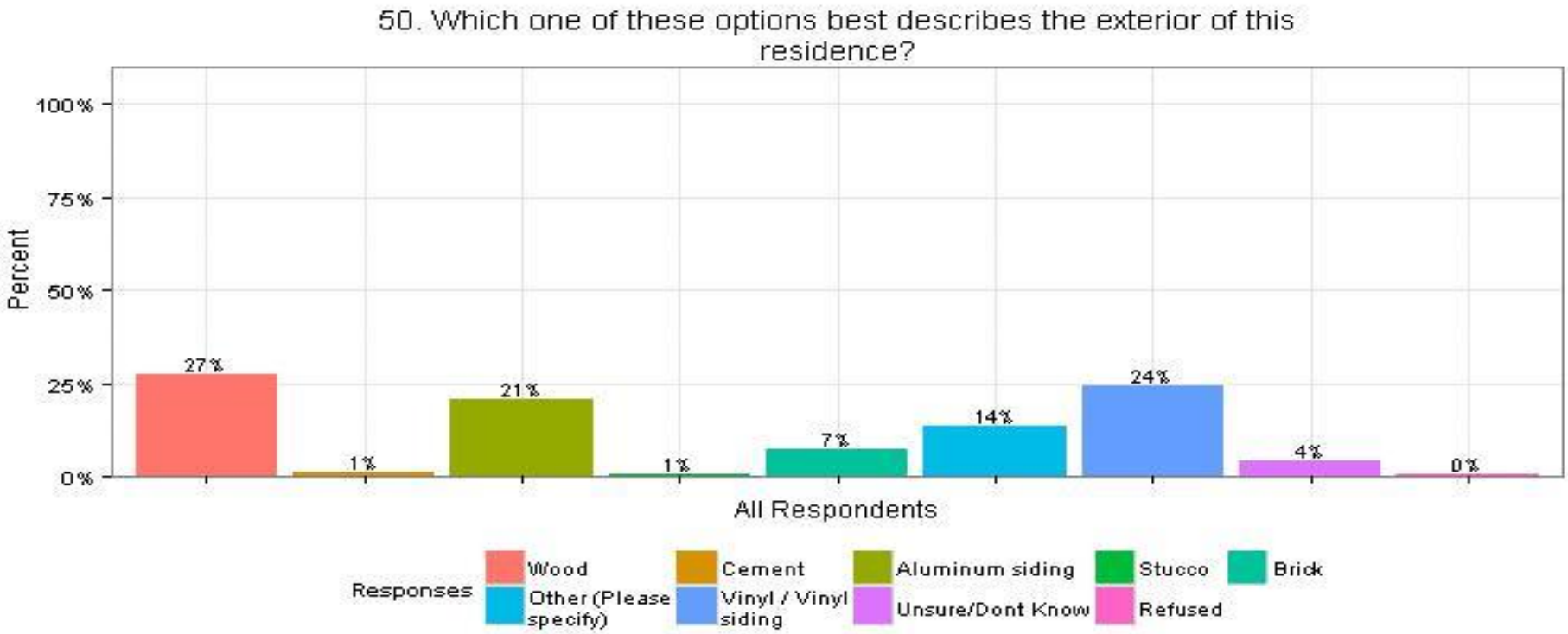
NAVIGANT

49. Which one of these options best describes this residence? Respondents in Large Homes

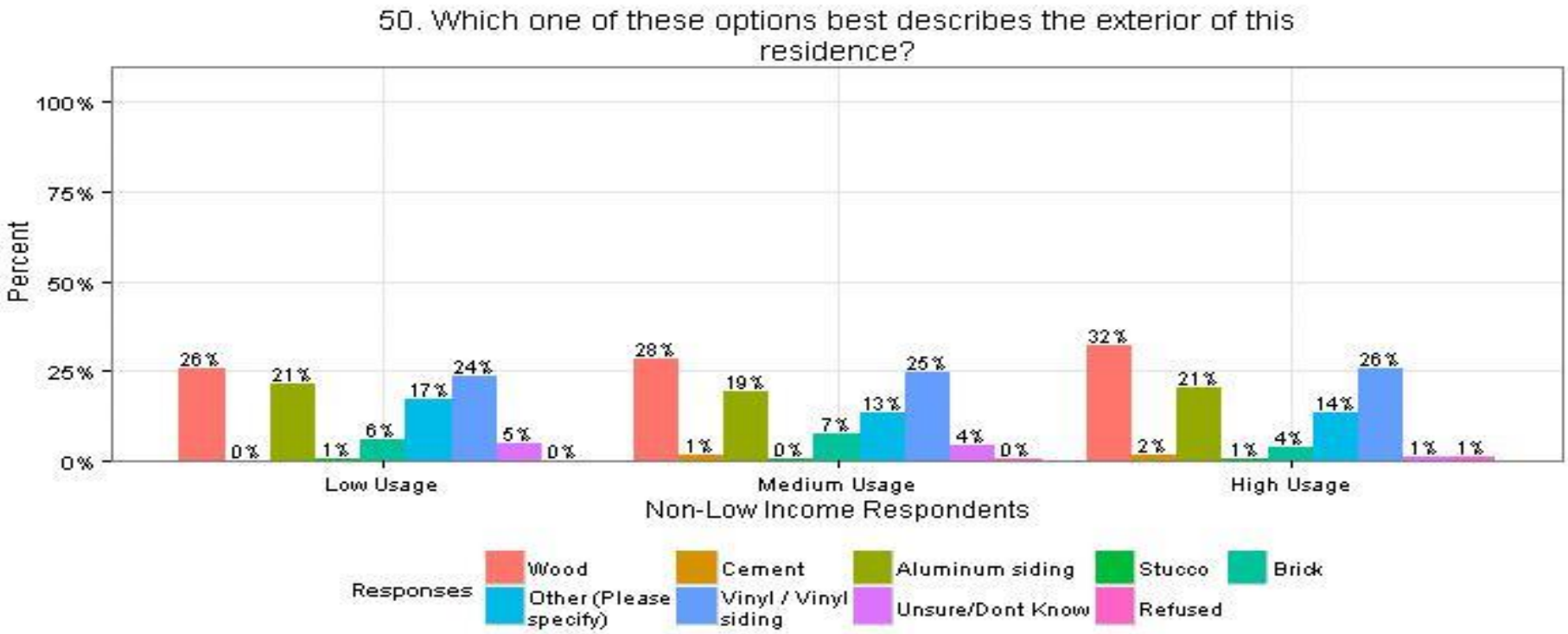


NAVIGANT

50. Which one of these options best describes the exterior of this residence?
All Respondents

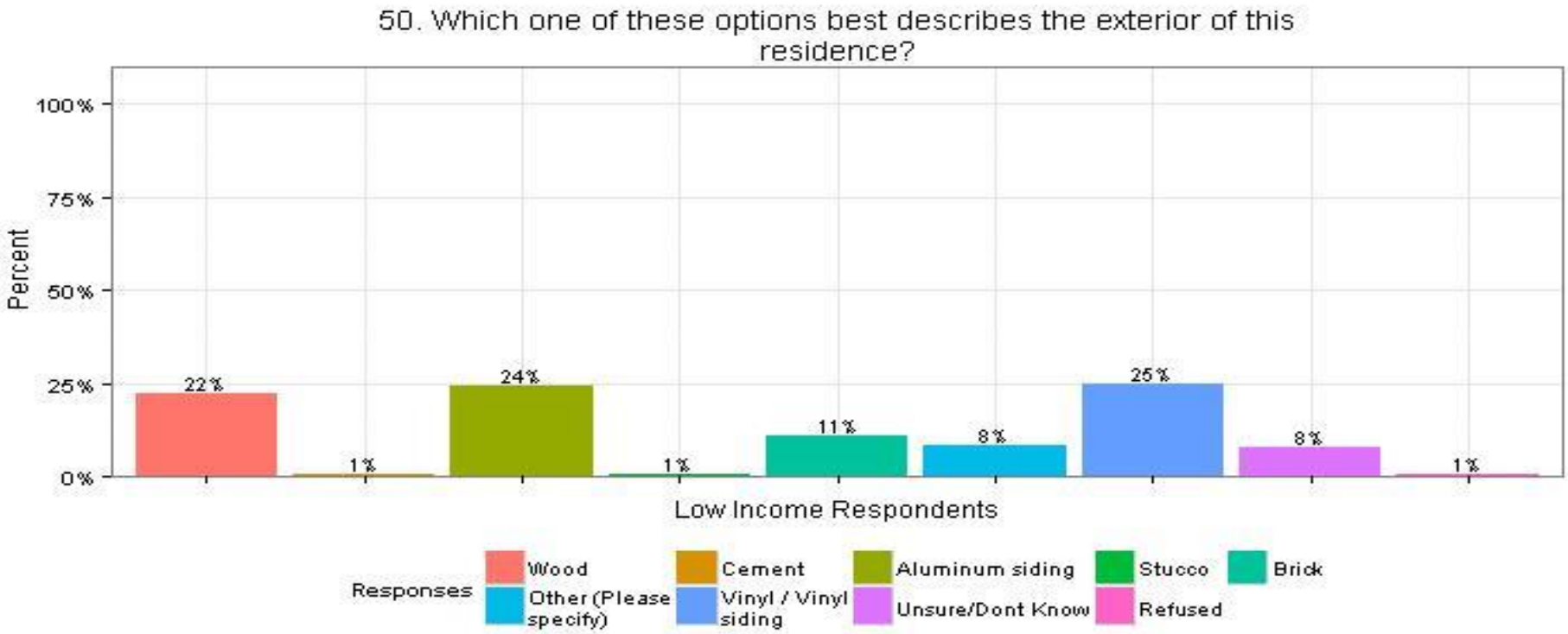


50. Which one of these options best describes the exterior of this residence?
Non-Low Income Respondents



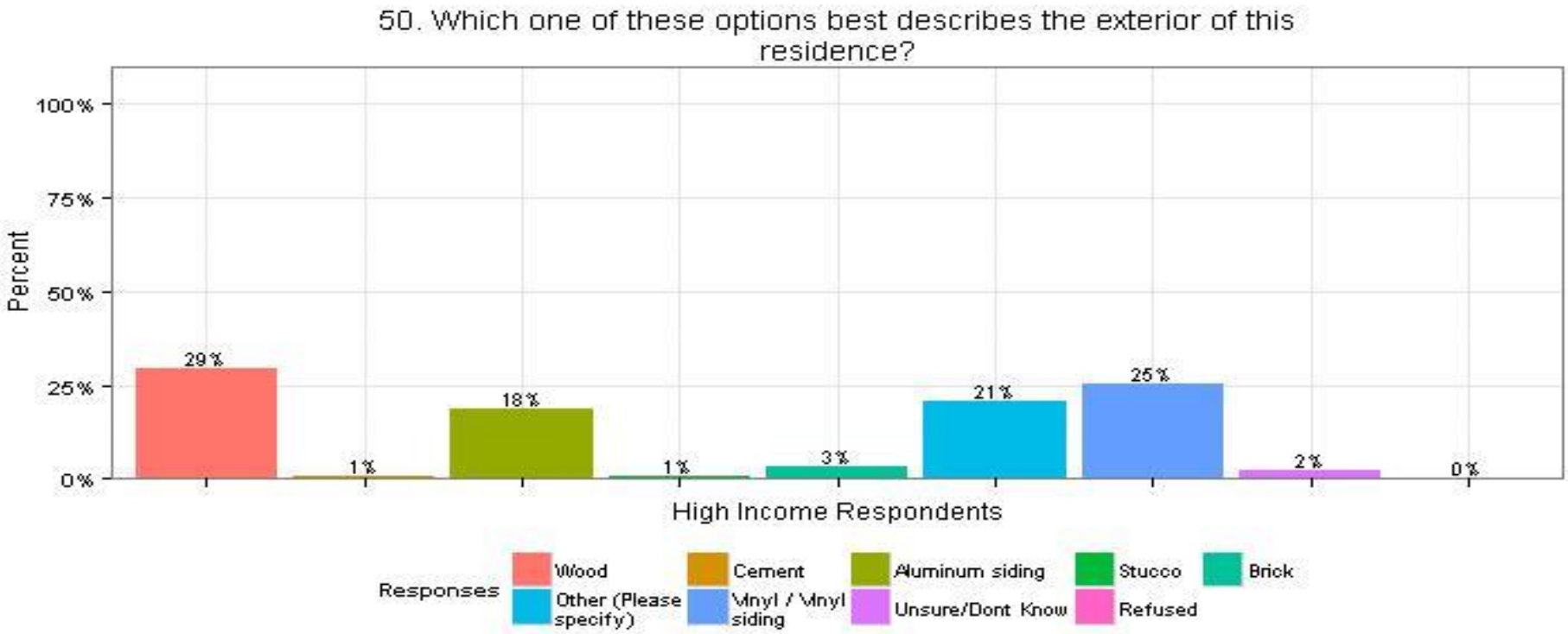
NAVIGANT

50. Which one of these options best describes the exterior of this residence?
Low Income Respondents



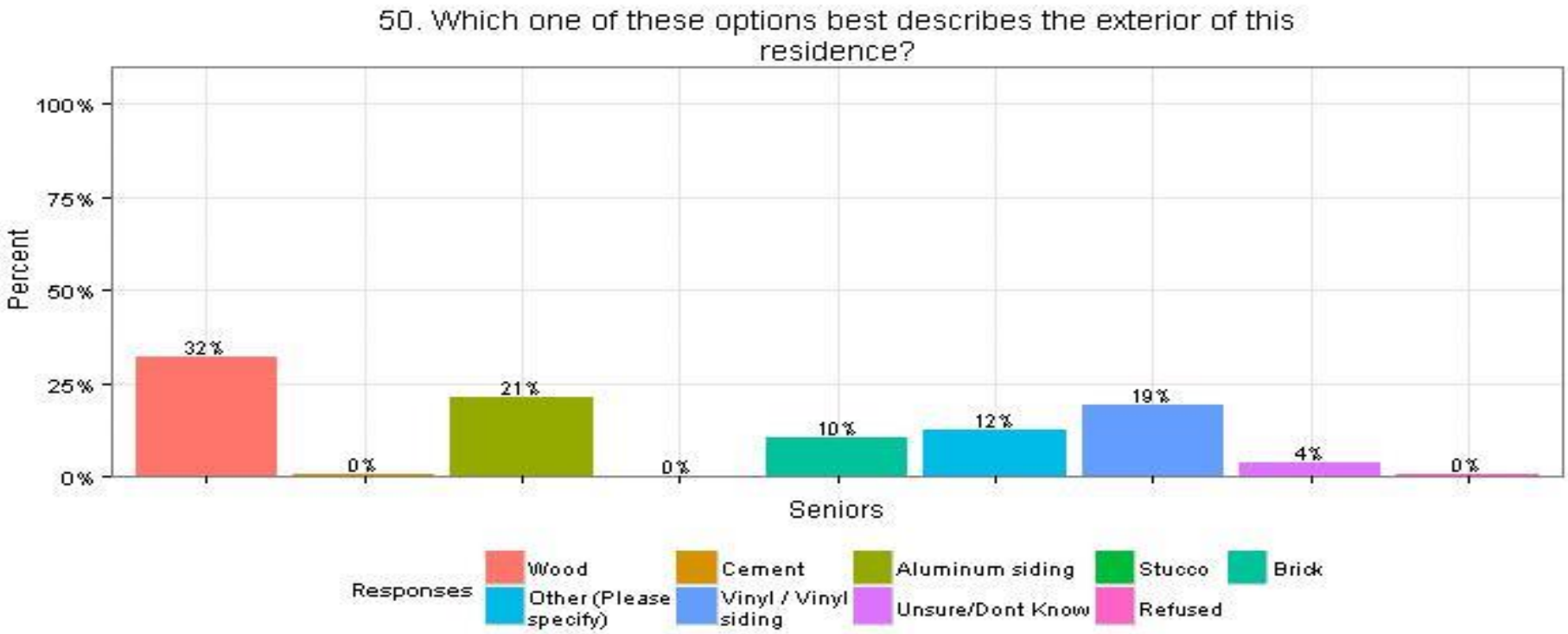
NAVIGANT

50. Which one of these options best describes the exterior of this residence?
High Income Respondents

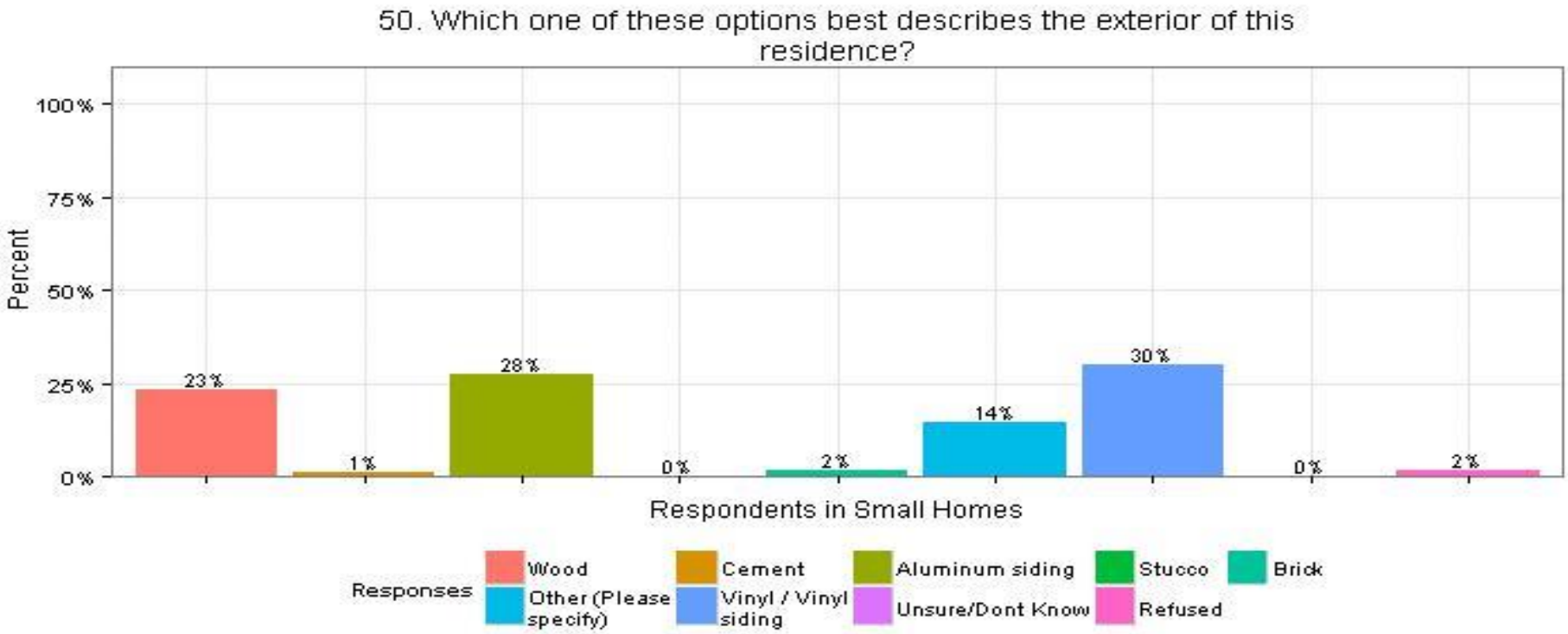


NAVIGANT

50. Which one of these options best describes the exterior of this residence?
Seniors

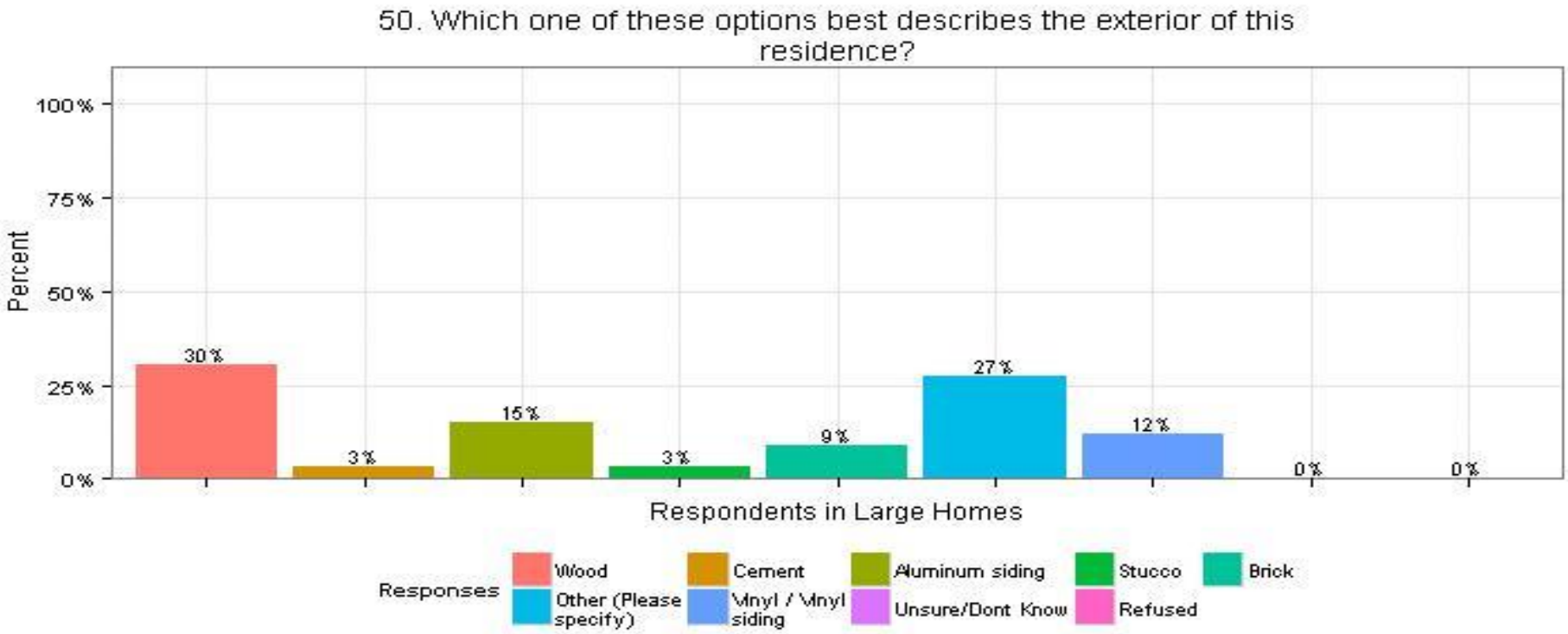


50. Which one of these options best describes the exterior of this residence?
Respondents in Small Homes



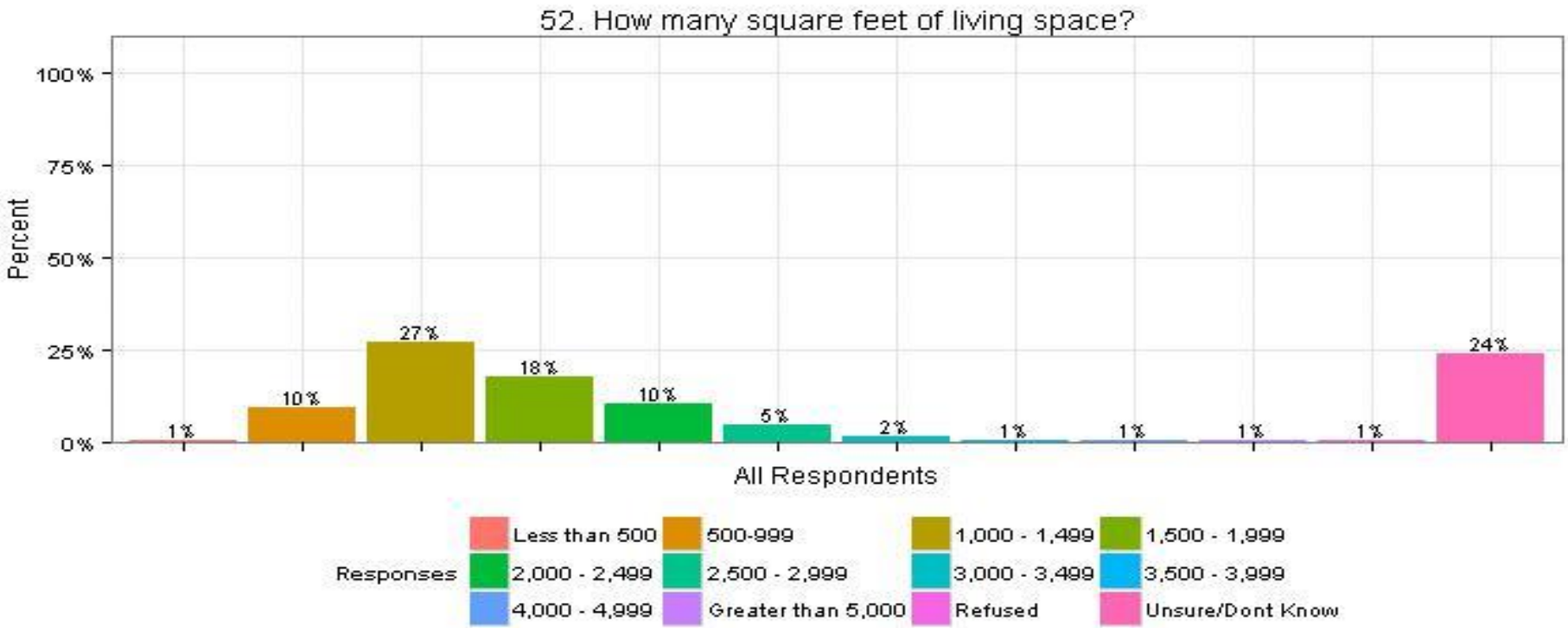
NAVIGANT

50. Which one of these options best describes the exterior of this residence?
Respondents in Large Homes



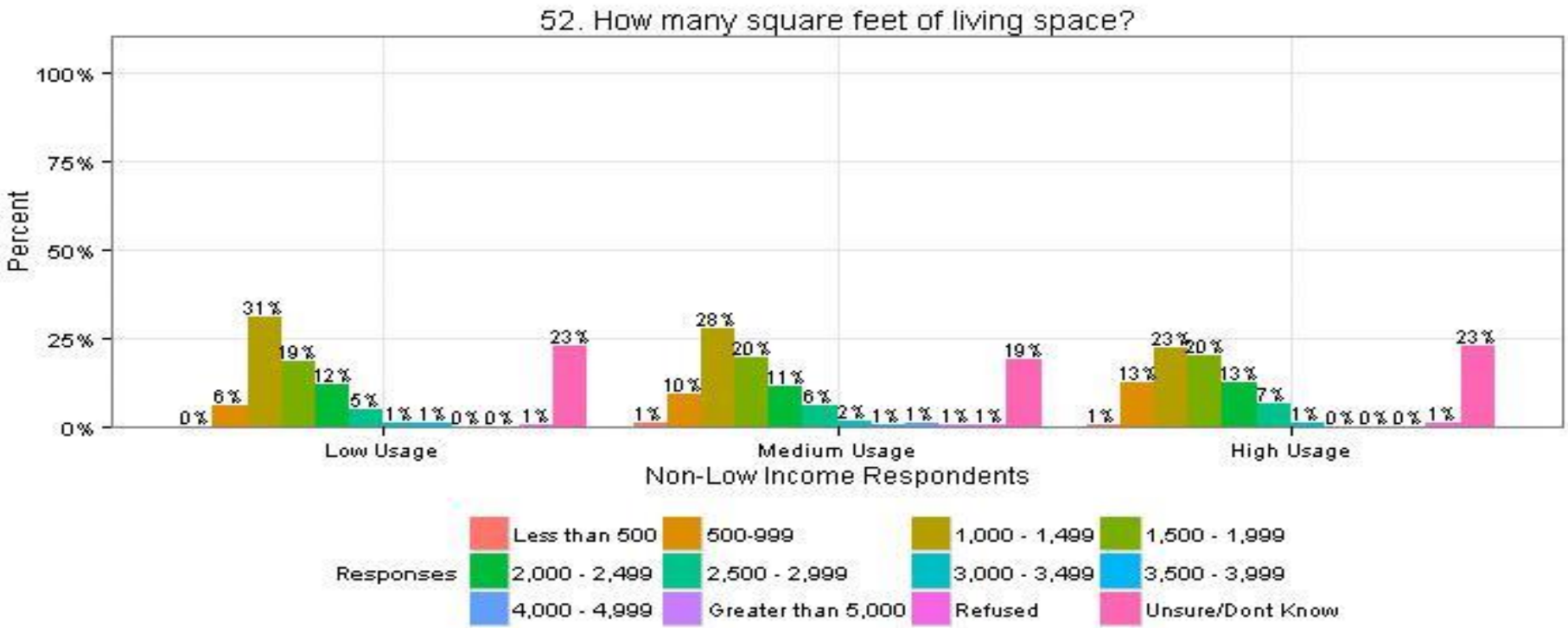
NAVIGANT

52. How many square feet of living space? All Respondents



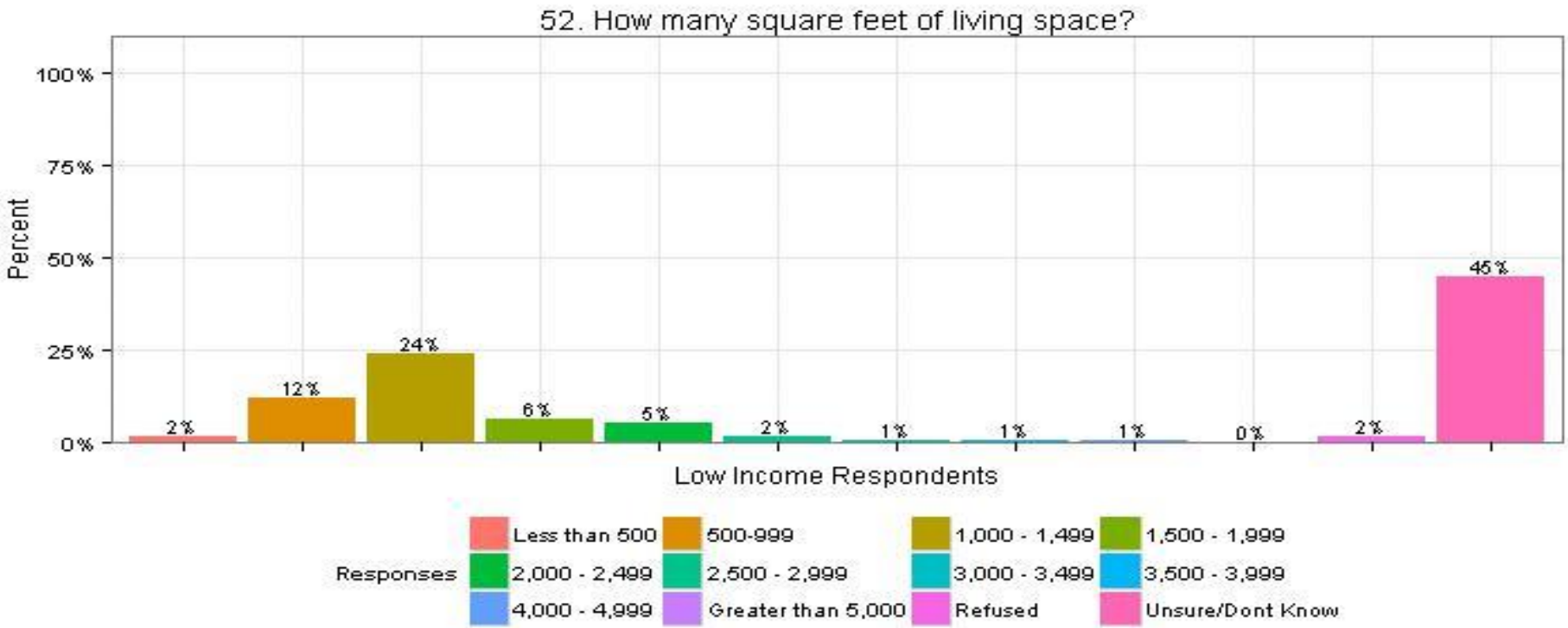
NAVIGANT

52. How many square feet of living space? Non-Low Income Respondents

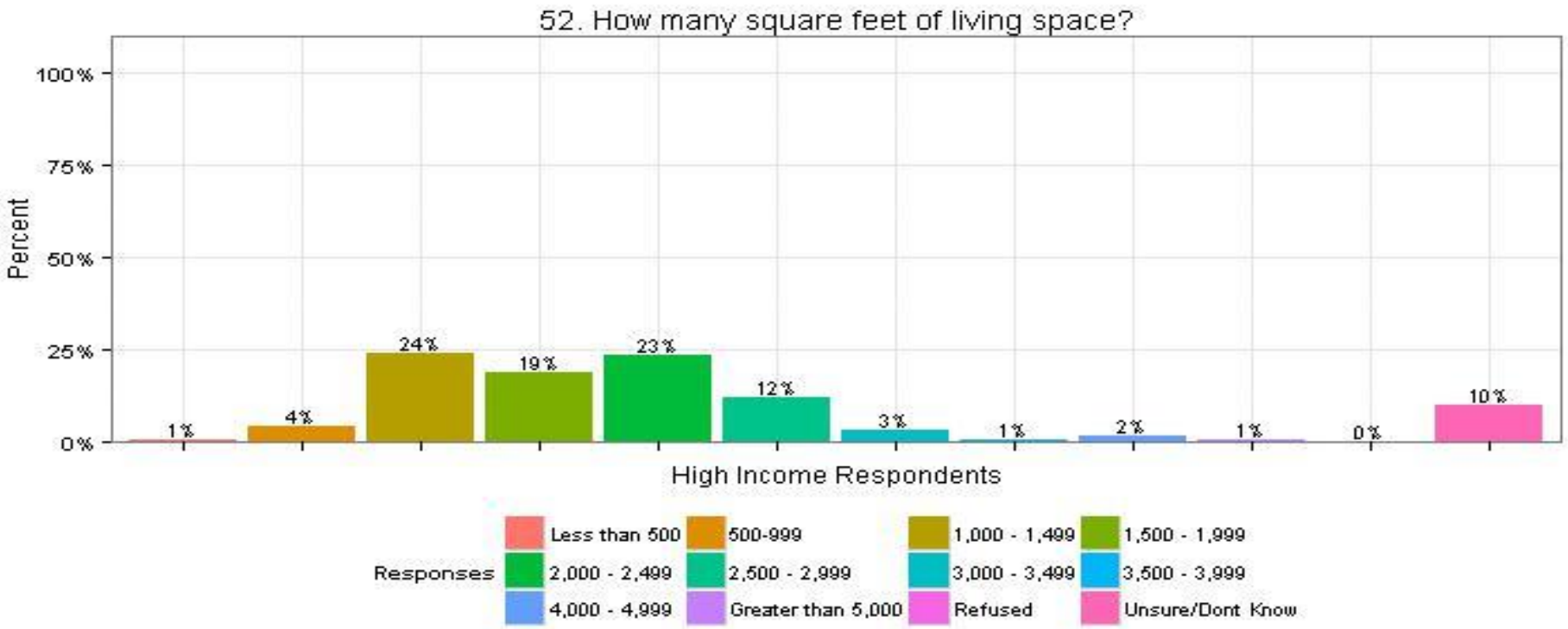


NAVIGANT

52. How many square feet of living space? Low Income Respondents

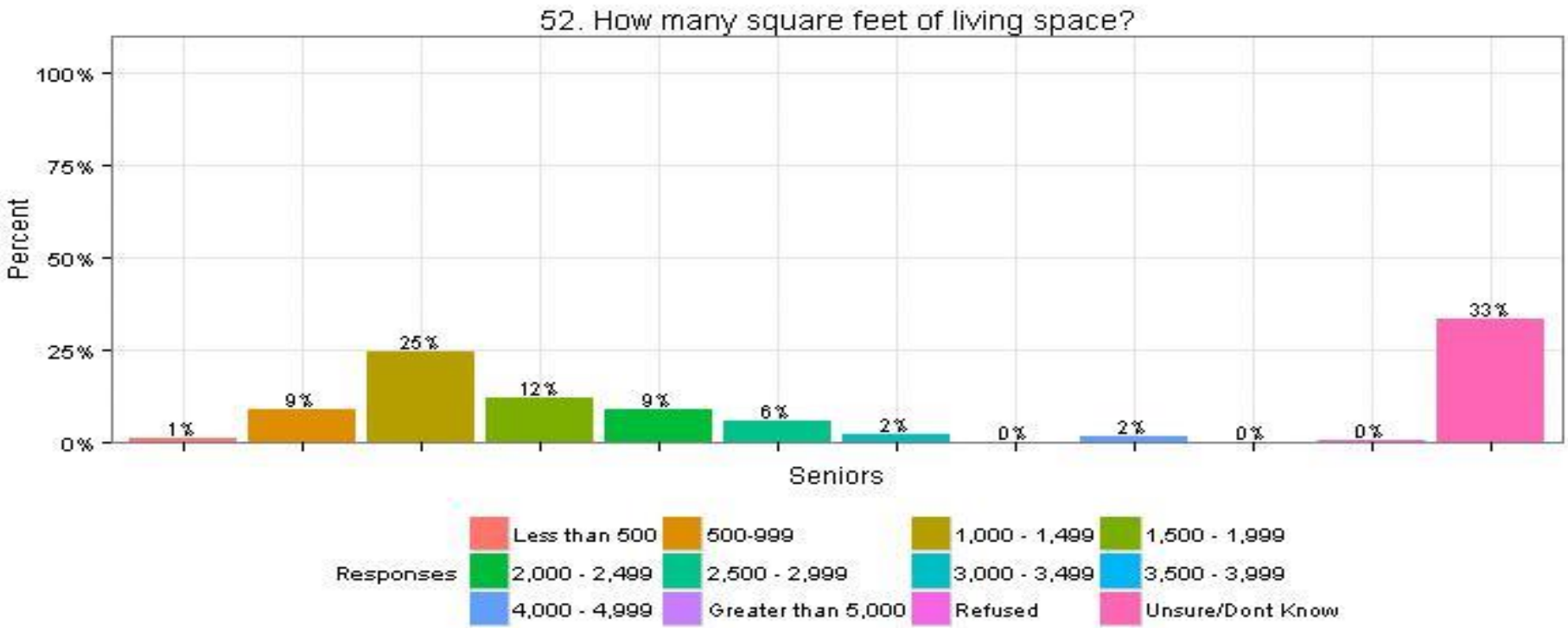


52. How many square feet of living space? High Income Respondents



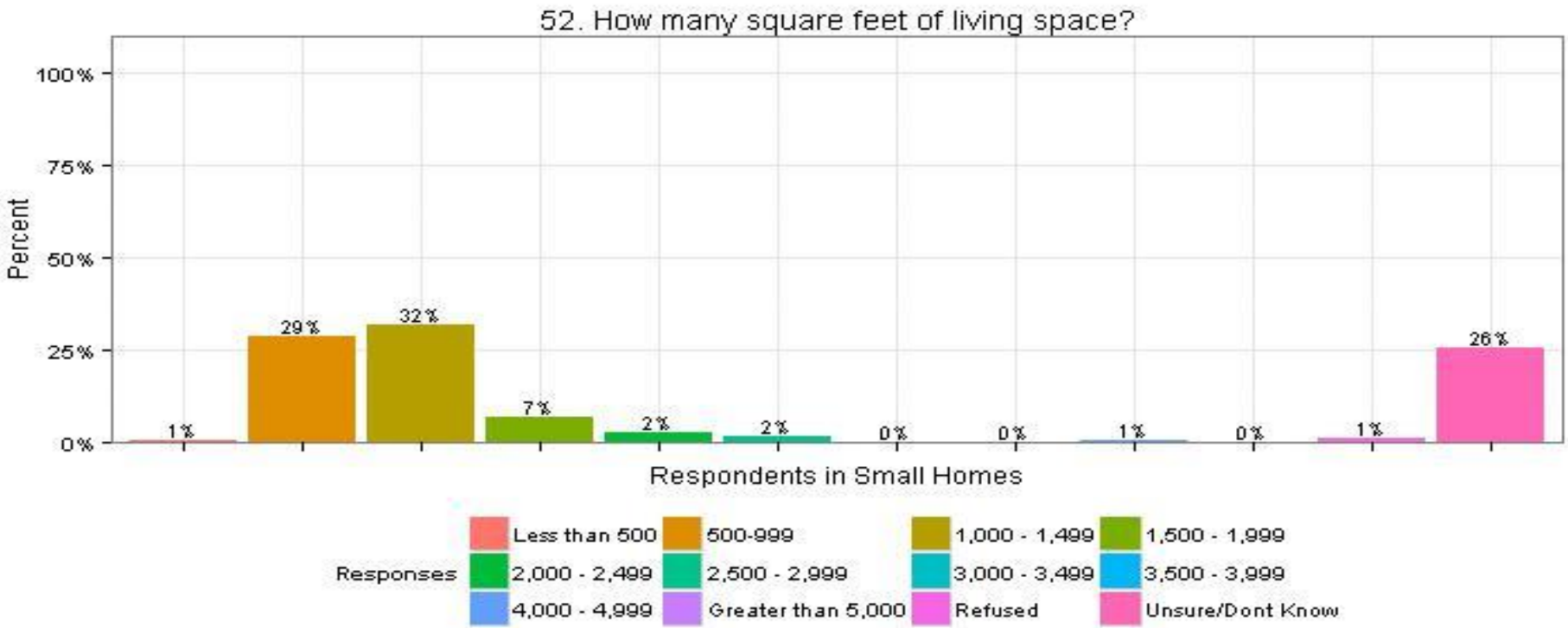
NAVIGANT

52. How many square feet of living space? Seniors



NAVIGANT

52. How many square feet of living space? Respondents in Small Homes



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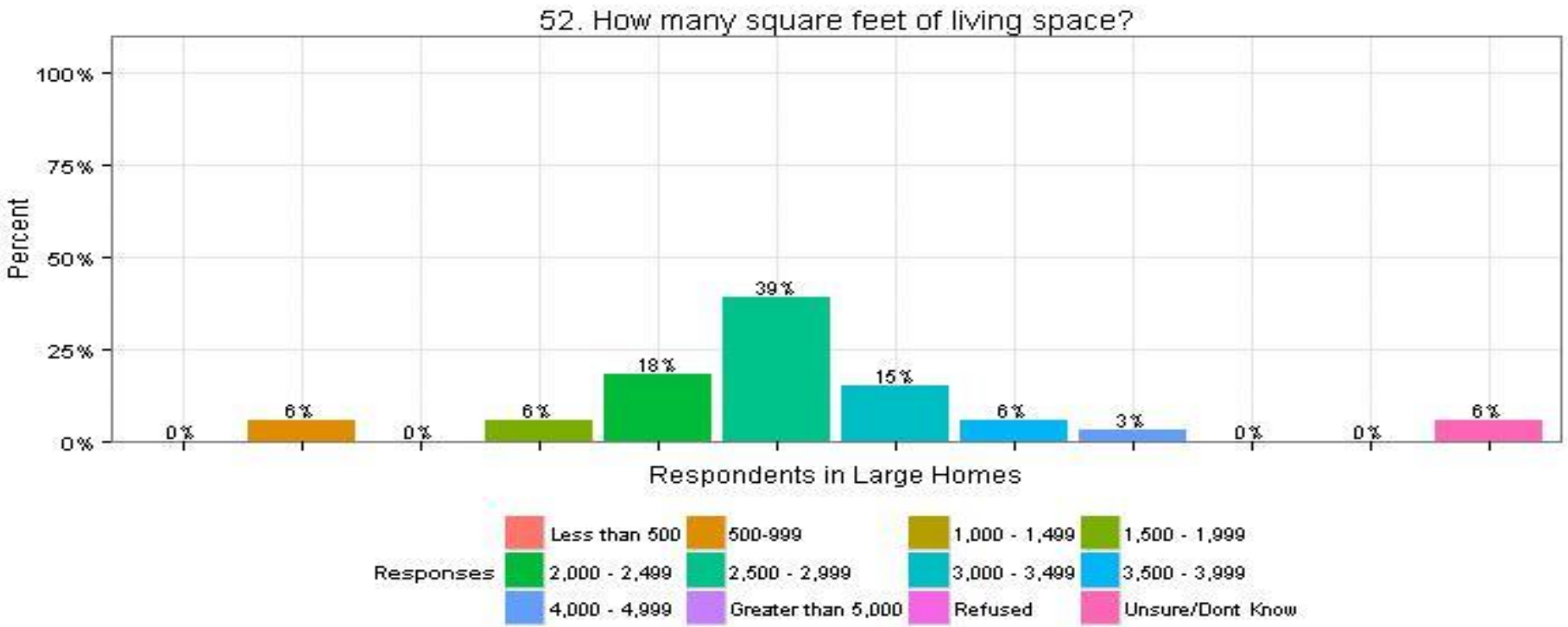
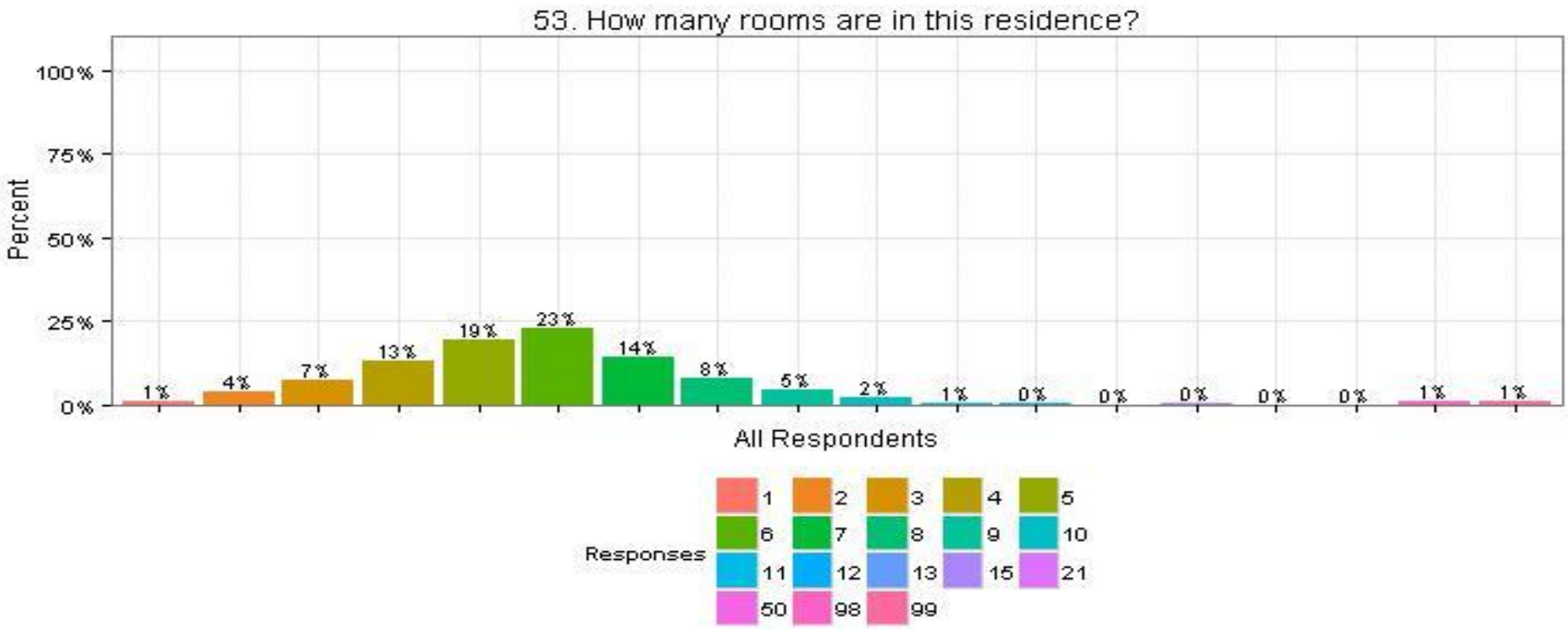
52. How many square feet of living space? Respondents in Large Homes

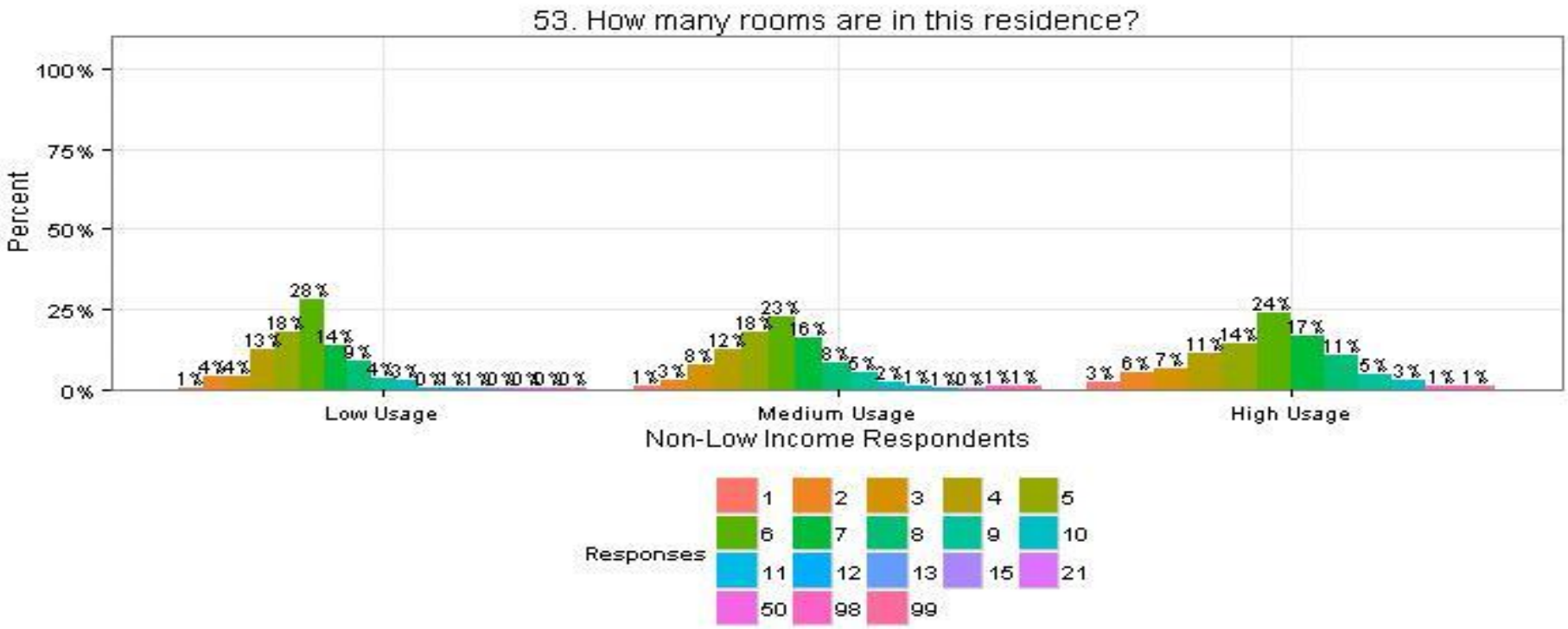


NAVIGANT

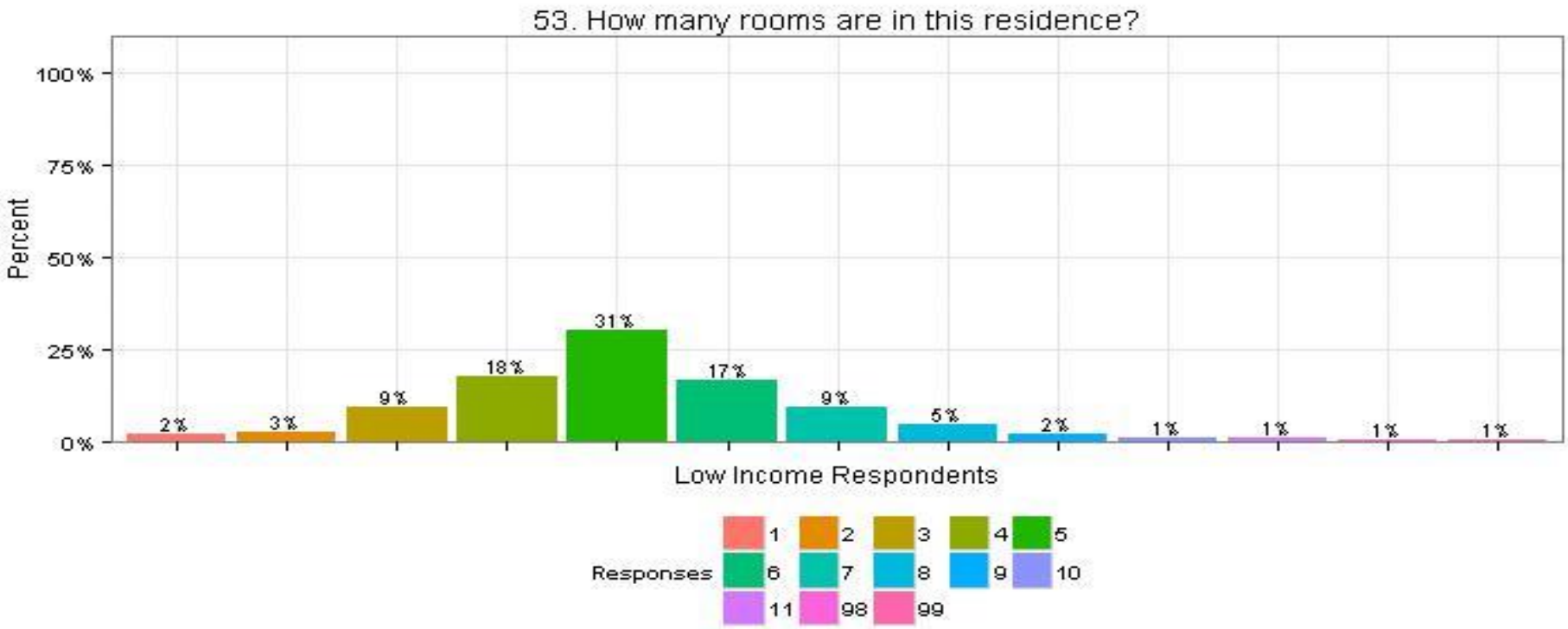
53. How many rooms are in this residence? All Respondents



53. How many rooms are in this residence? Non-Low Income Respondents



53. How many rooms are in this residence? Low Income Respondents



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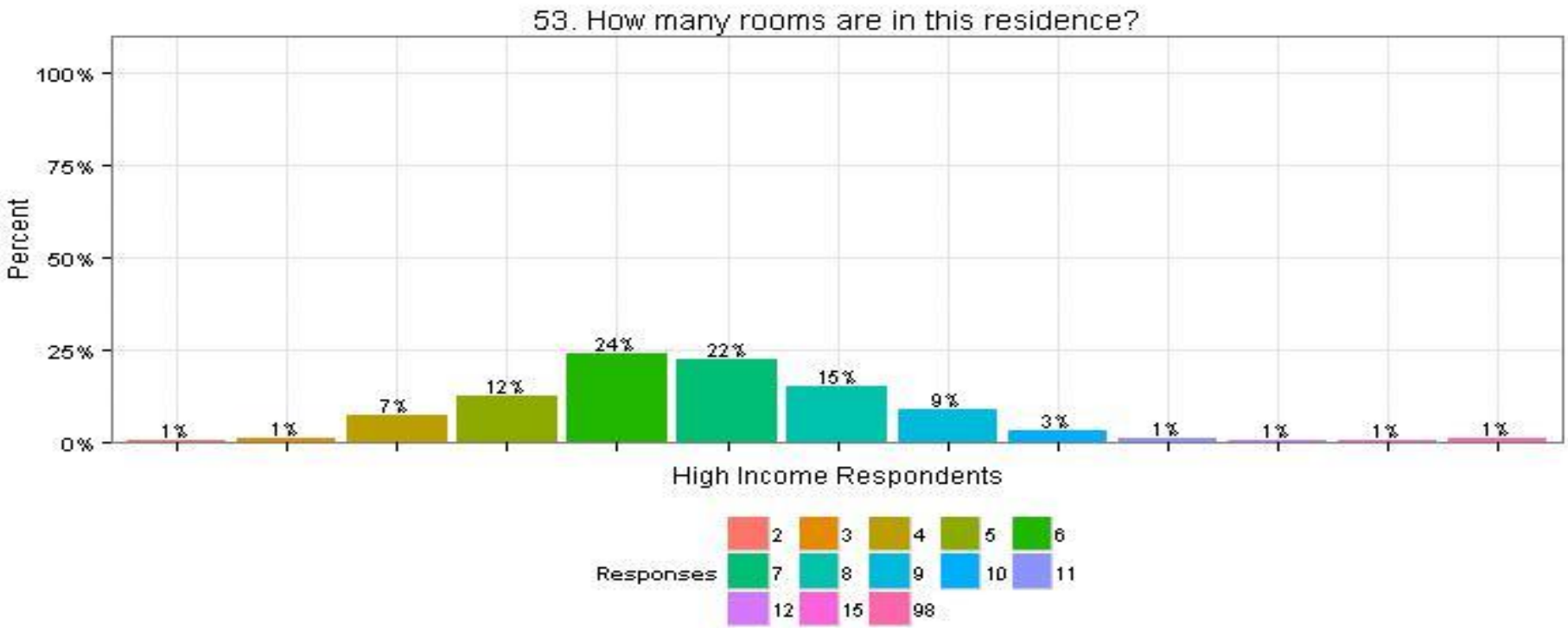
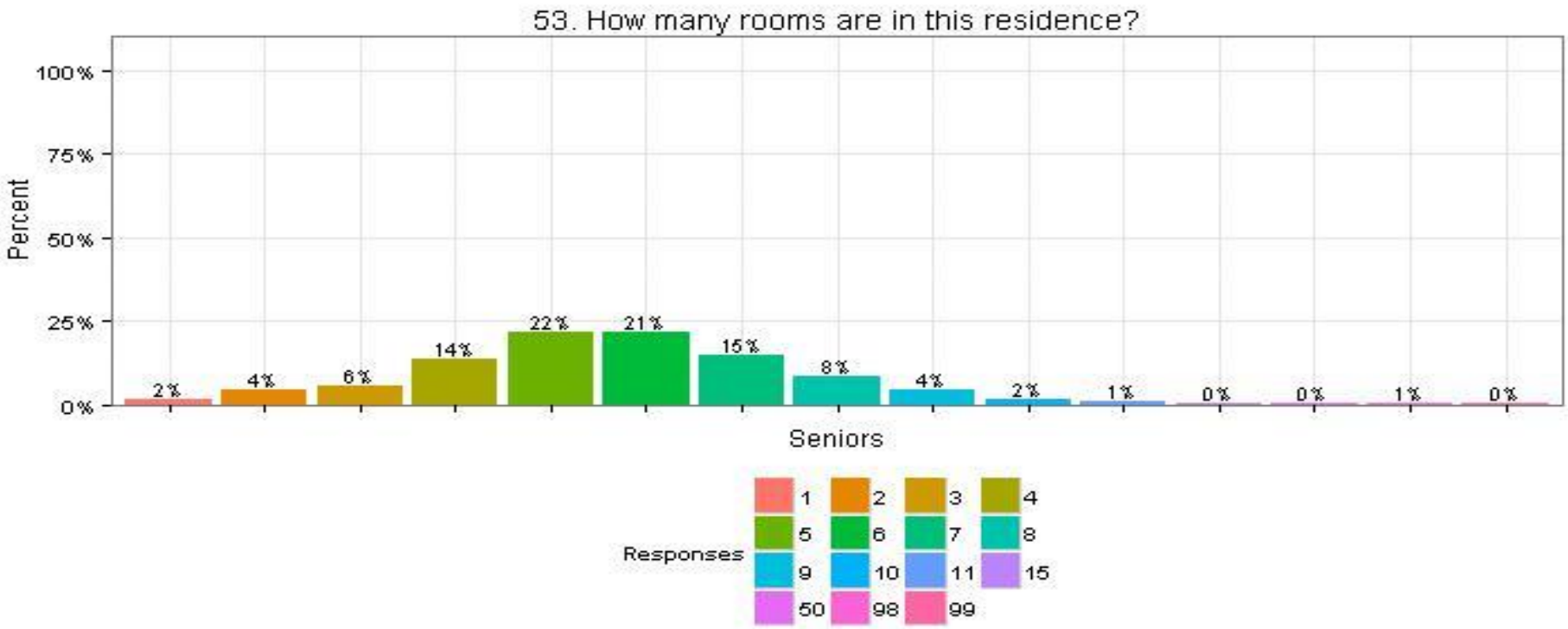
53. How many rooms are in this residence? High Income Respondents

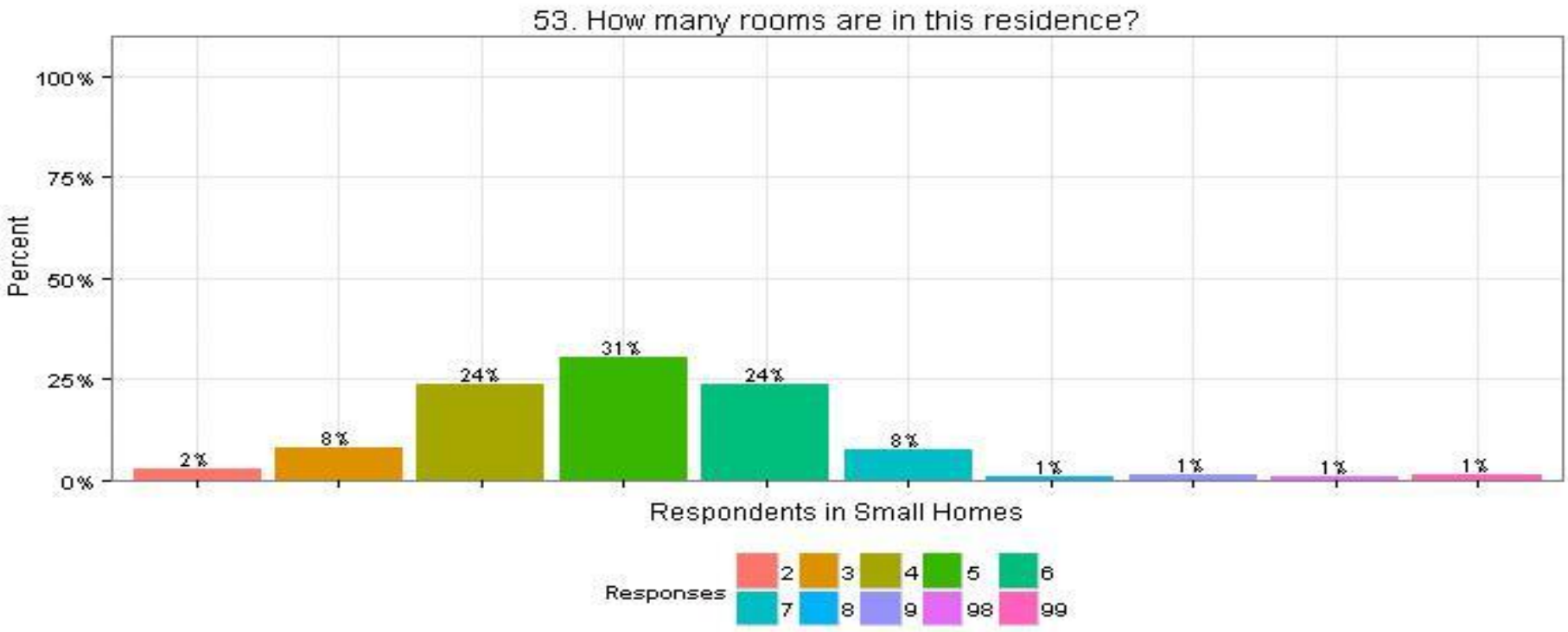


NAVIGANT

53. How many rooms are in this residence? Seniors

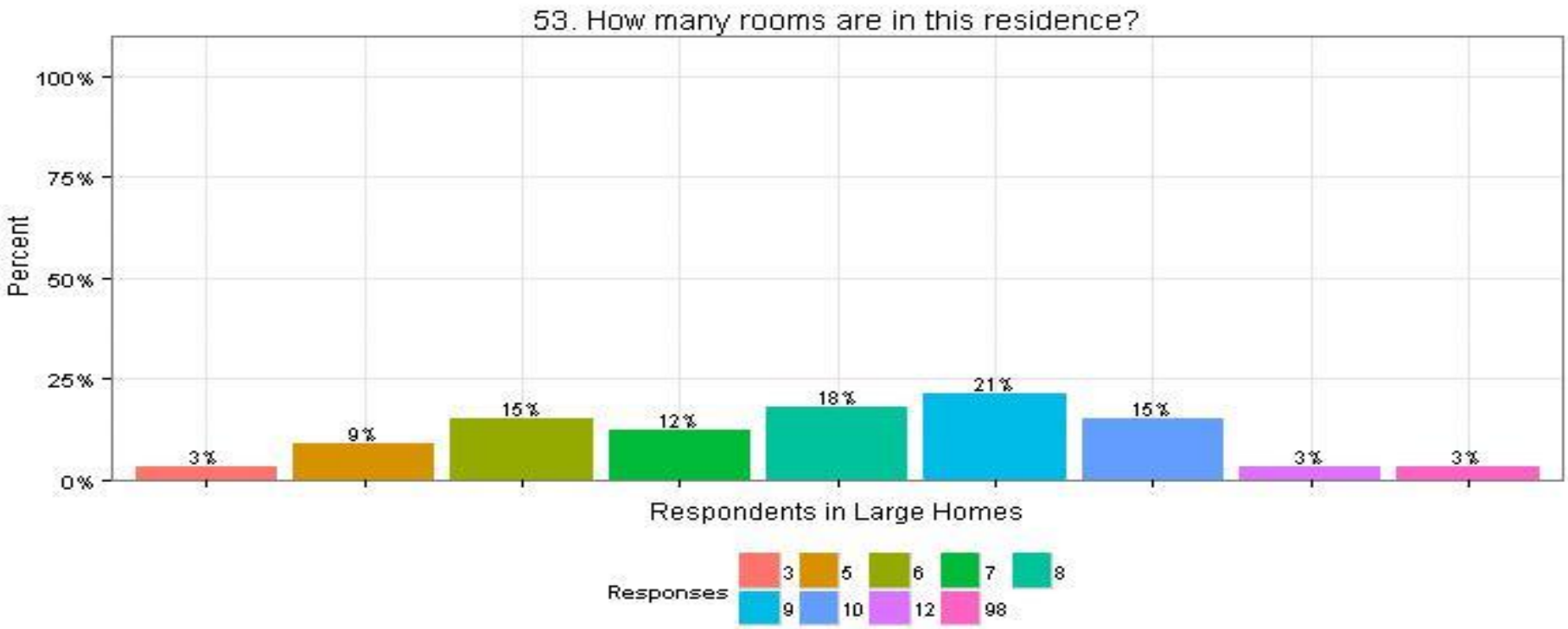


53. How many rooms are in this residence? Respondents in Small Homes



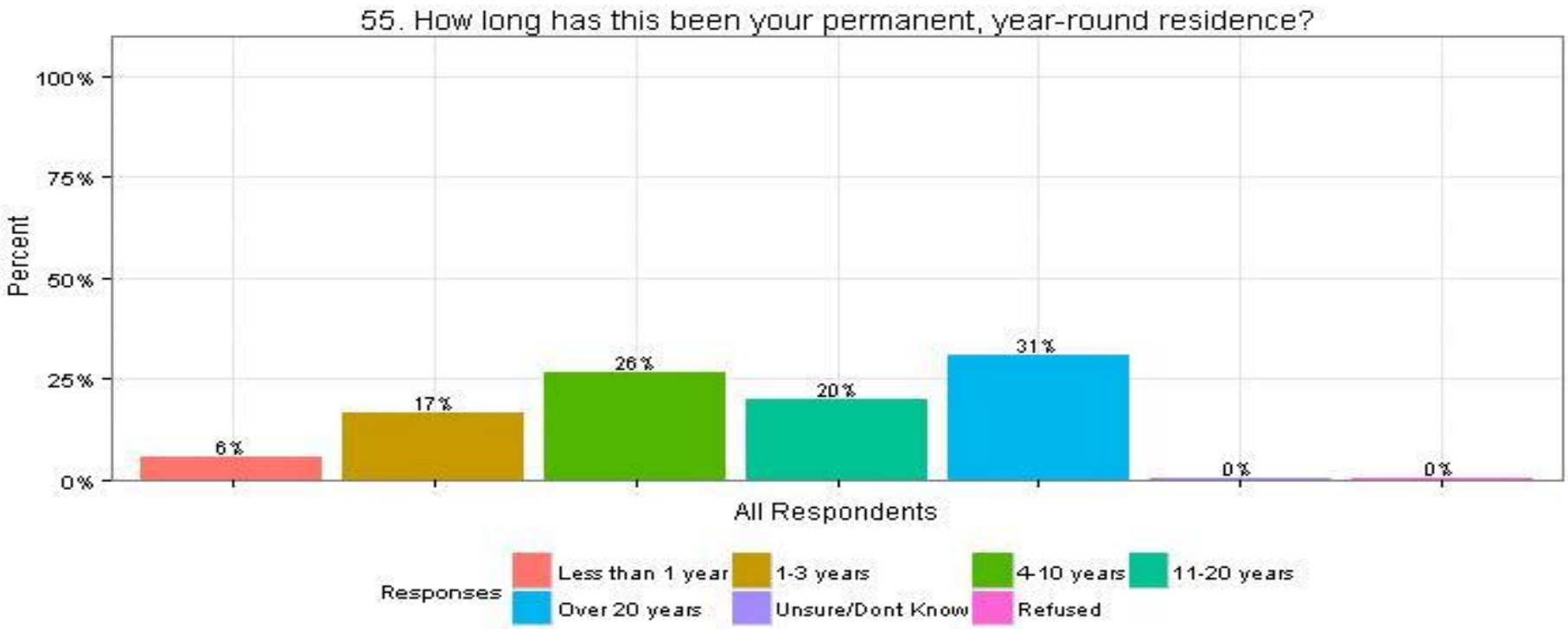
NAVIGANT

53. How many rooms are in this residence? Respondents in Large Homes



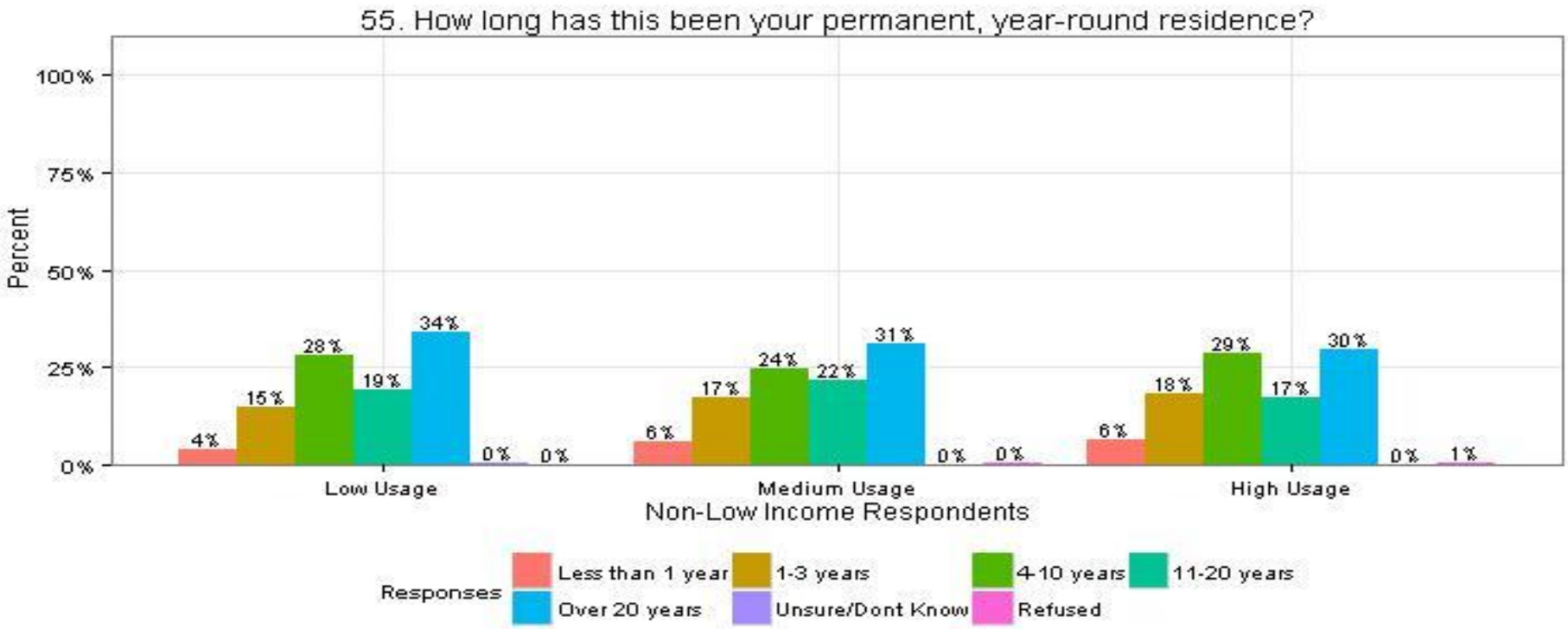
NAVIGANT

55. How long has this been your permanent, year-round residence? All Respondents

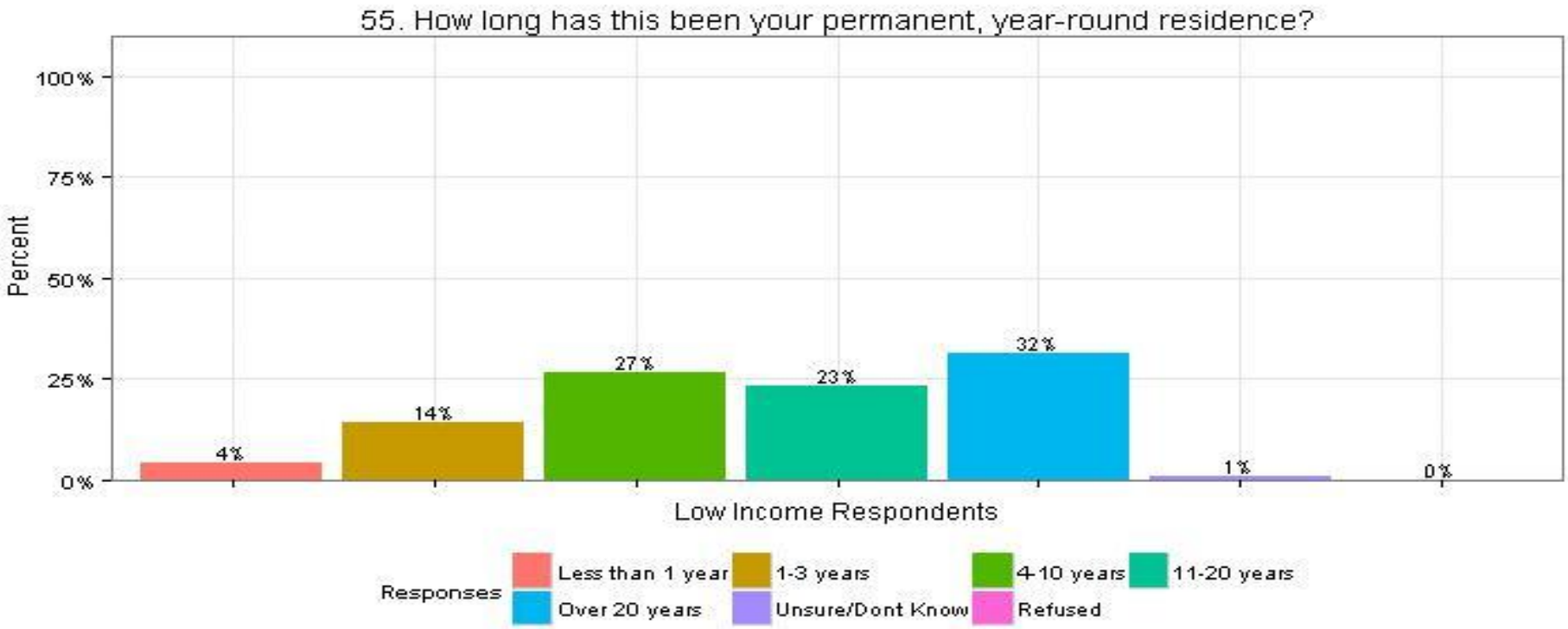


NAVIGANT

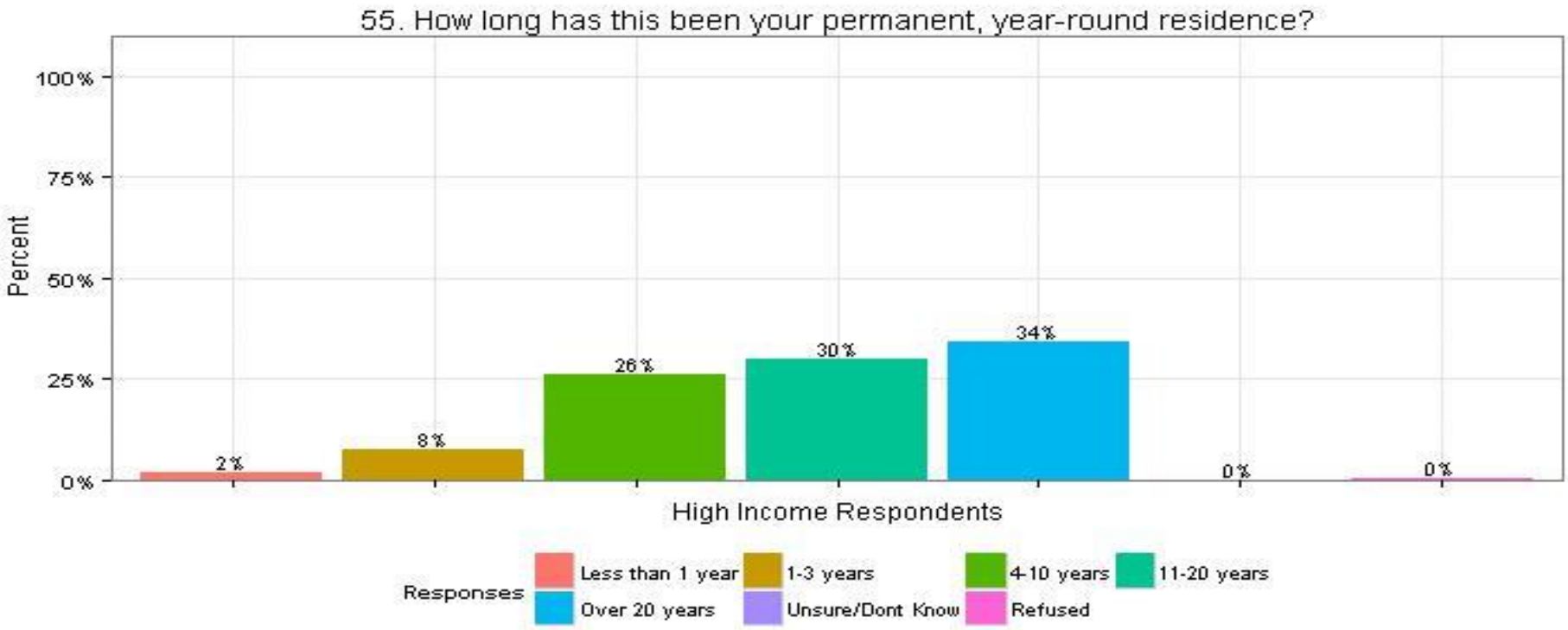
55. How long has this been your permanent, year-round residence? Non-Low Income Respondents



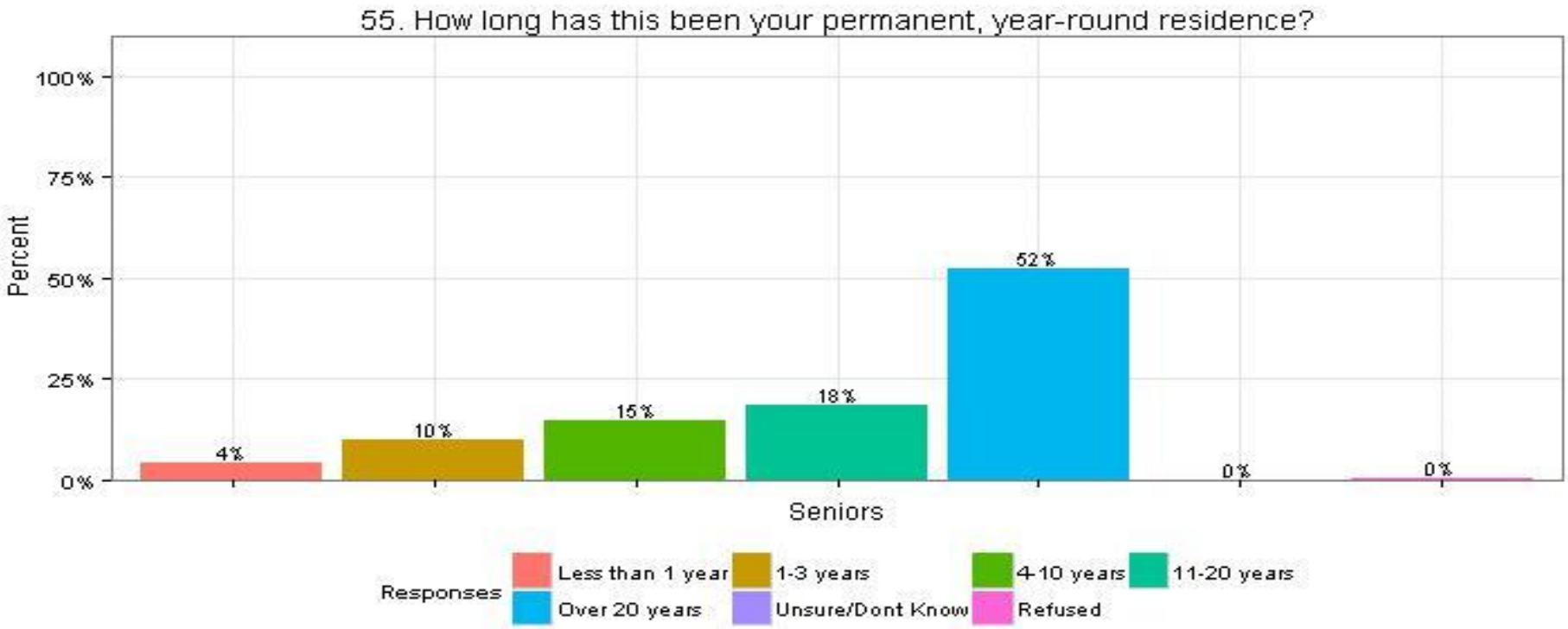
55. How long has this been your permanent, year-round residence? Low Income Respondents



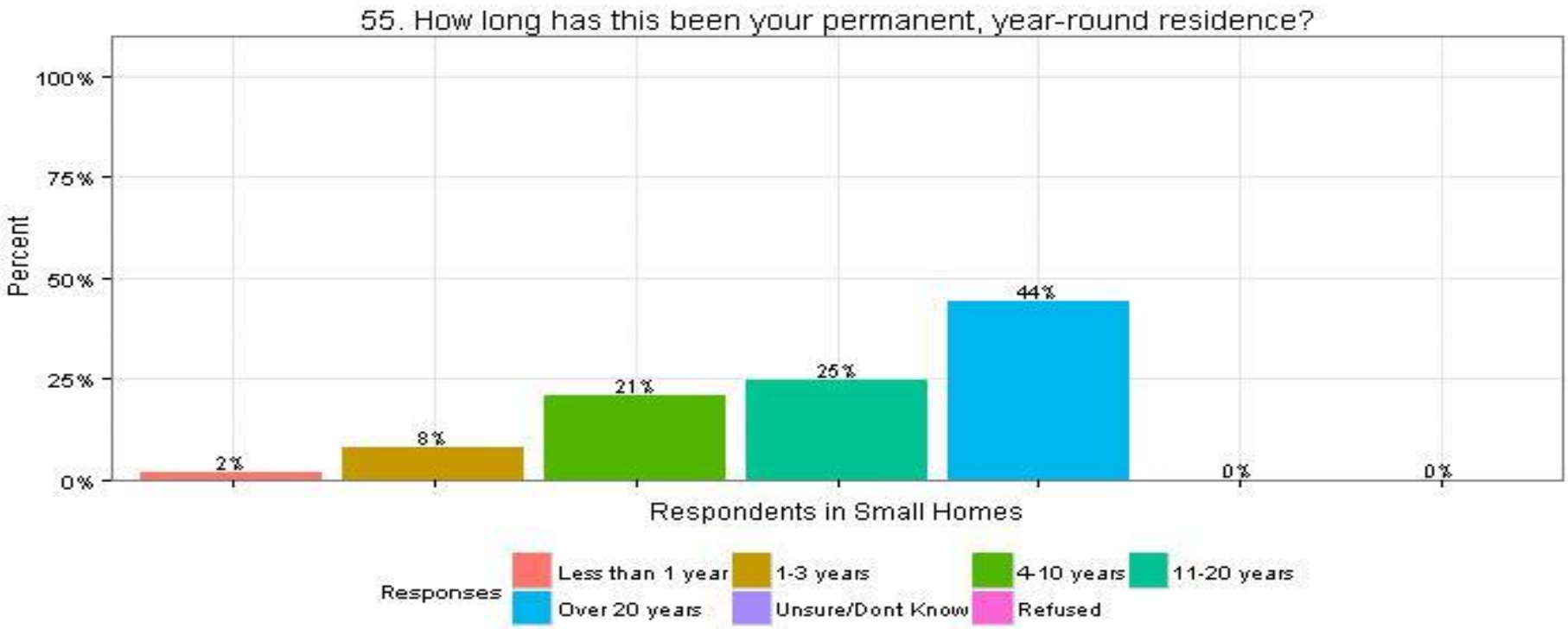
55. How long has this been your permanent, year-round residence? High Income Respondents



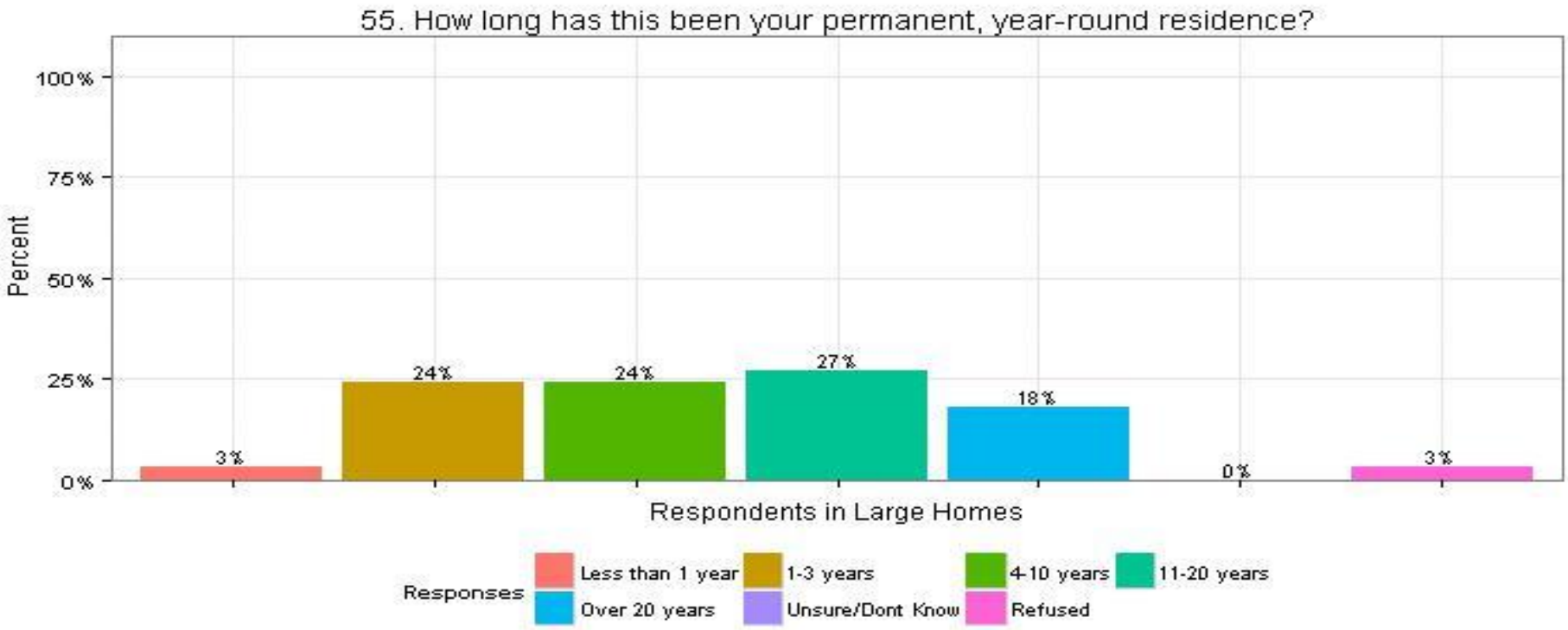
55. How long has this been your permanent, year-round residence? Seniors



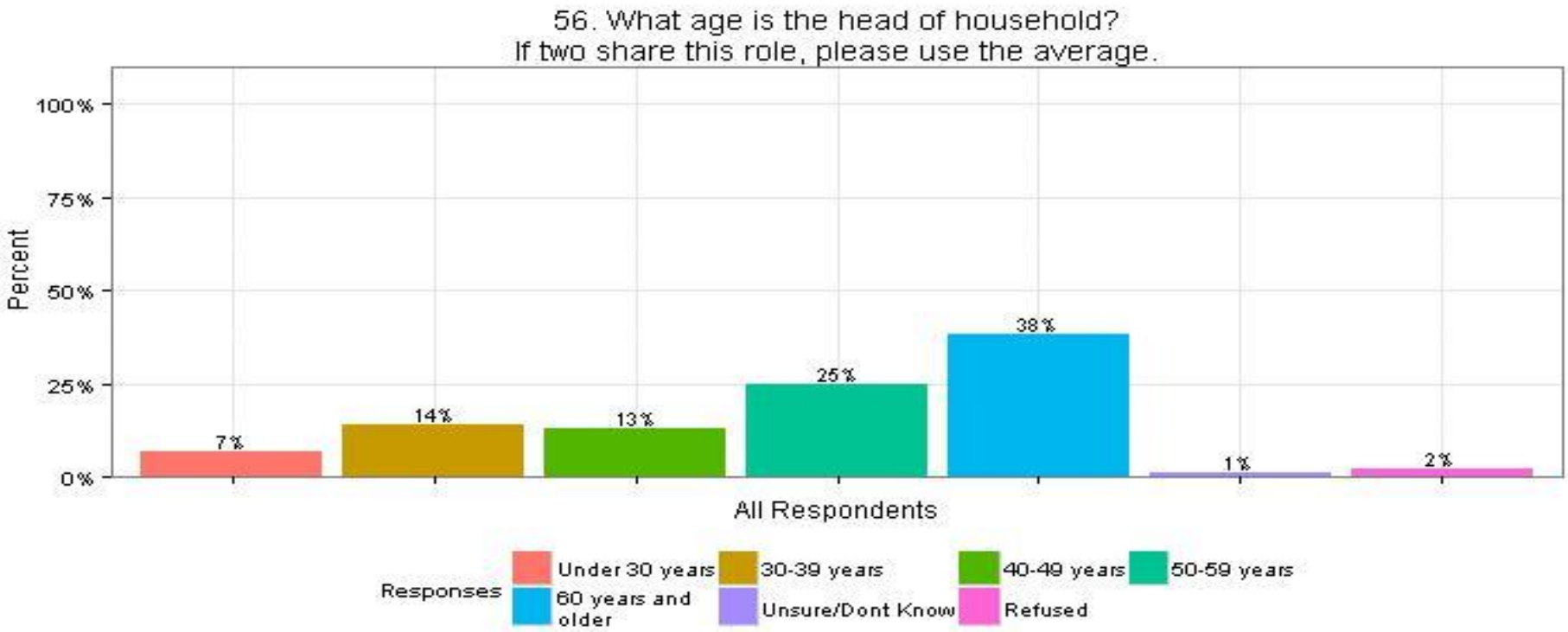
55. How long has this been your permanent, year-round residence? Respondents in Small Homes



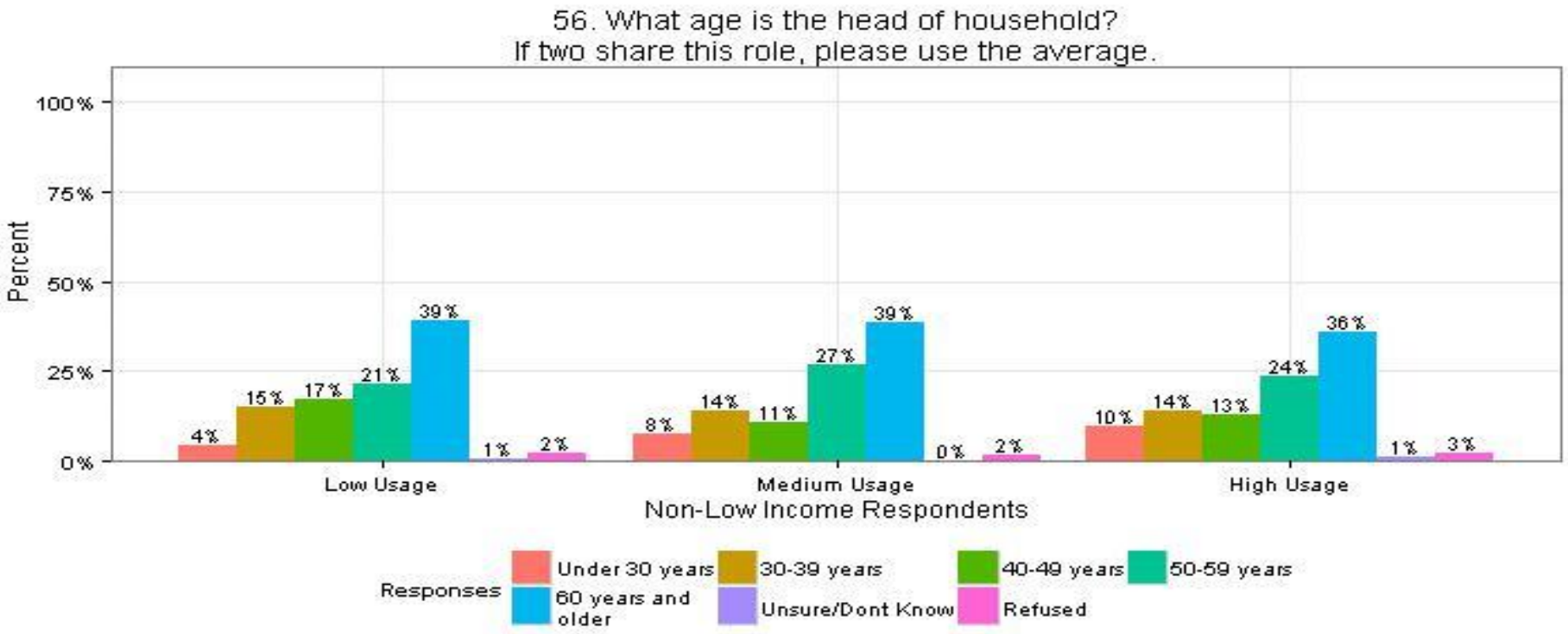
55. How long has this been your permanent, year-round residence? Respondents in Large Homes



56. What age is the head of household? If two share this role, please use the average. All Respondents

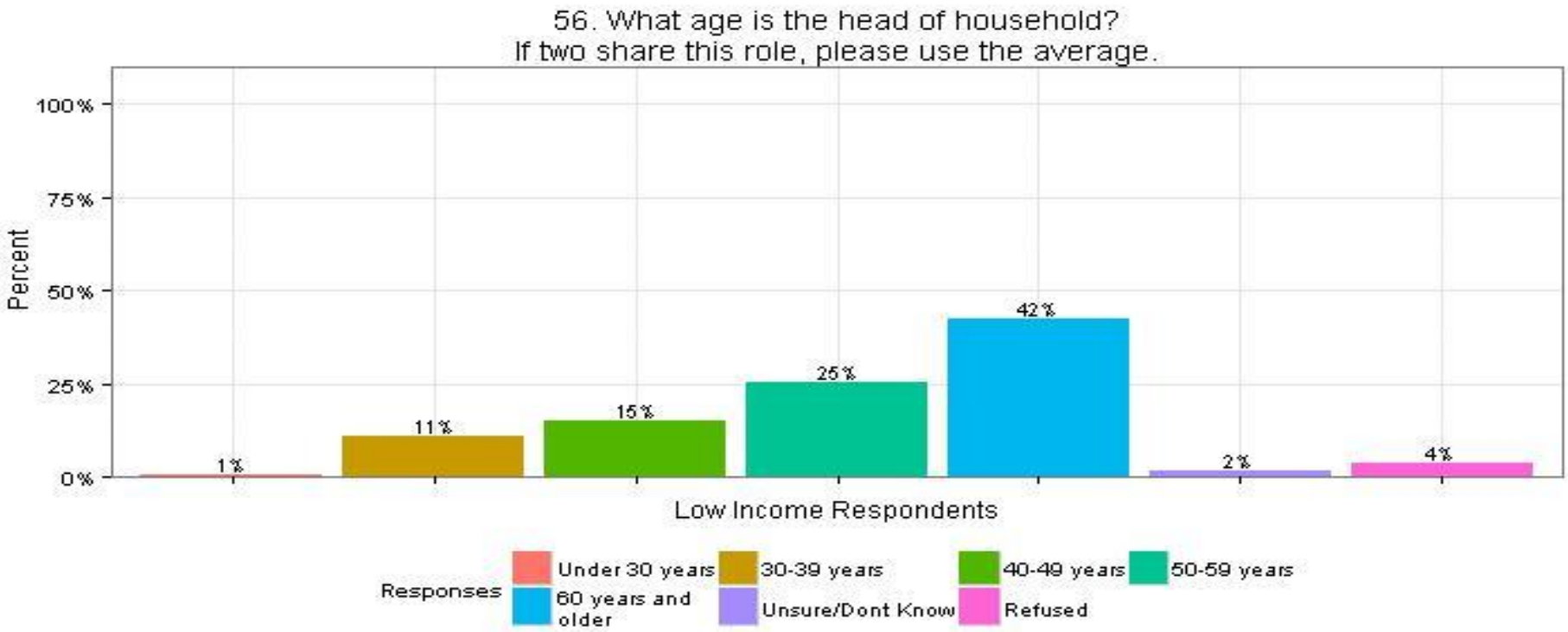


56. What age is the head of household? If two share this role, please use the average. Non-Low Income Respondents

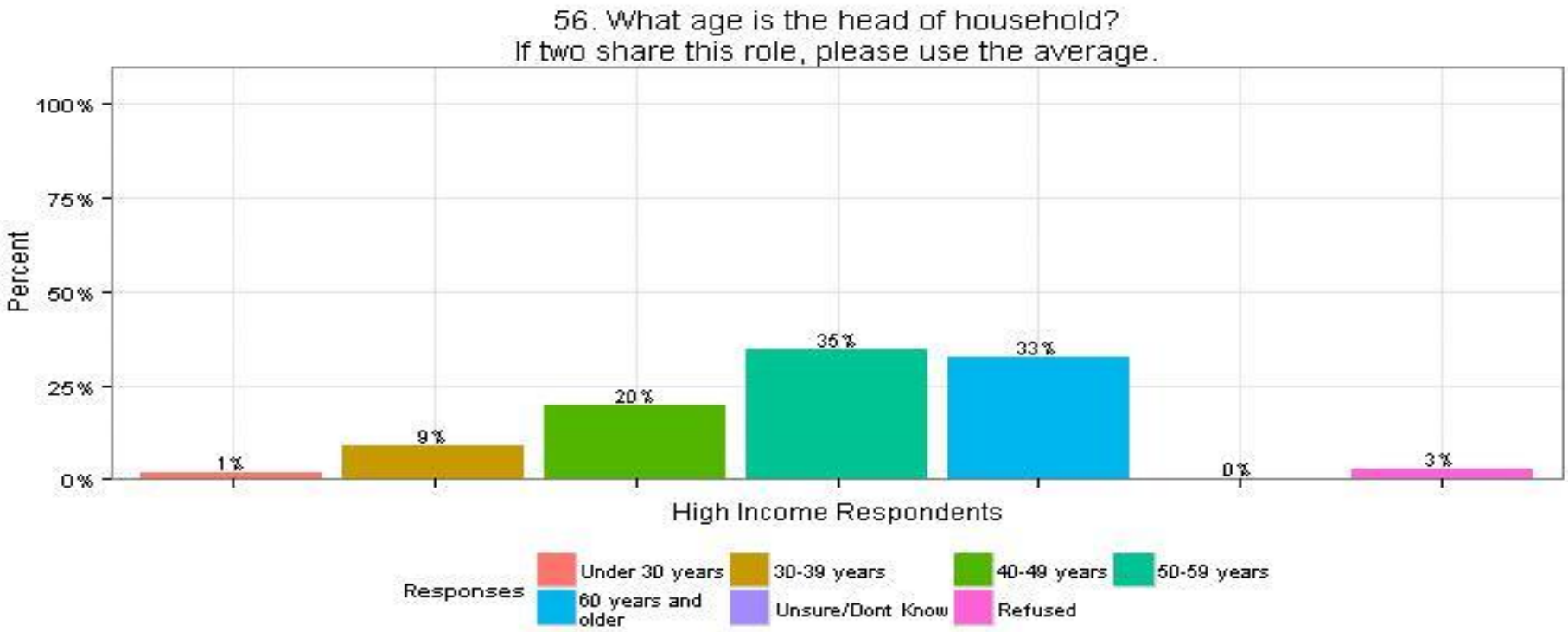


NAVIGANT

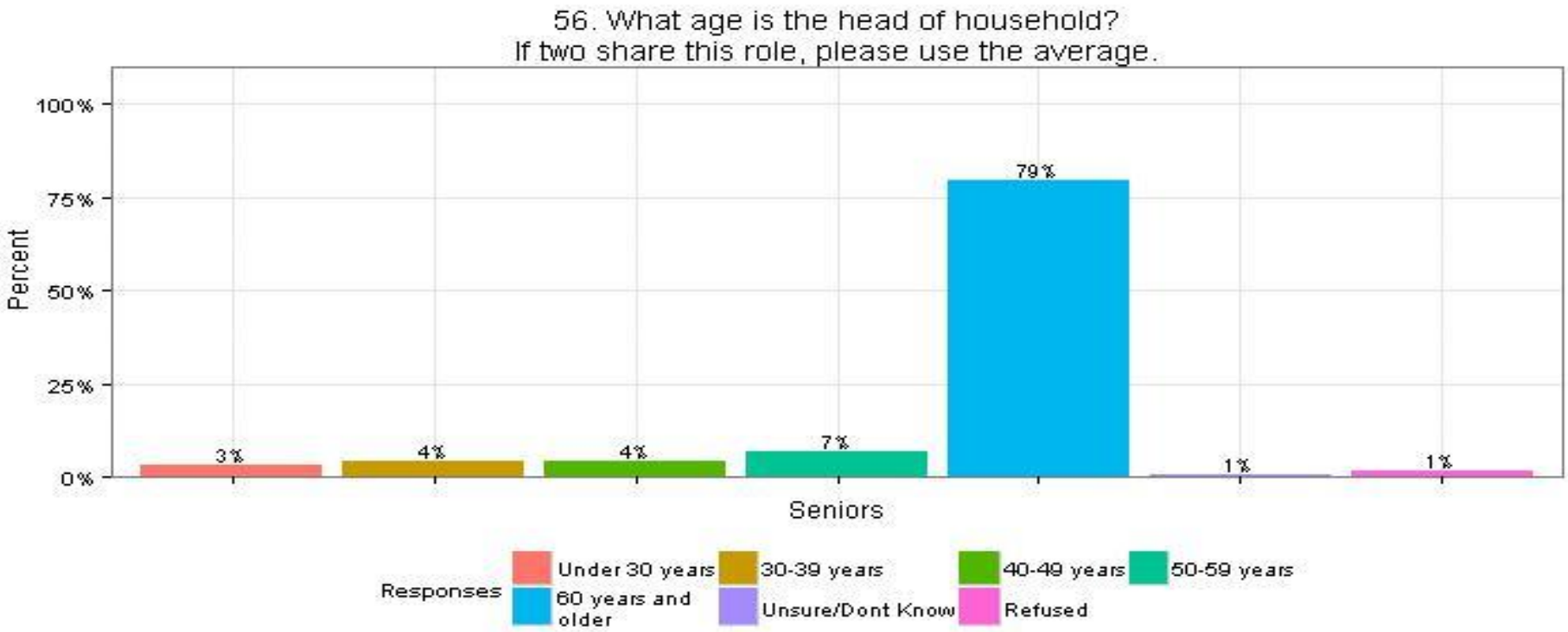
56. What age is the head of household? If two share this role, please use the average. Low Income Respondents



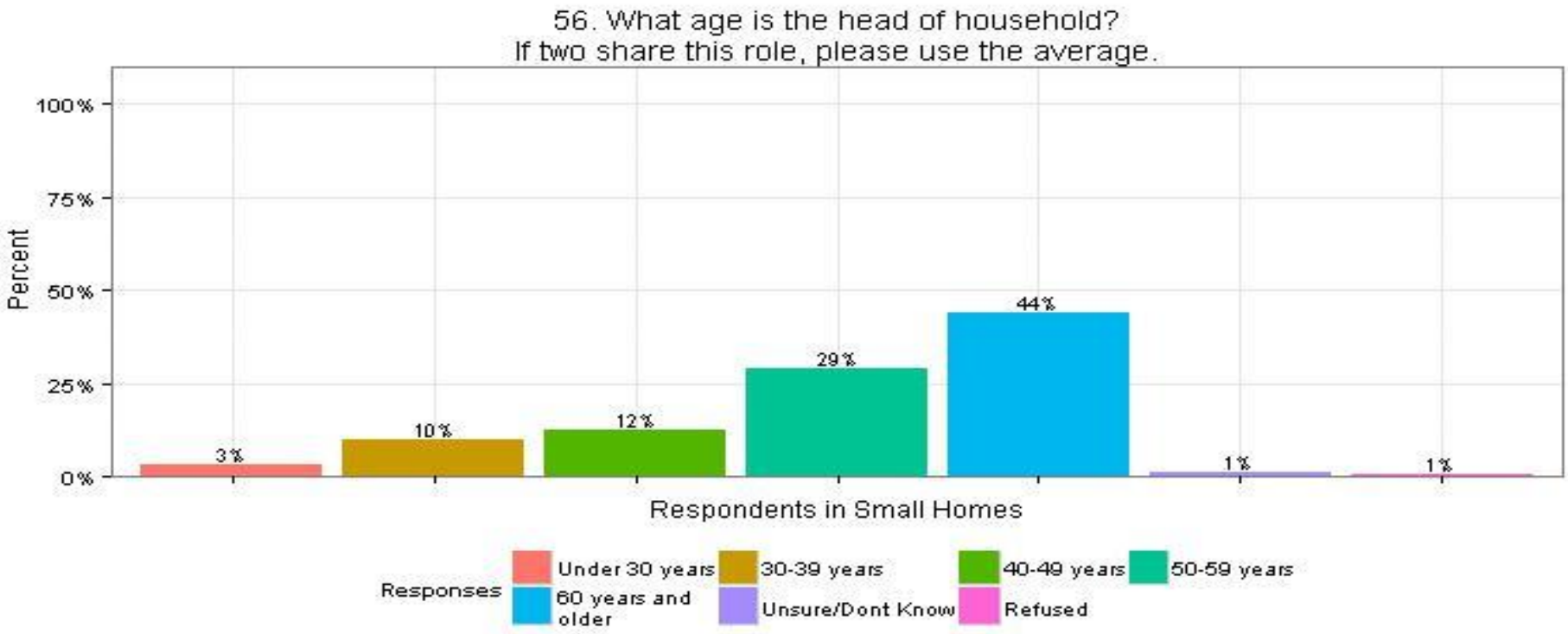
56. What age is the head of household? If two share this role, please use the average. High Income Respondents



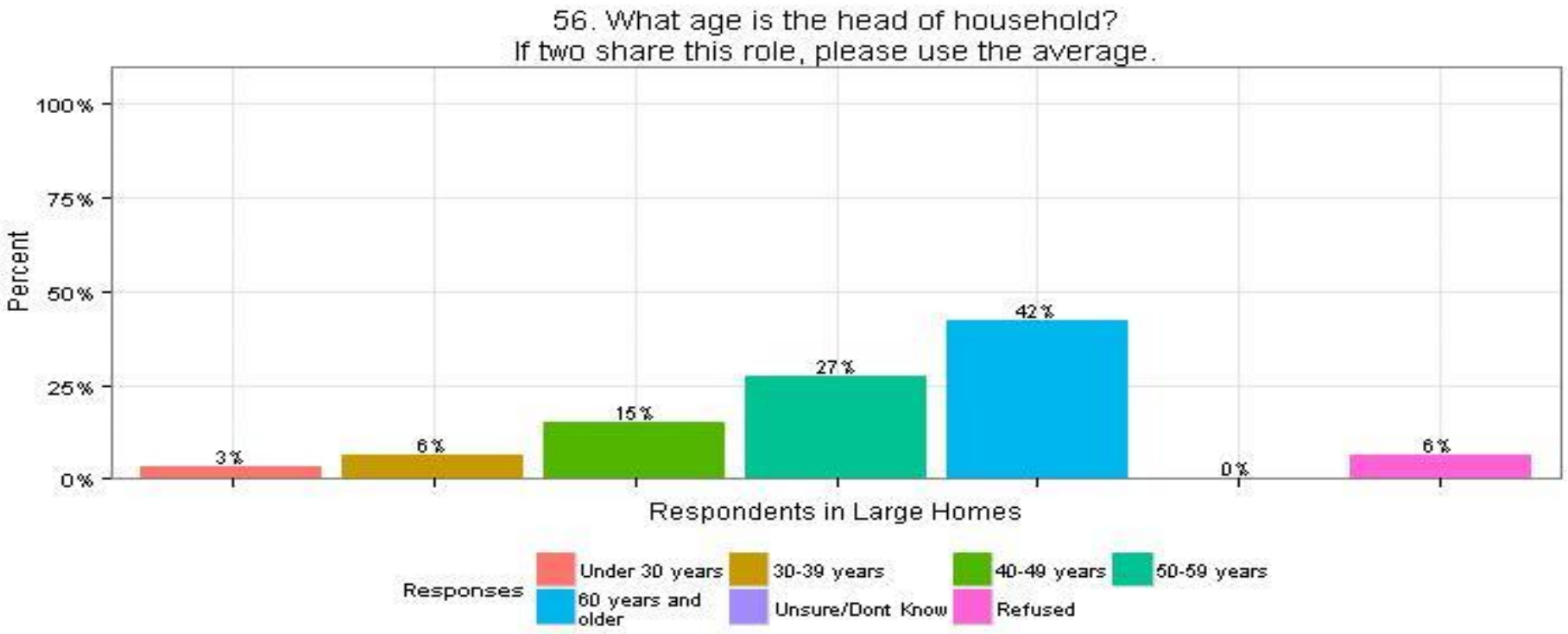
56. What age is the head of household? If two share this role, please use the average. Seniors



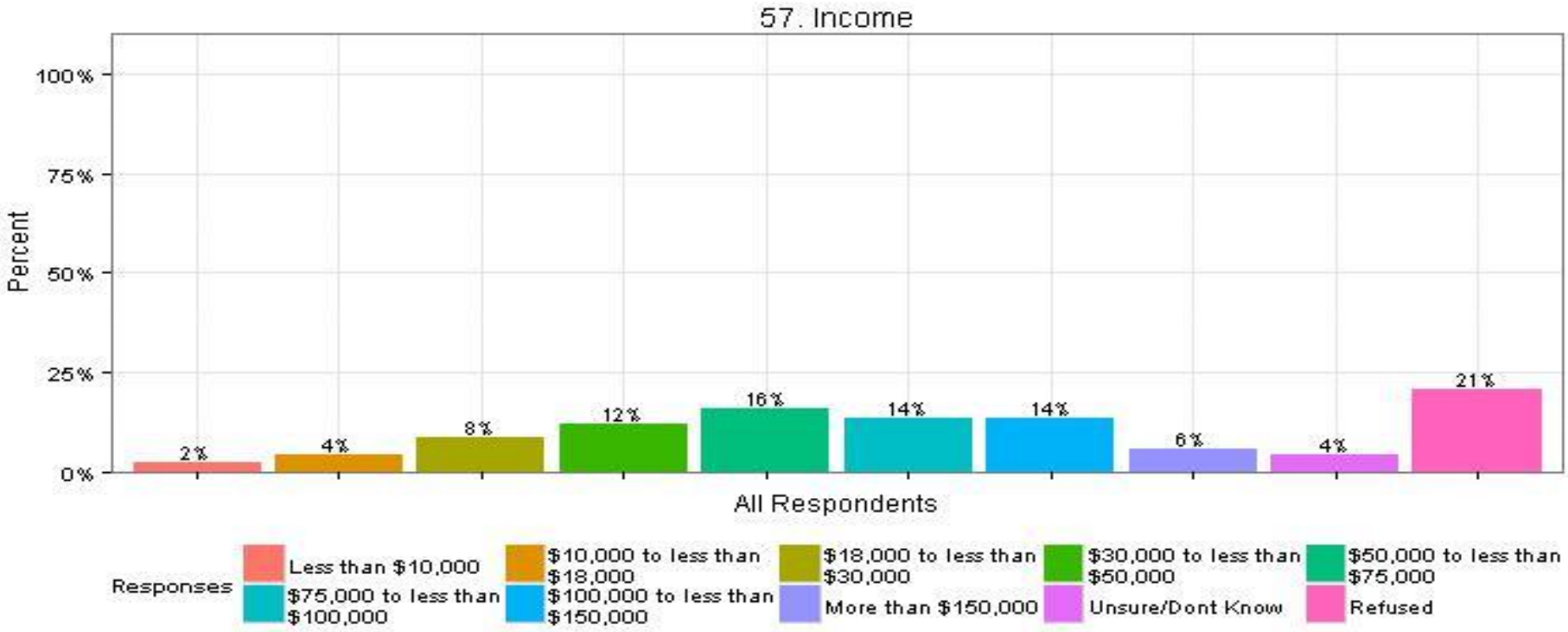
56. What age is the head of household? If two share this role, please use the average. Respondents in Small Homes



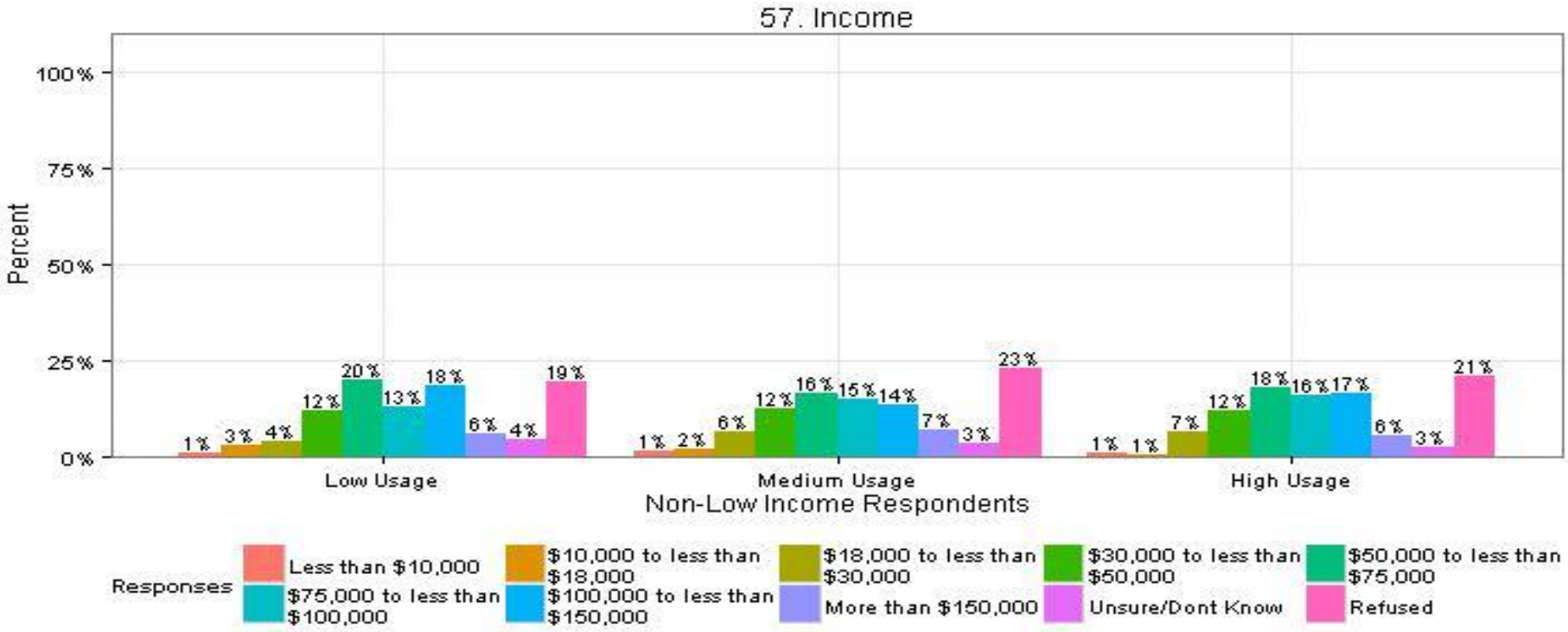
56. What age is the head of household? If two share this role, please use the average. Respondents in Large Homes



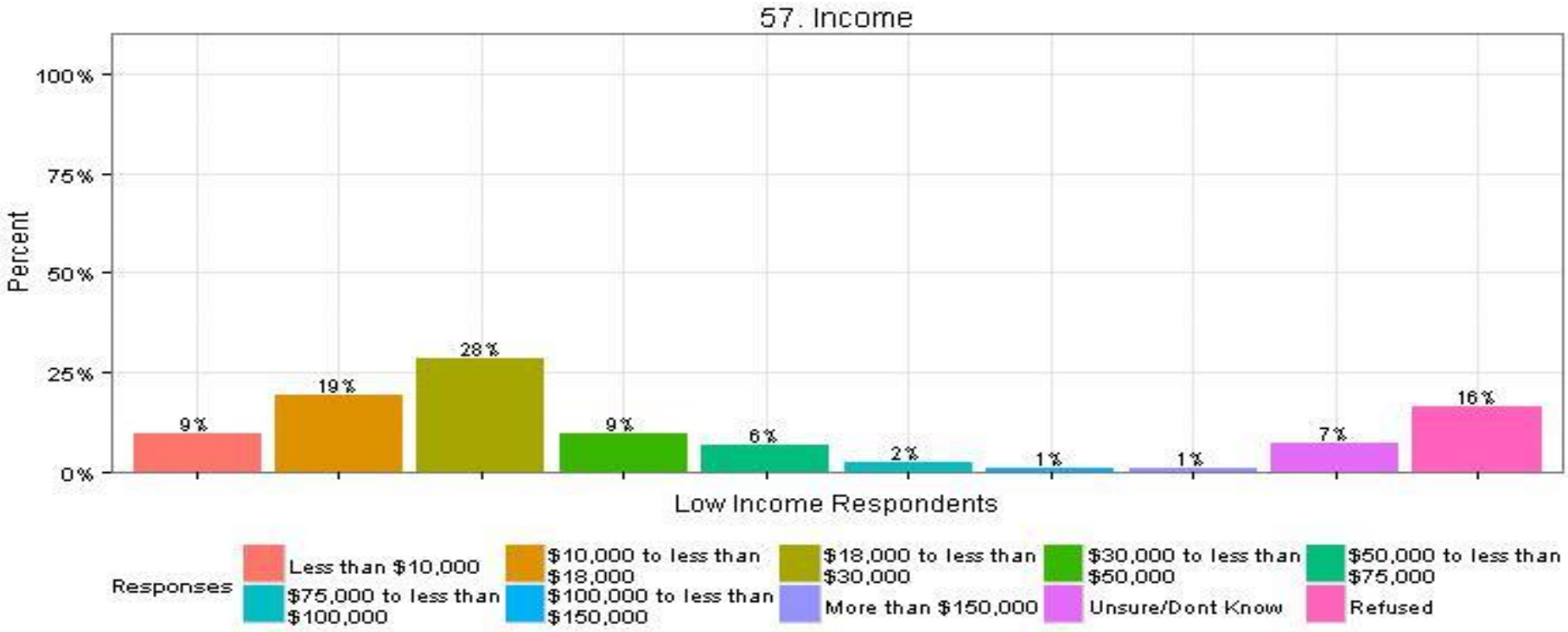
57. Income
All Respondents



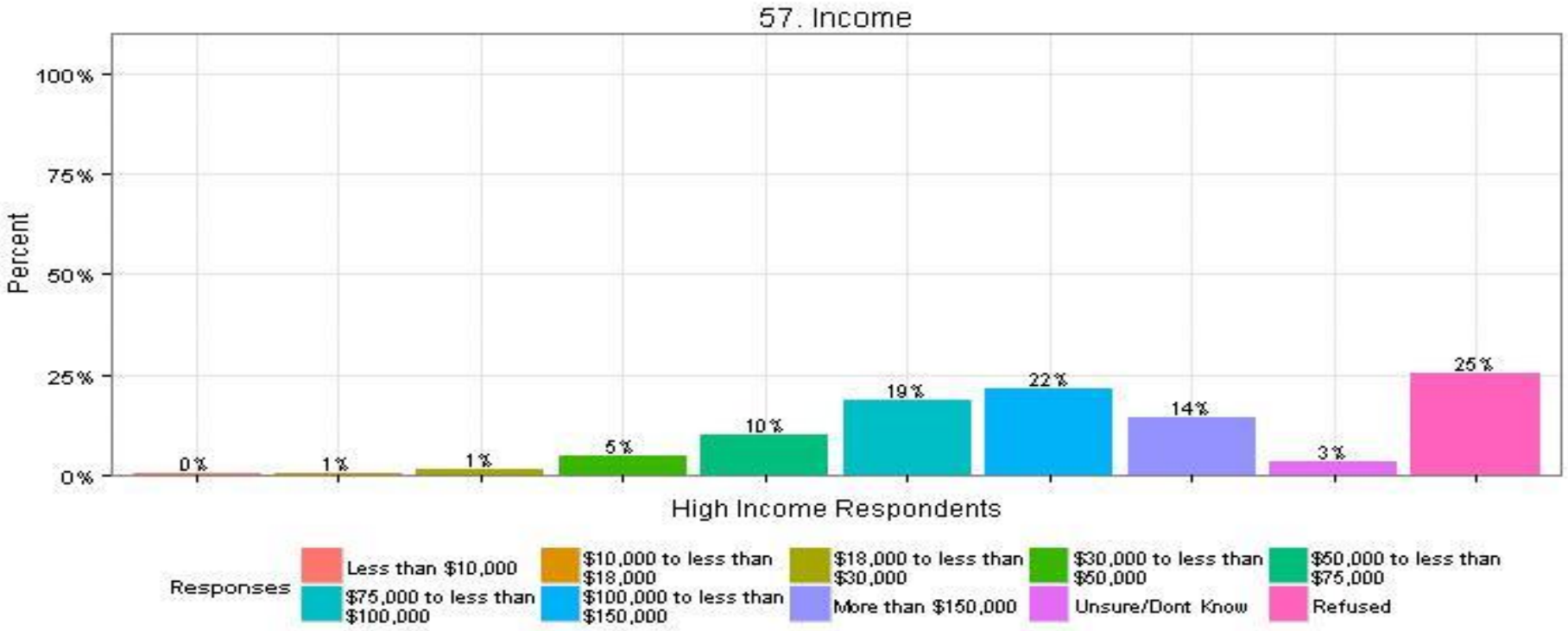
57. Income
Non-Low Income Respondents



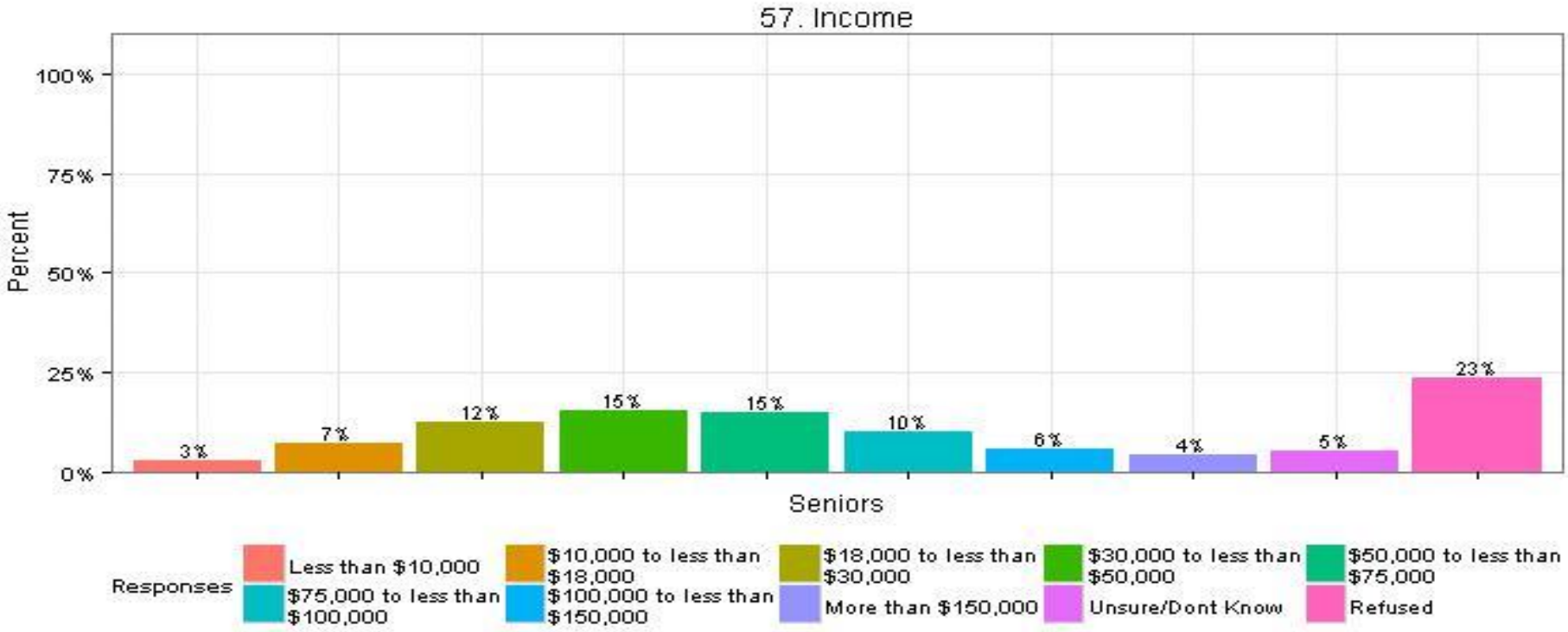
57. Income
Low Income Respondents



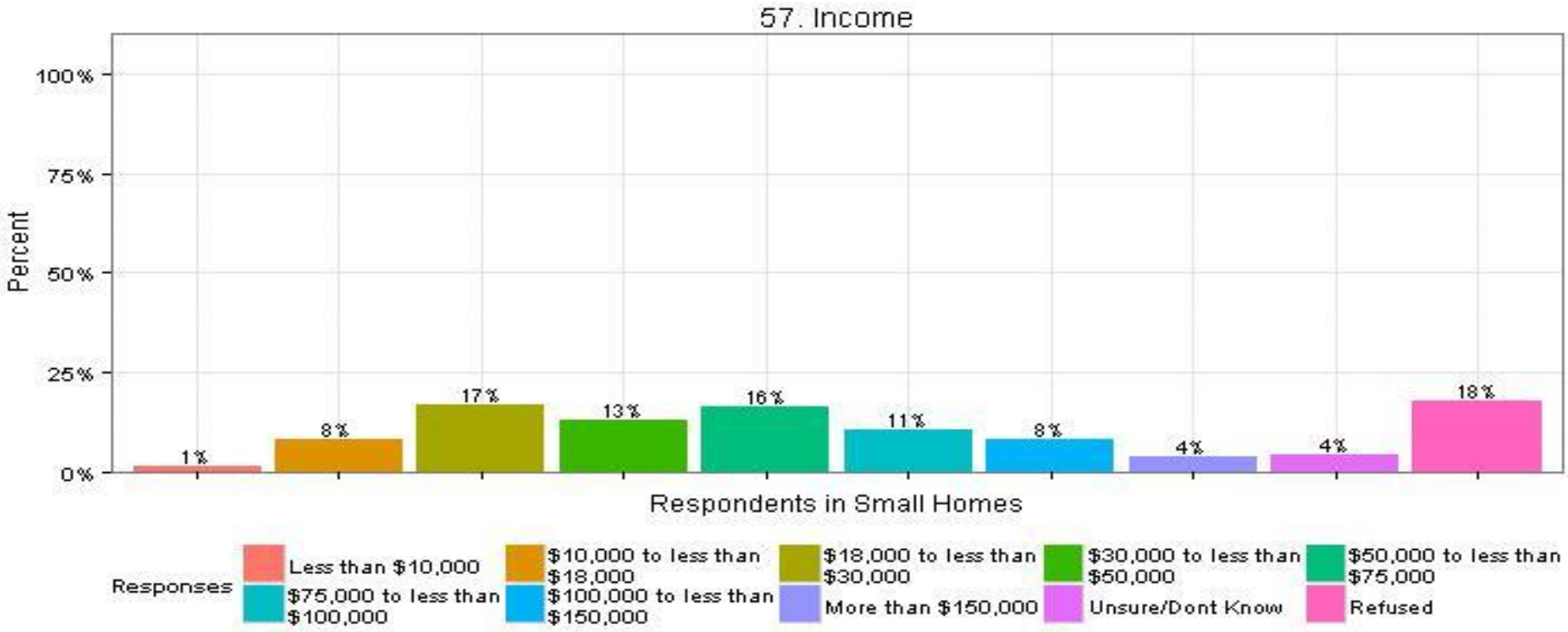
57. Income
High Income Respondents



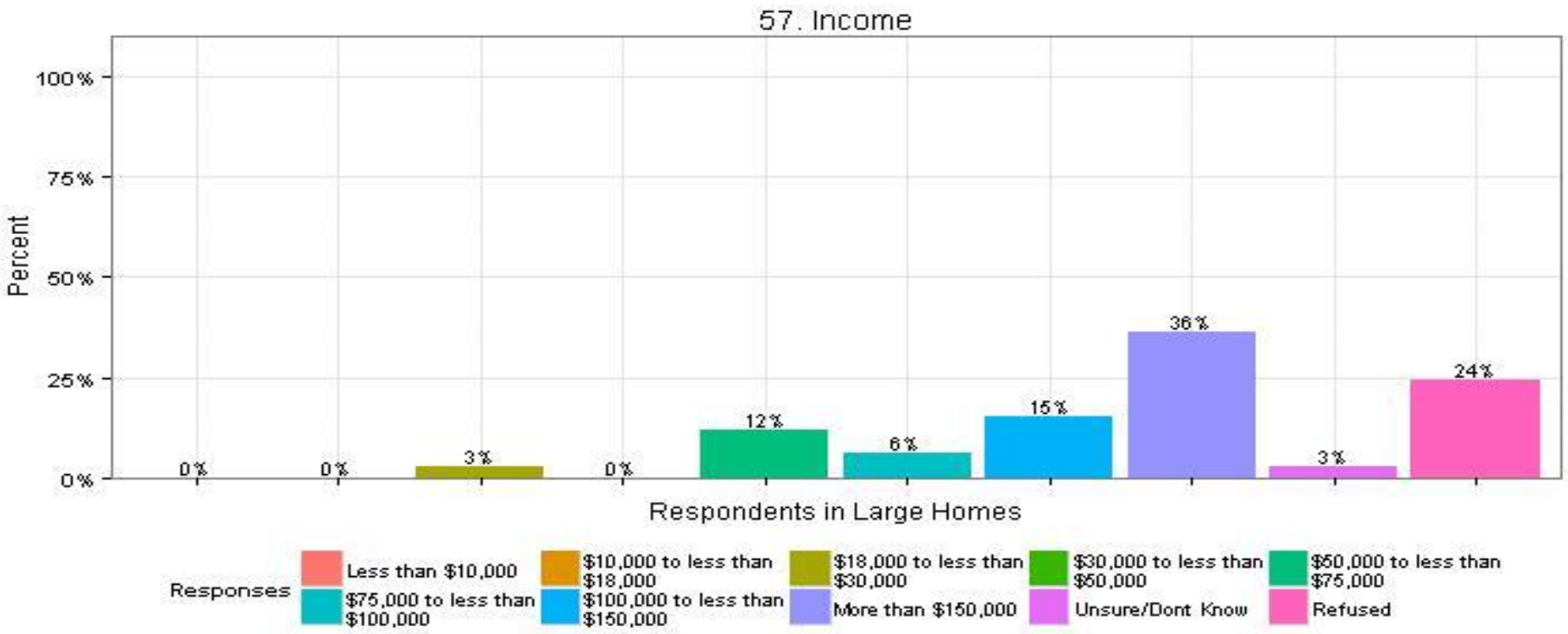
57. Income
Seniors



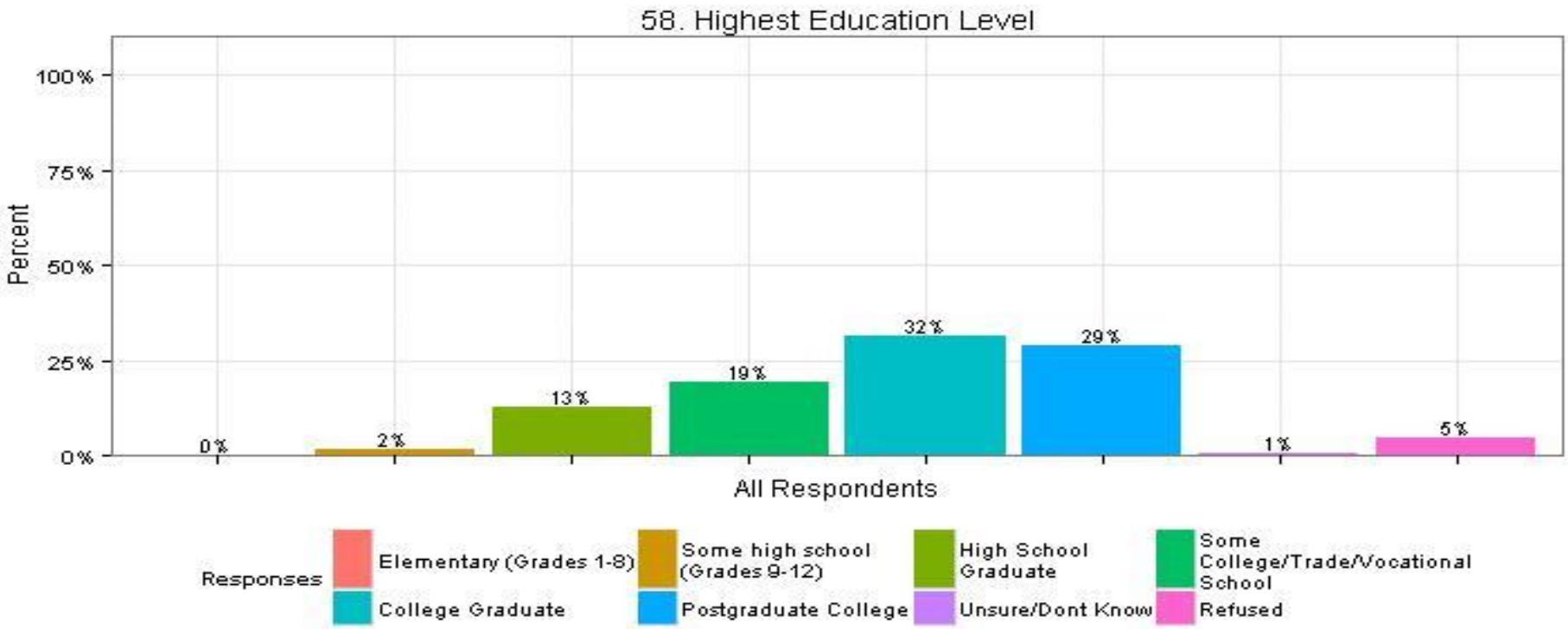
57. Income
Respondents in Small Homes



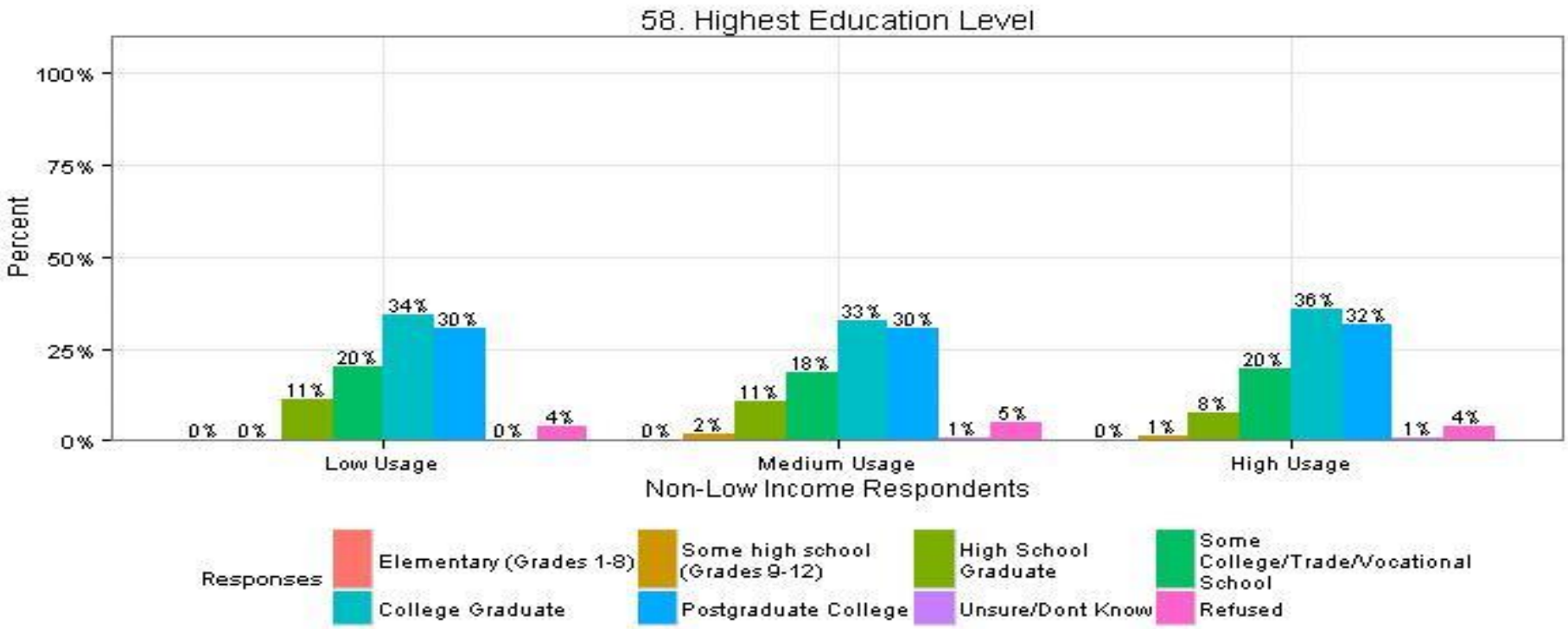
57. Income
Respondents in Large Homes



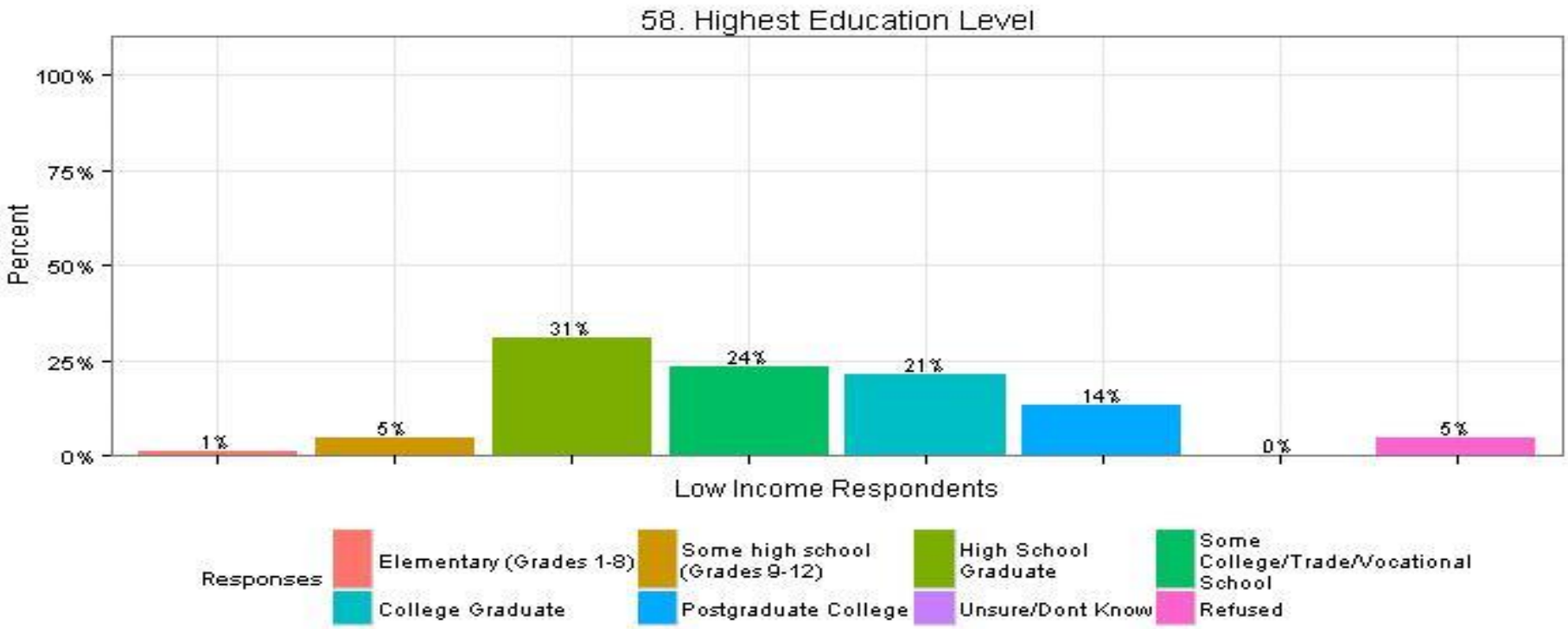
58. Highest Education Level
All Respondents



58. Highest Education Level
Non-Low Income Respondents



58. Highest Education Level
Low Income Respondents



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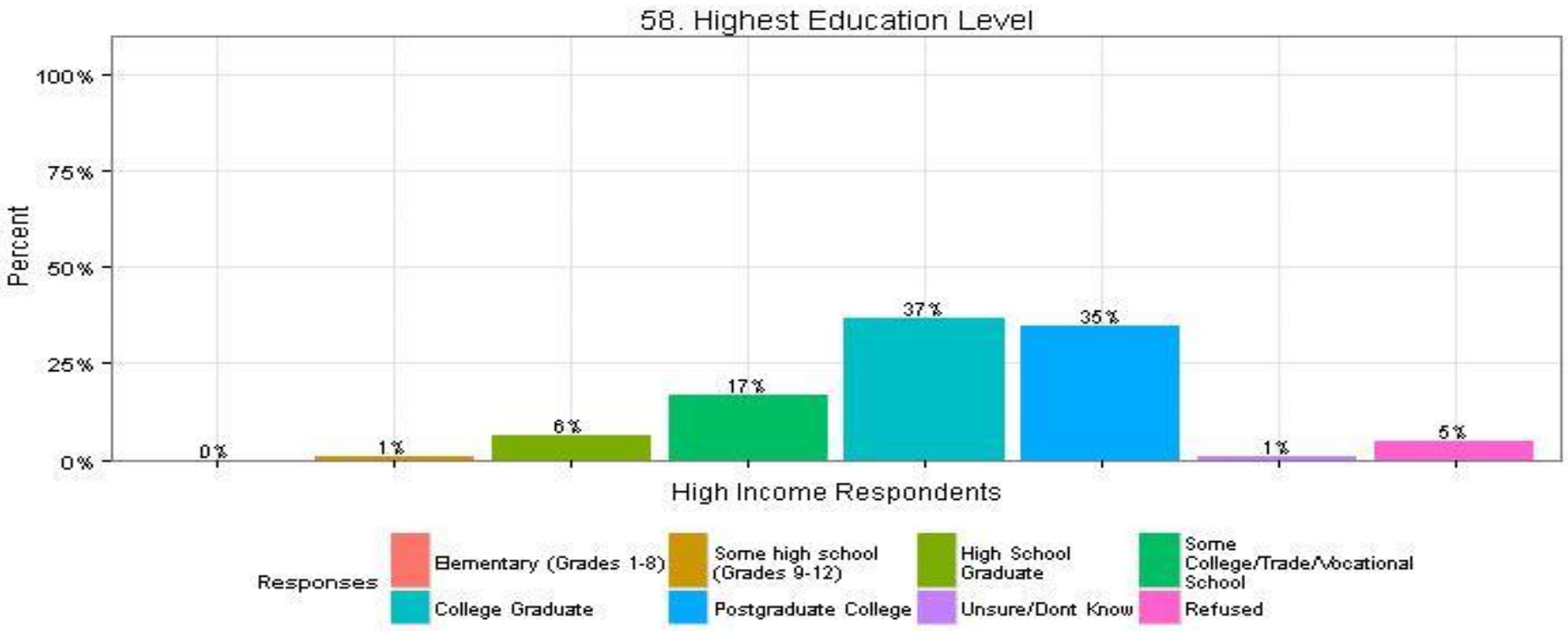
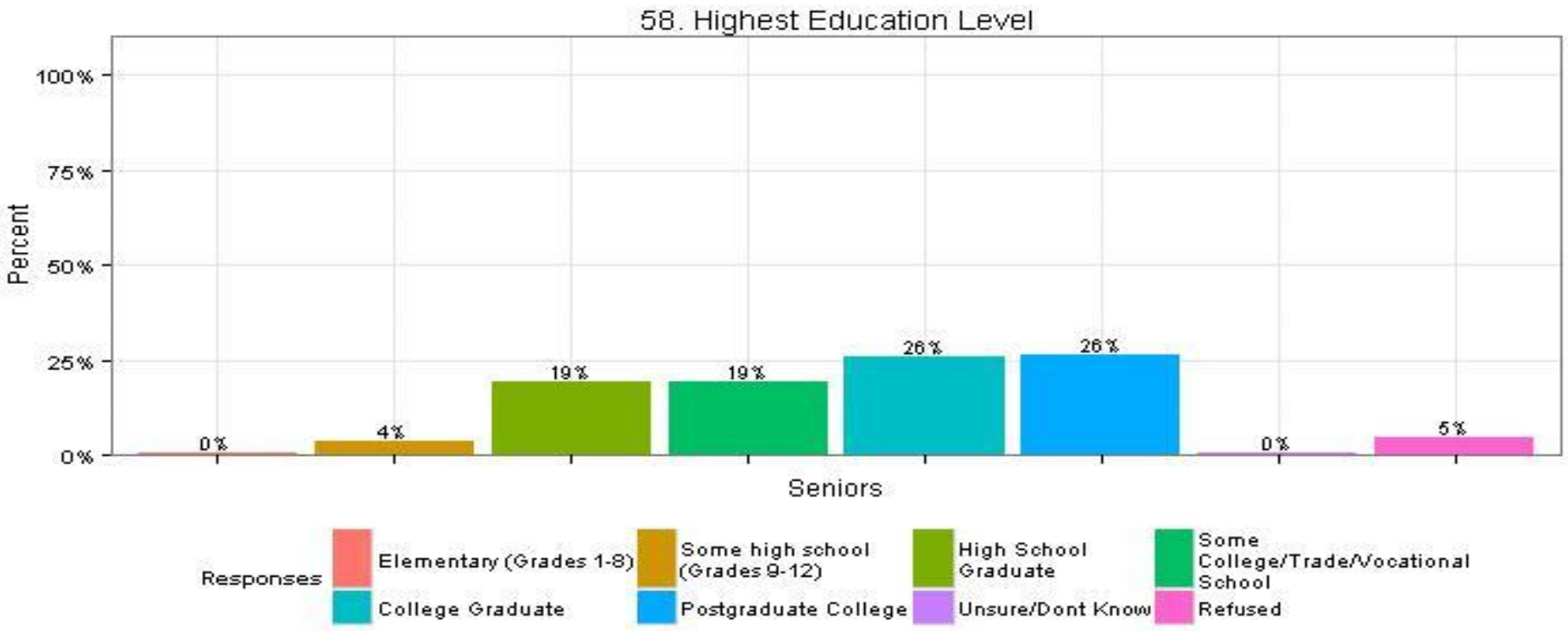
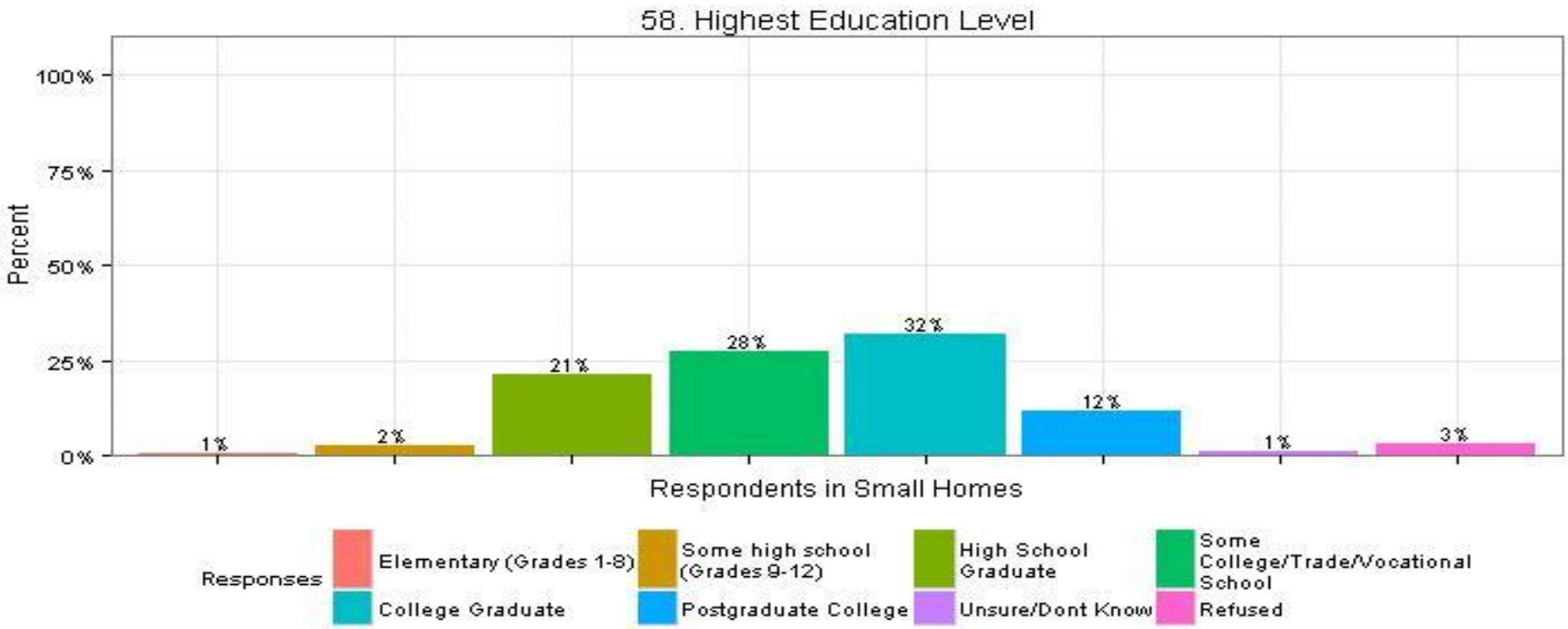
58. Highest Education Level
High Income Respondents



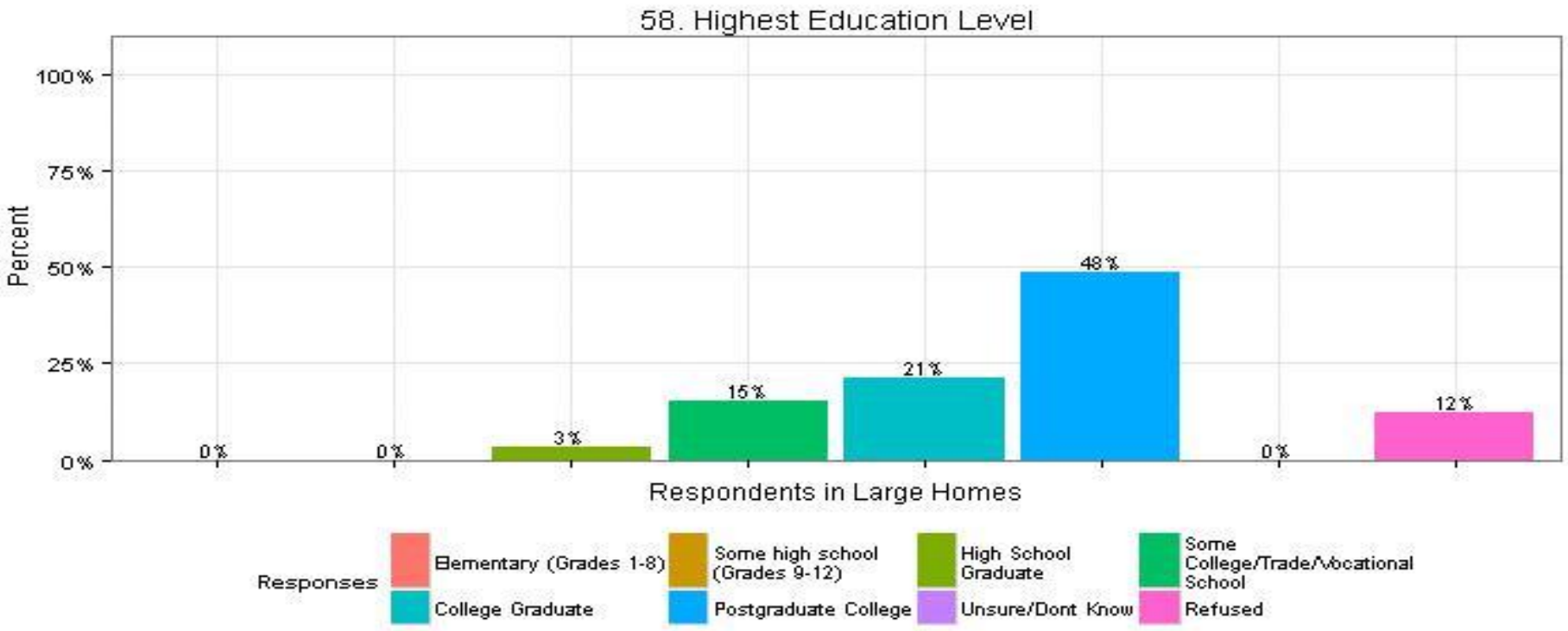
58. Highest Education Level
Seniors



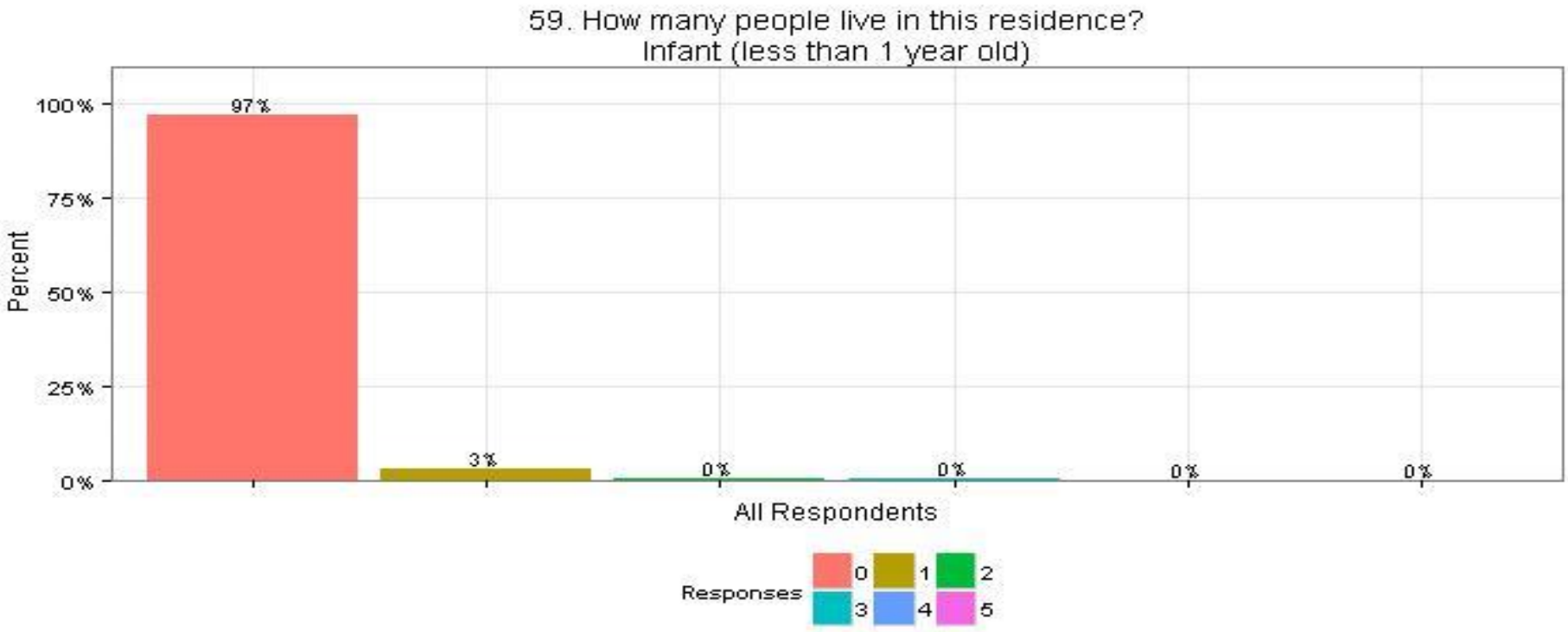
58. Highest Education Level Respondents in Small Homes



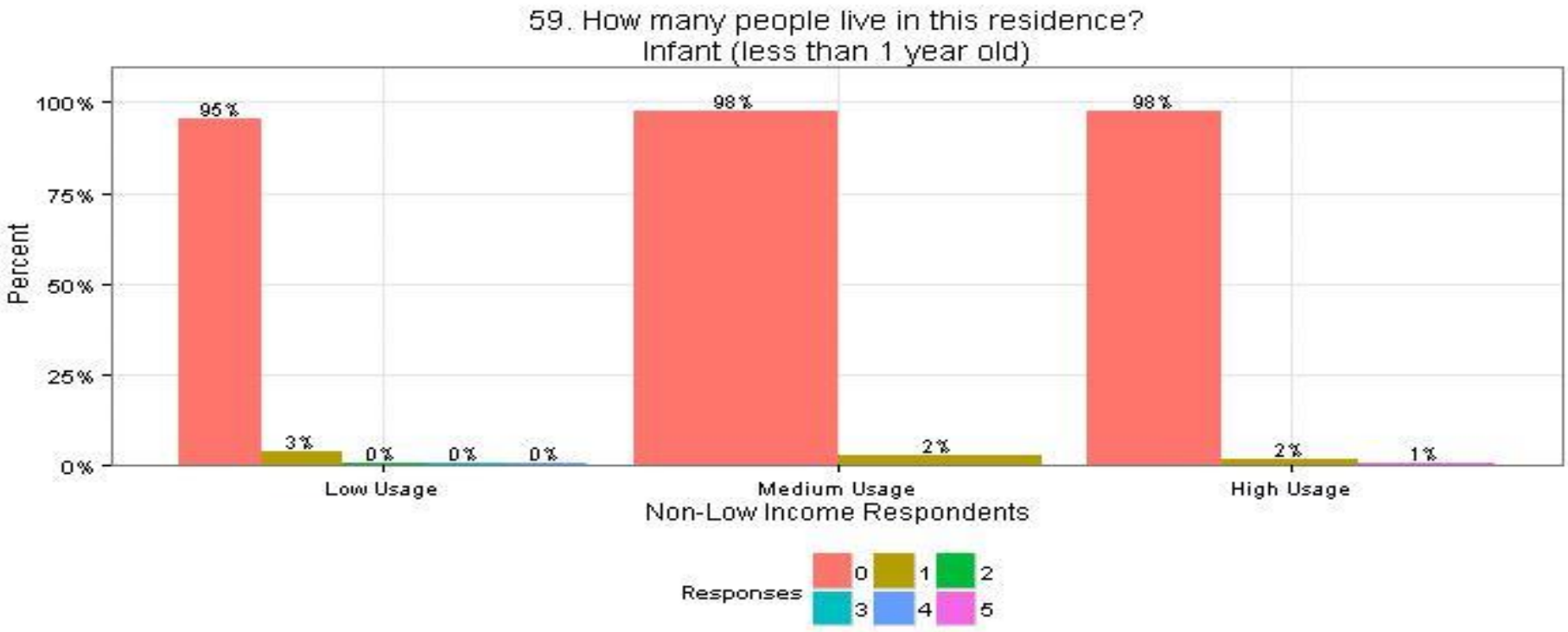
58. Highest Education Level
Respondents in Large Homes



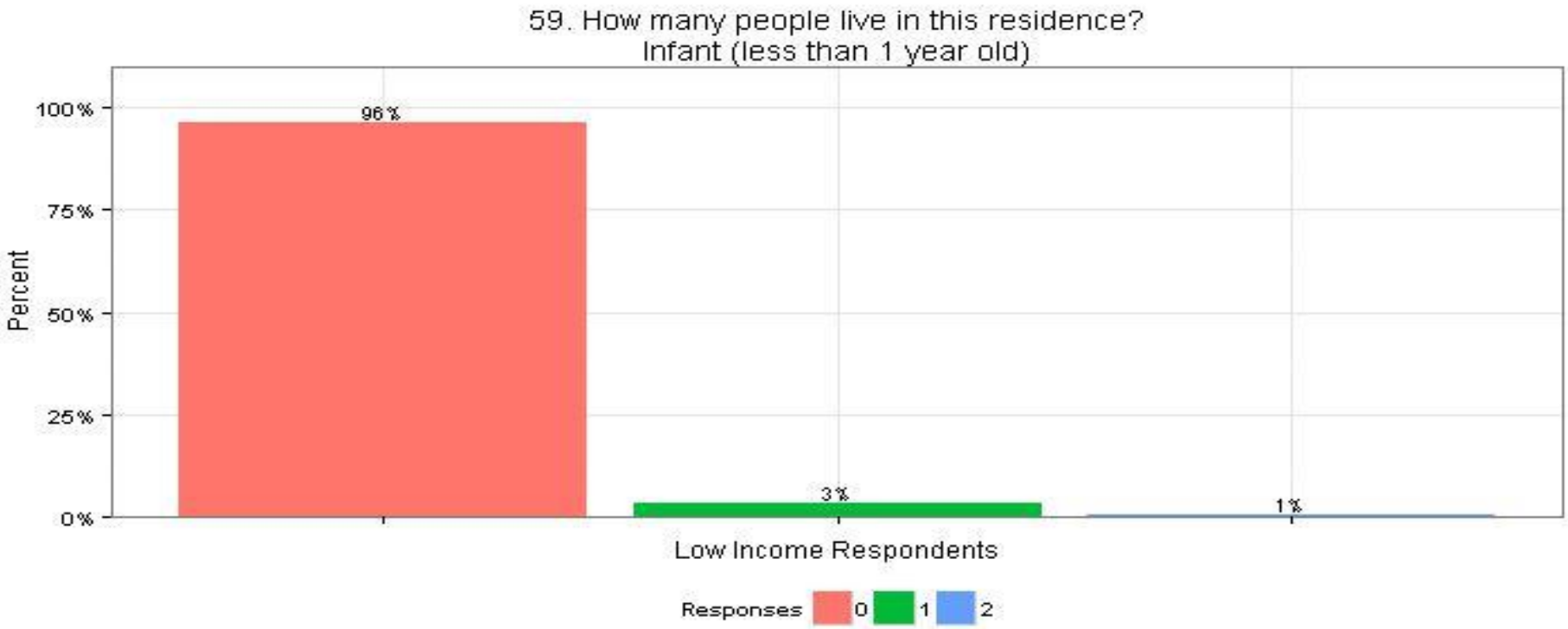
59. How many people live in this residence? Infant (less than 1 year old) All Respondents



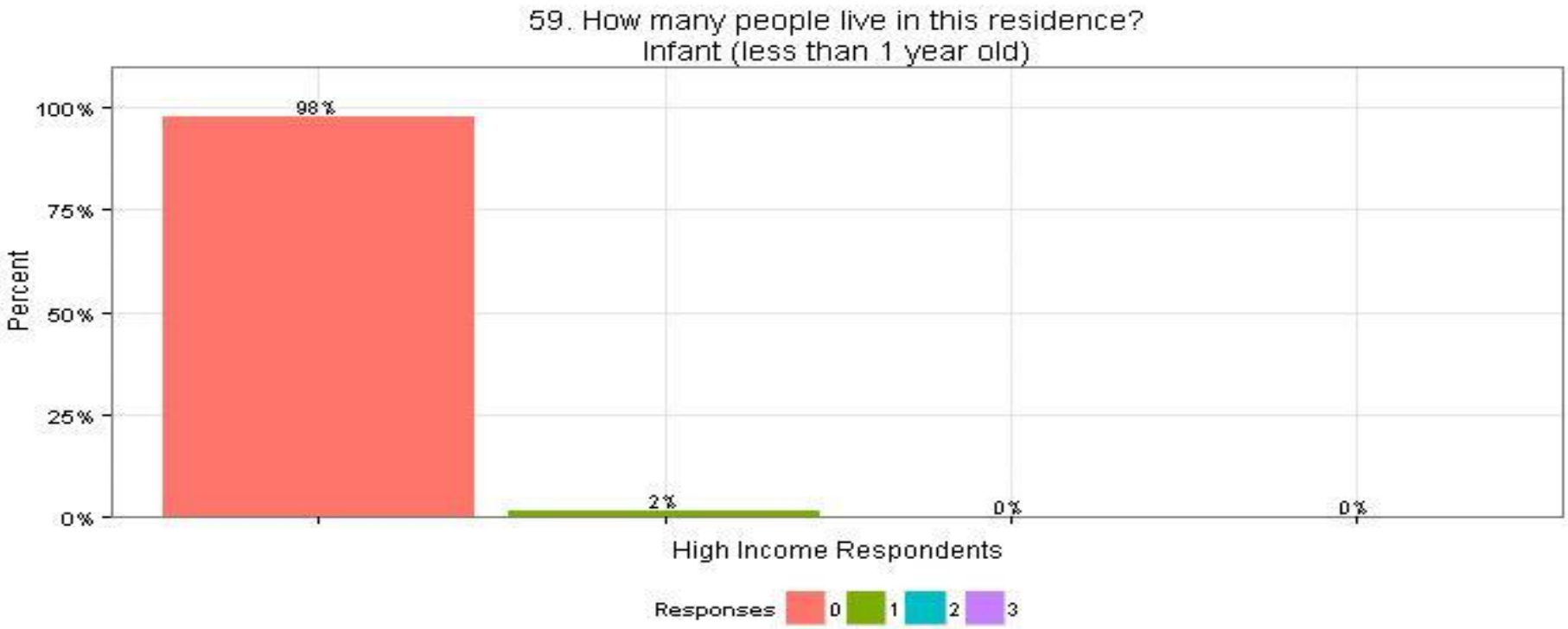
59. How many people live in this residence? Infant (less than 1 year old) Non-Low Income Respondents



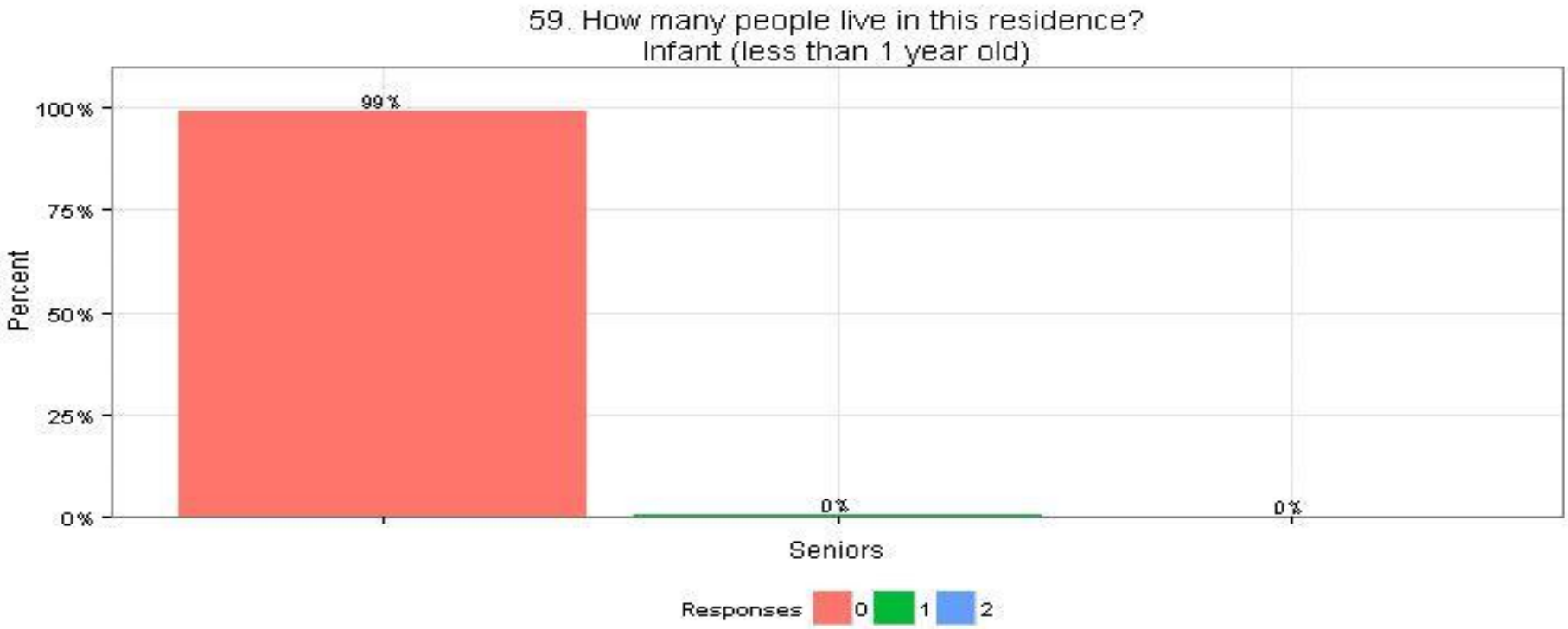
59. How many people live in this residence? Infant (less than 1 year old) Low Income Respondents



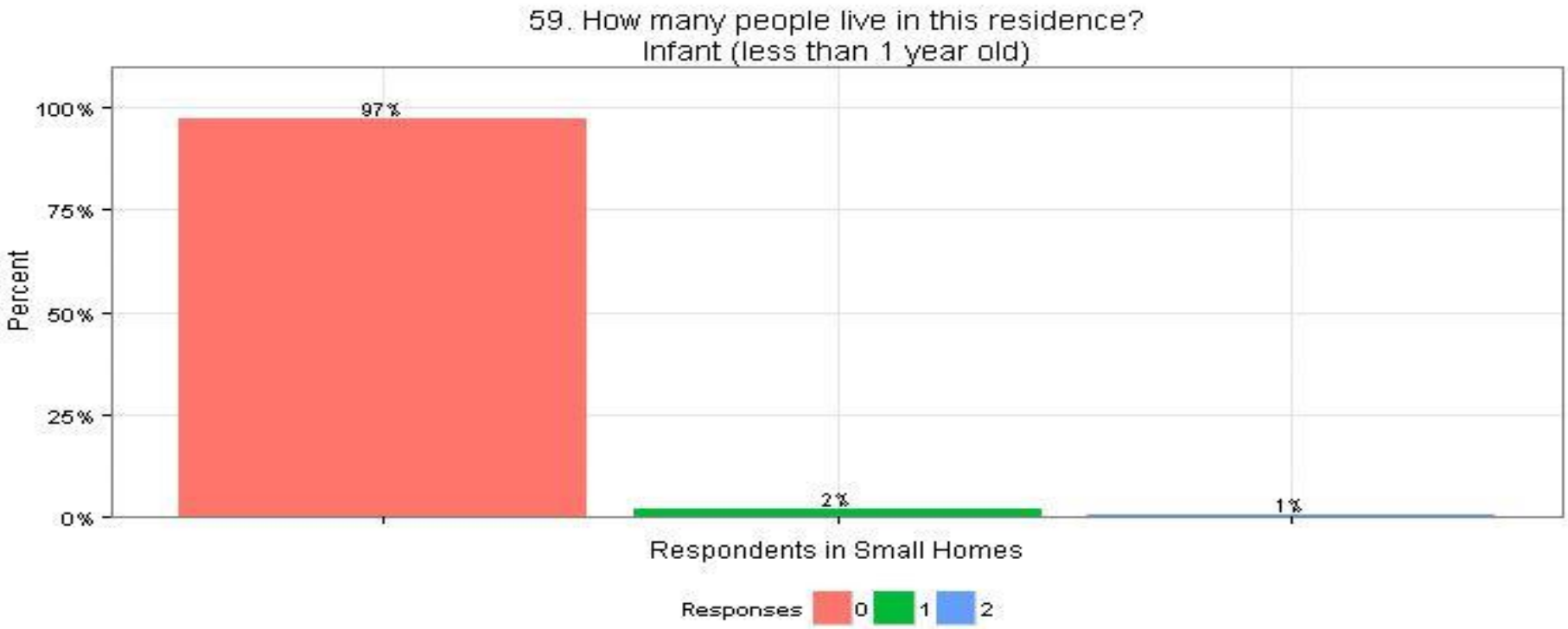
59. How many people live in this residence? Infant (less than 1 year old) High Income Respondents



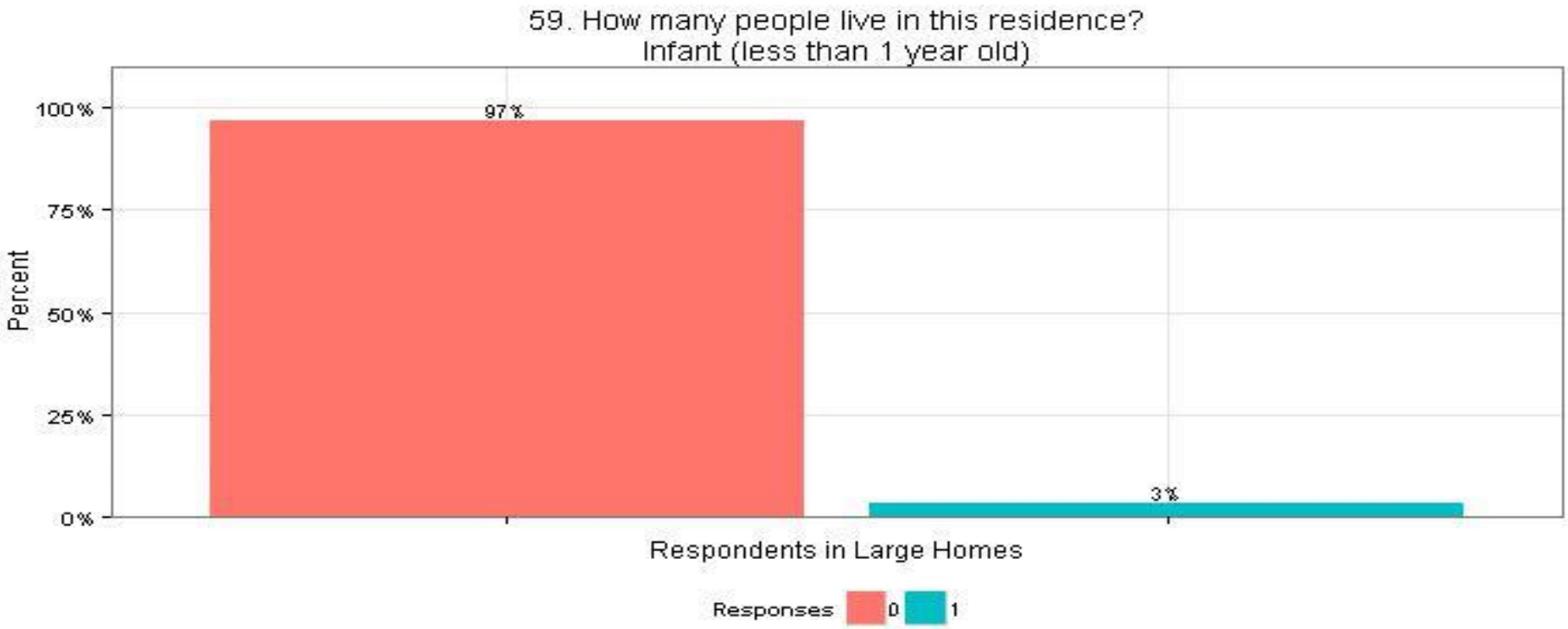
59. How many people live in this residence? Infant (less than 1 year old) Seniors



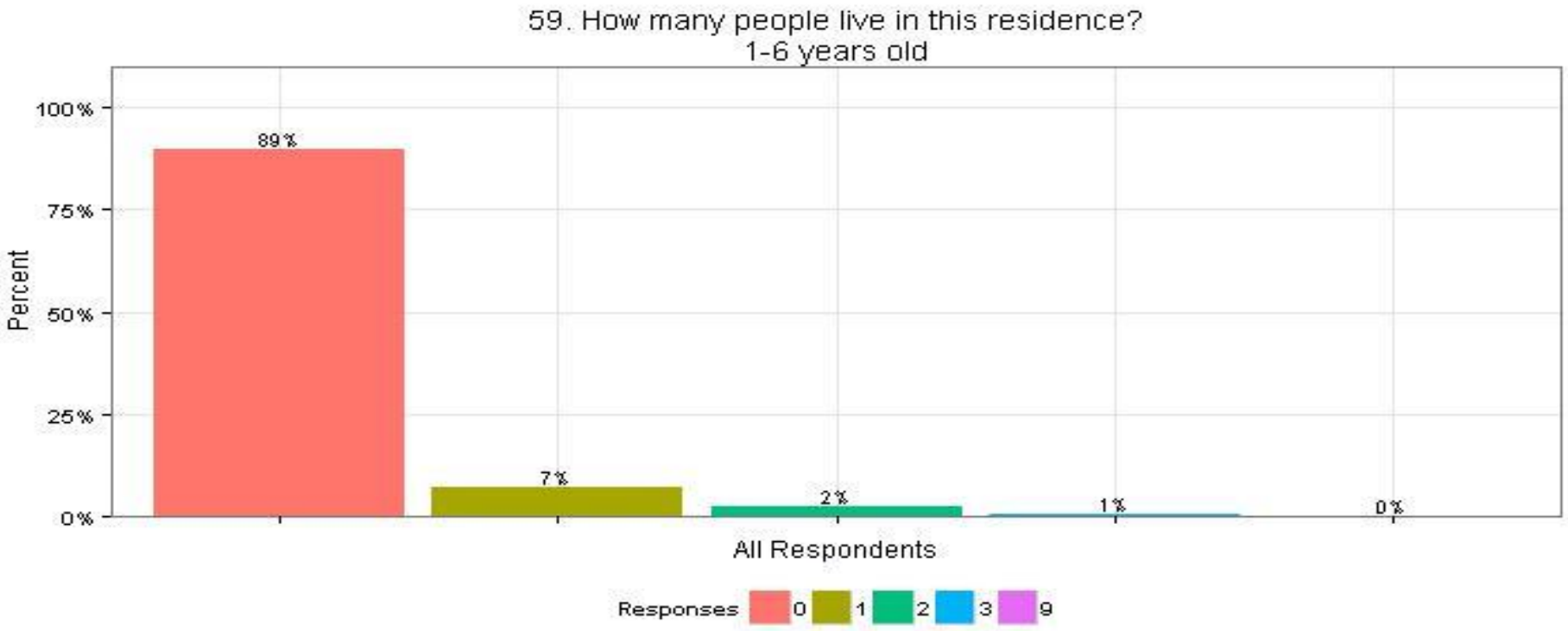
59. How many people live in this residence? Infant (less than 1 year old) Respondents in Small Homes



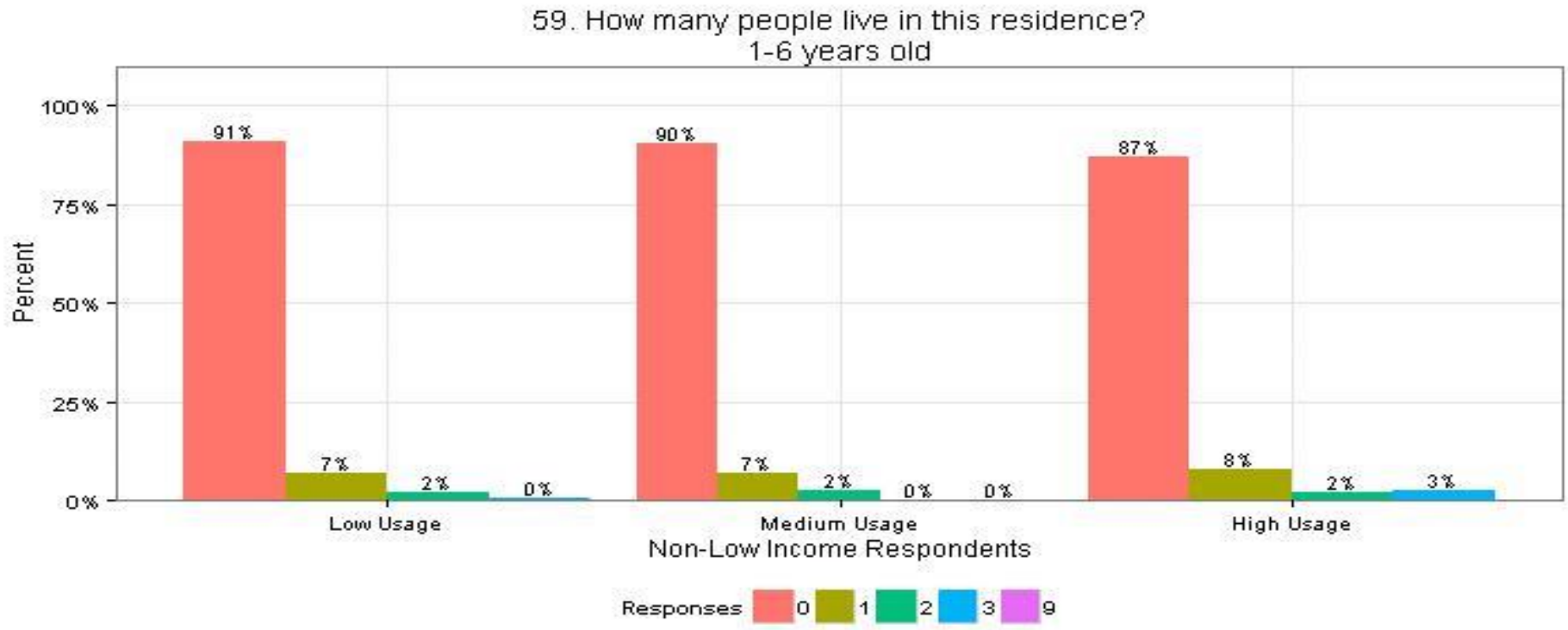
59. How many people live in this residence? Infant (less than 1 year old) Respondents in Large Homes



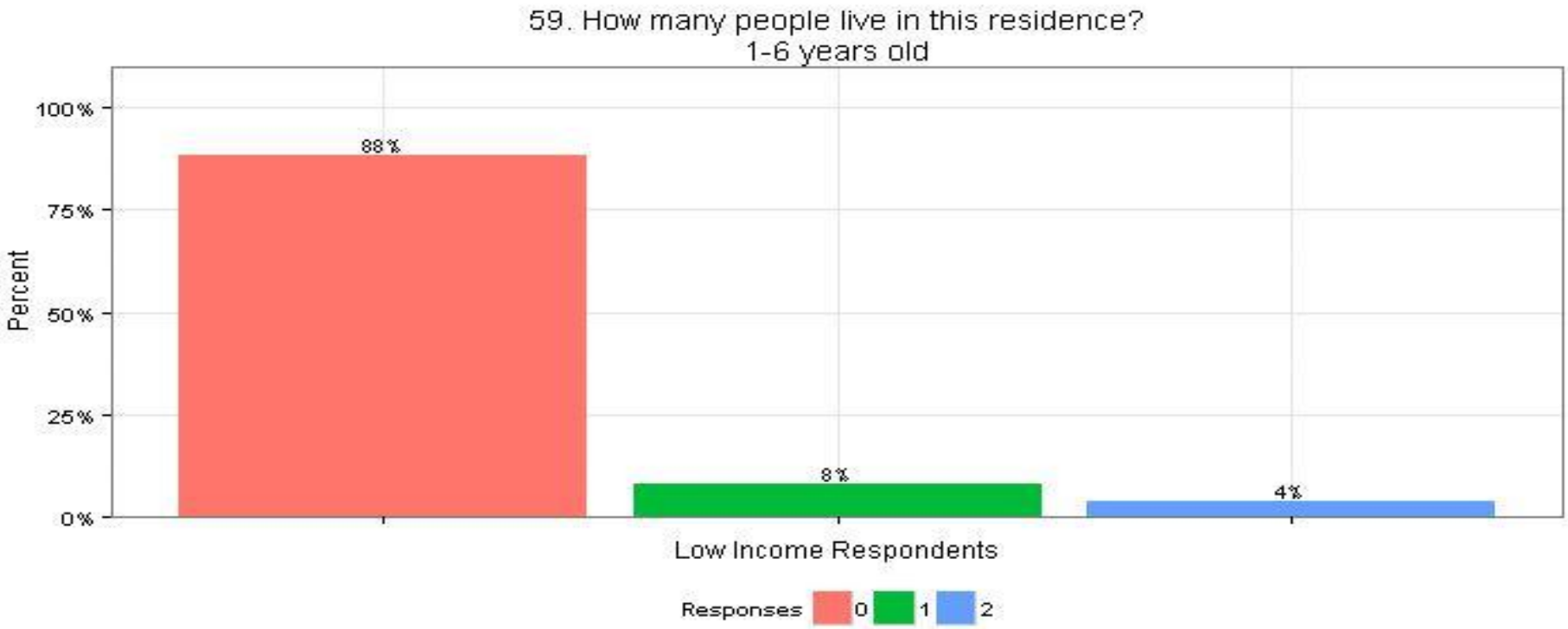
59. How many people live in this residence?
1-6 years old
All Respondents



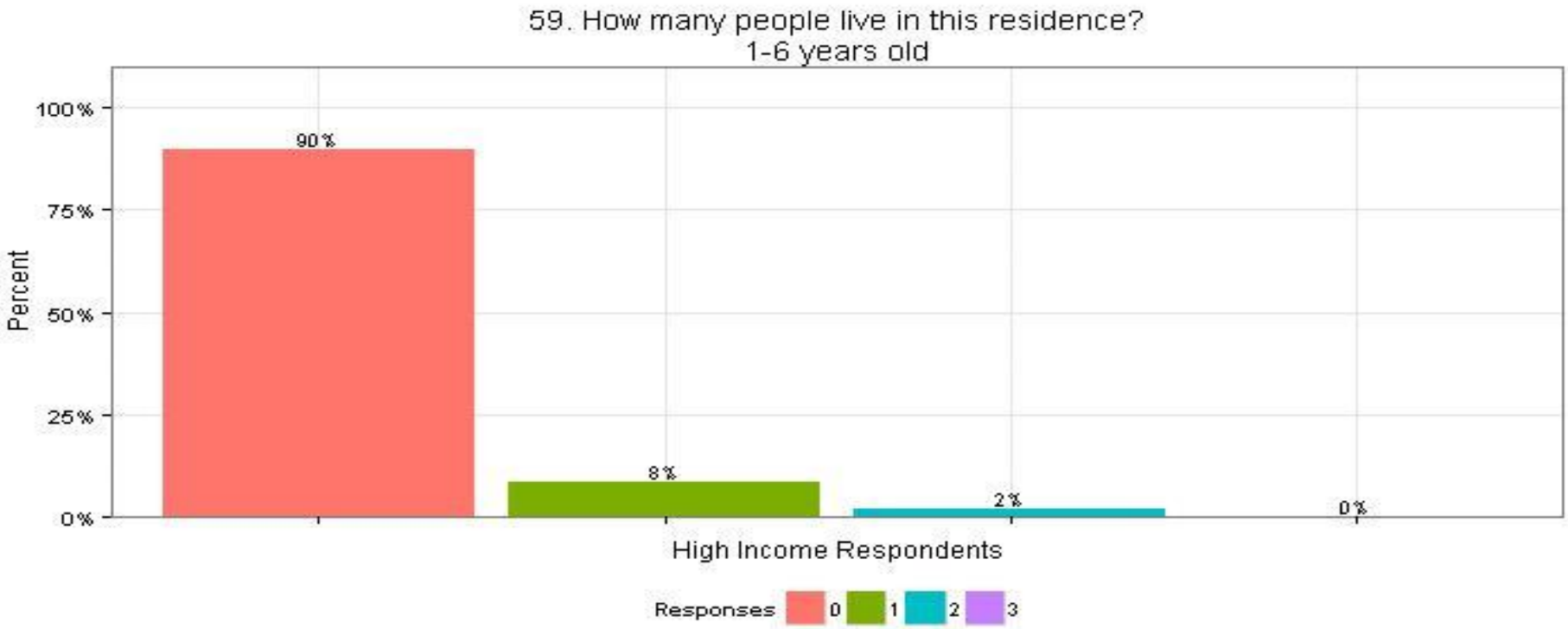
59. How many people live in this residence?
1-6 years old
Non-Low Income Respondents



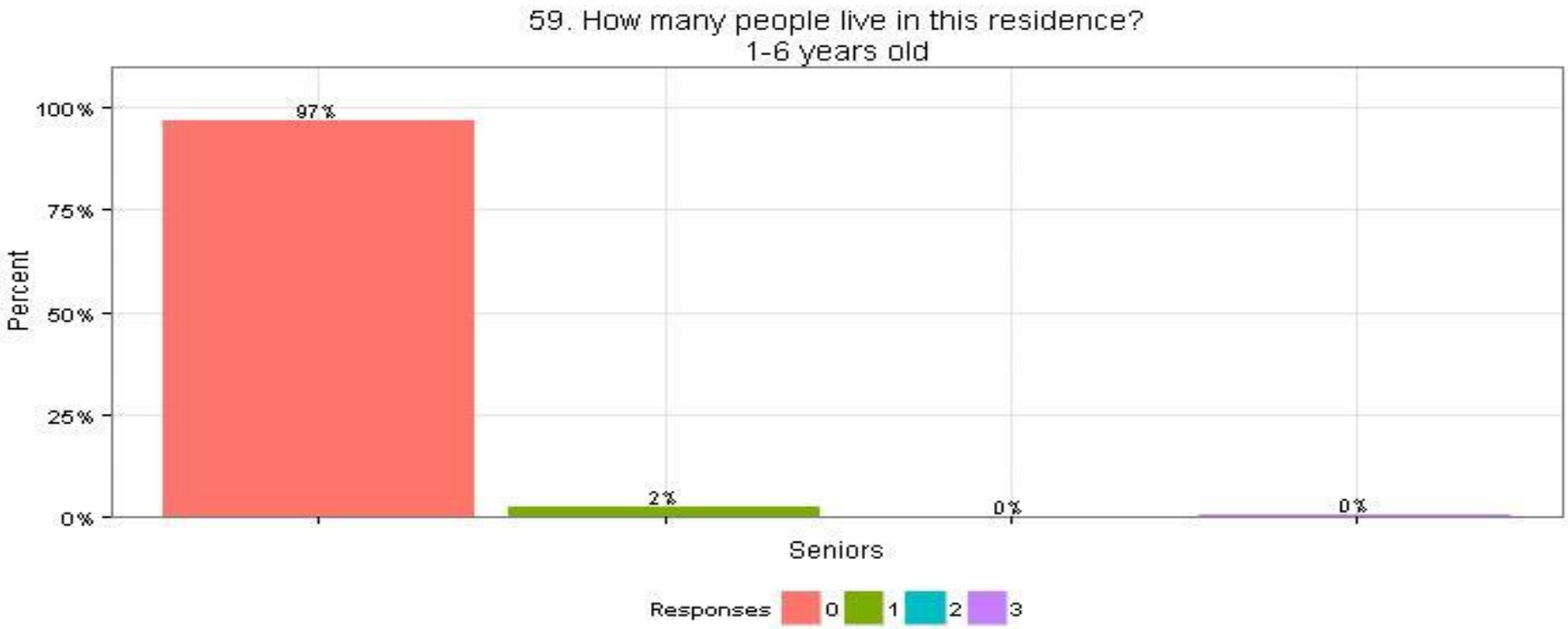
59. How many people live in this residence?
1-6 years old
Low Income Respondents



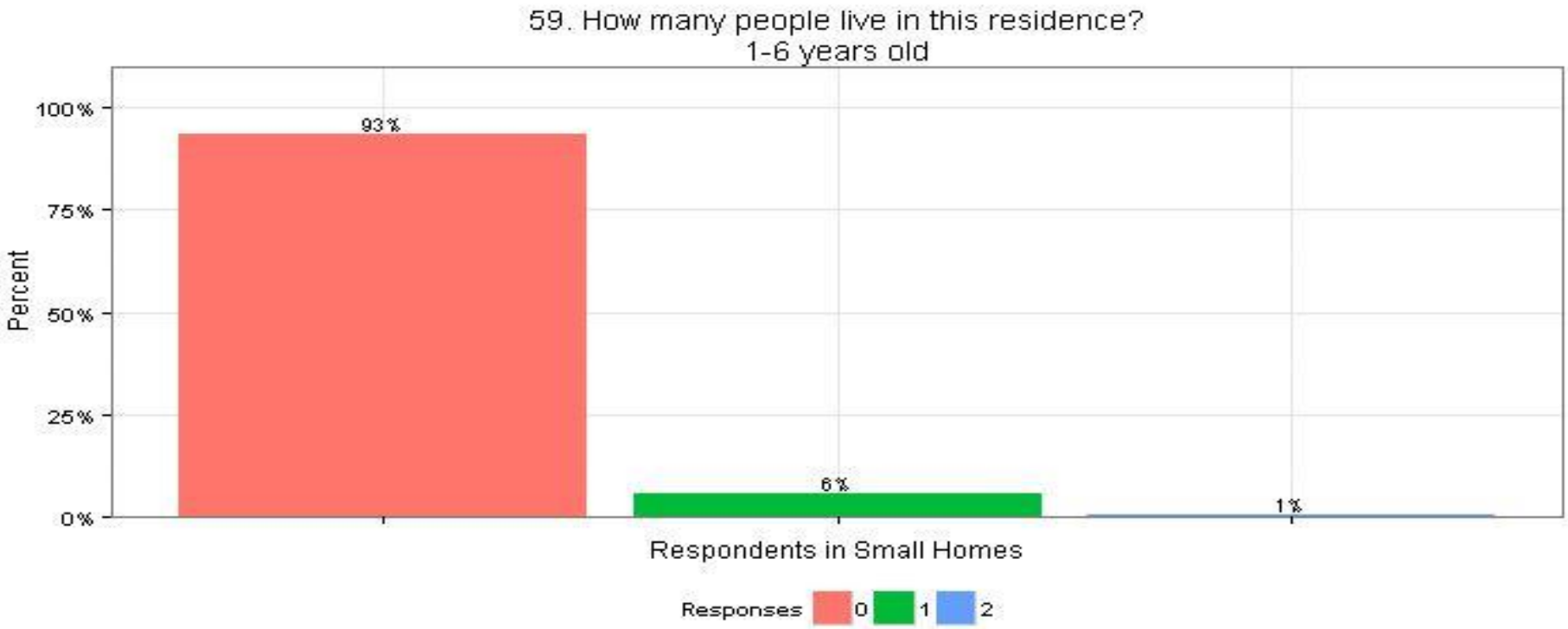
59. How many people live in this residence?
1-6 years old
High Income Respondents



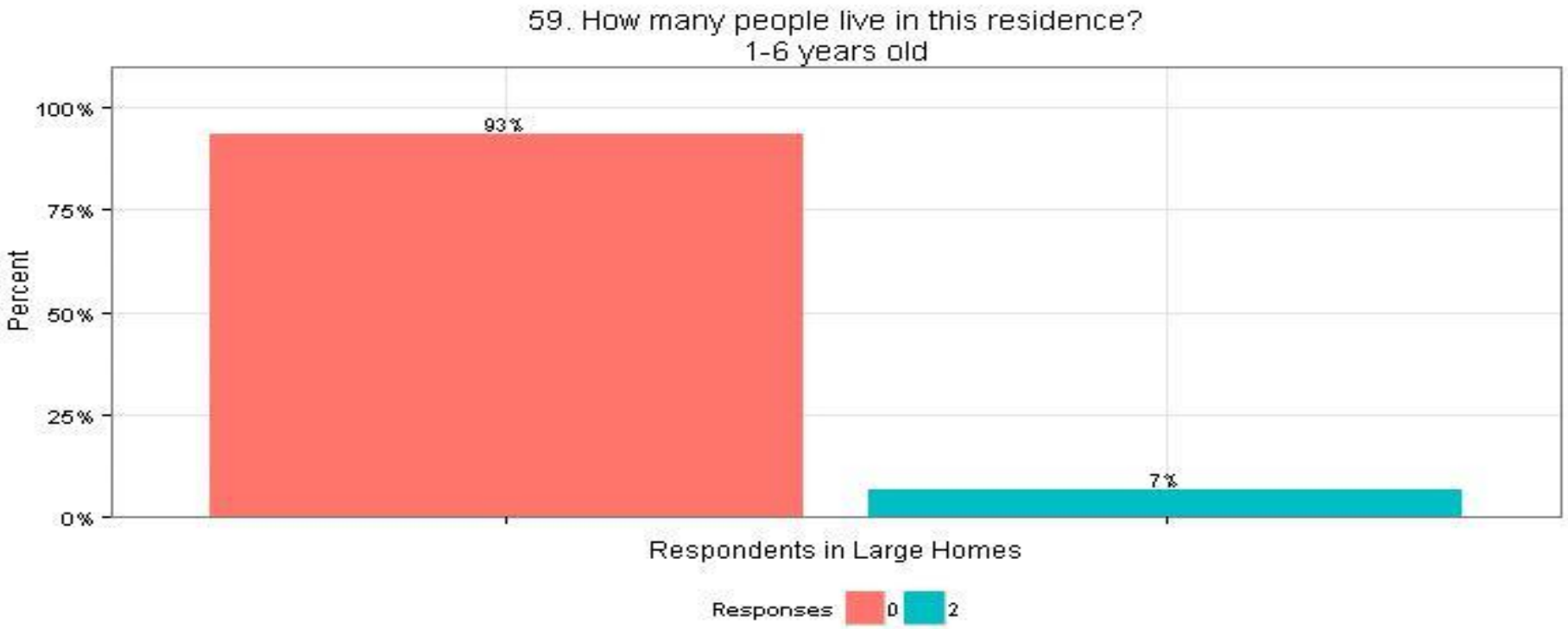
59. How many people live in this residence?
1-6 years old
Seniors



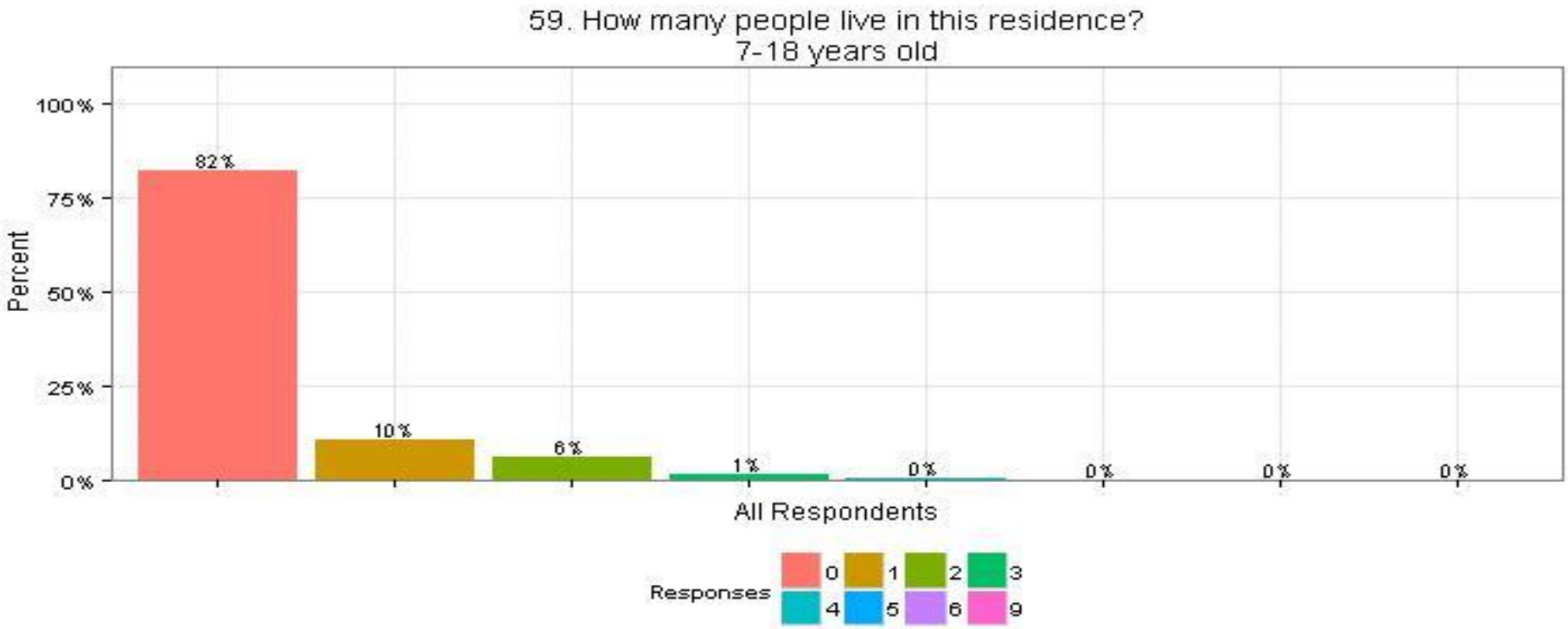
59. How many people live in this residence?
1-6 years old
Respondents in Small Homes



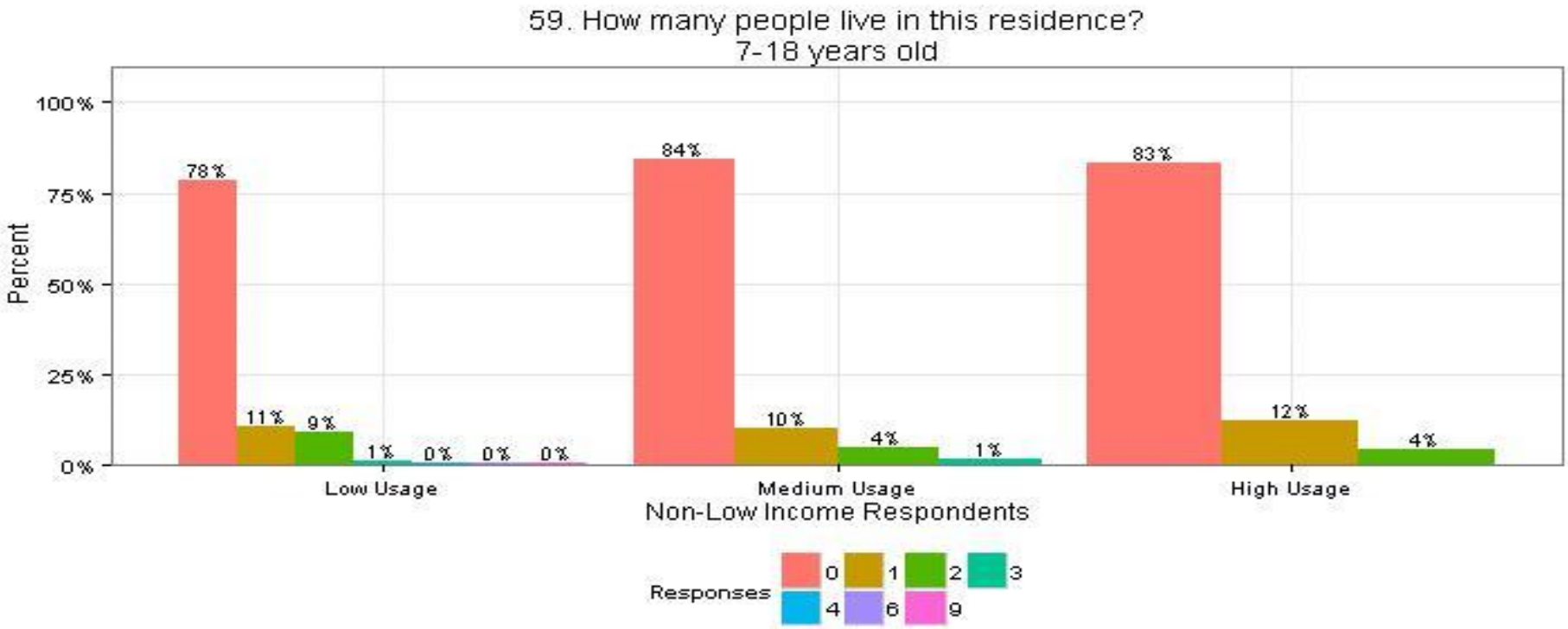
59. How many people live in this residence? 1-6 years old Respondents in Large Homes



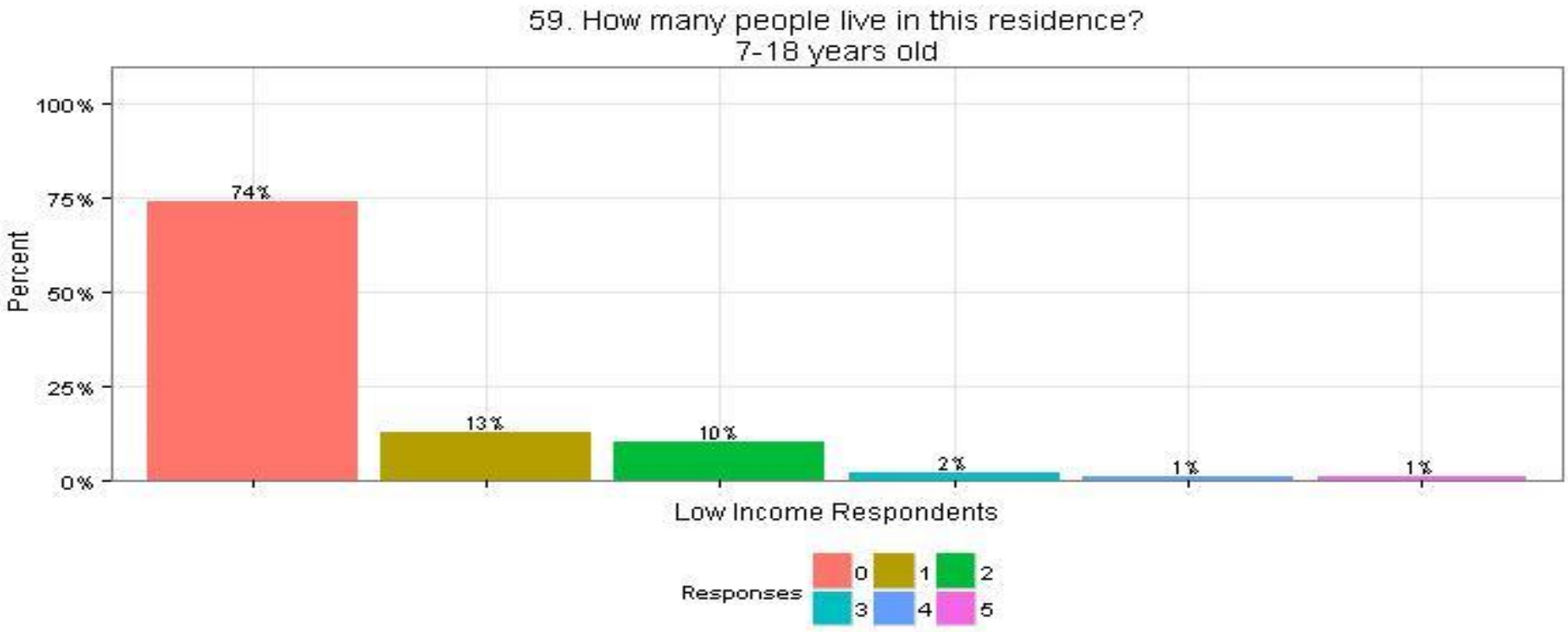
59. How many people live in this residence?
7-18 years old
All Respondents



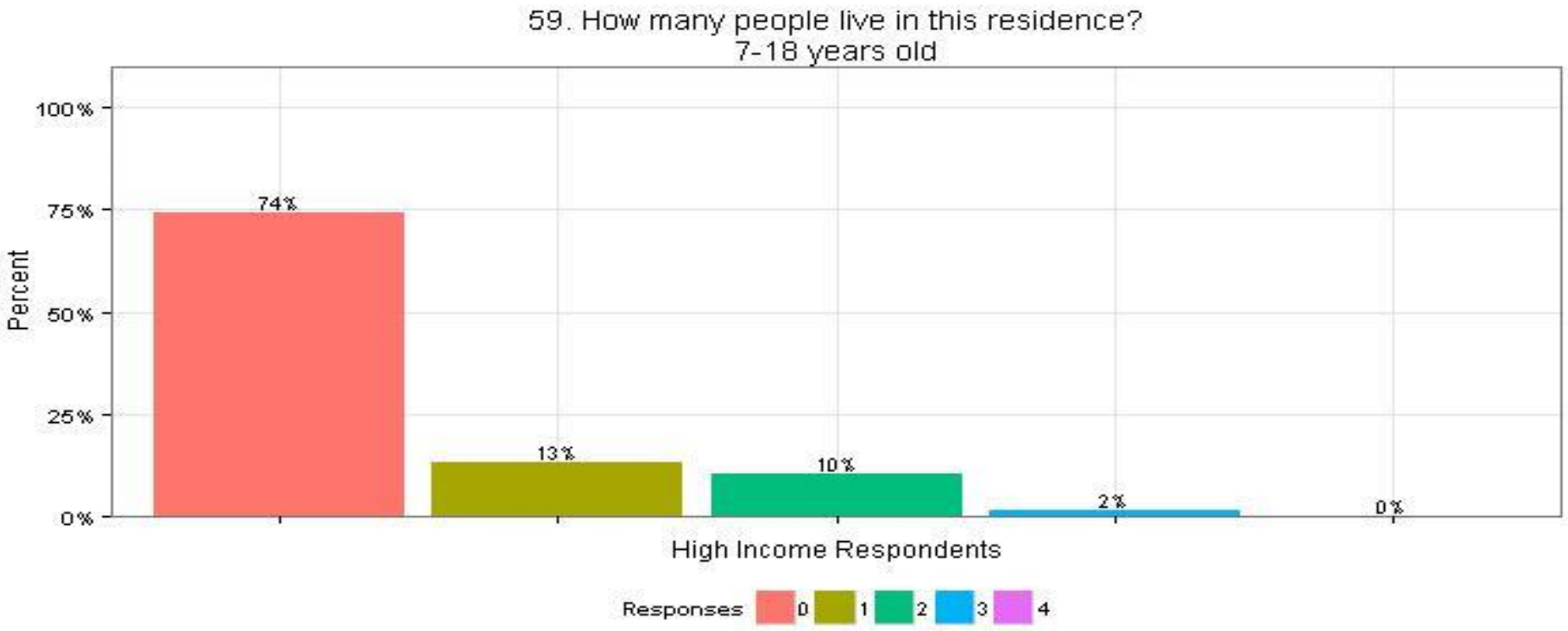
59. How many people live in this residence?
7-18 years old
Non-Low Income Respondents



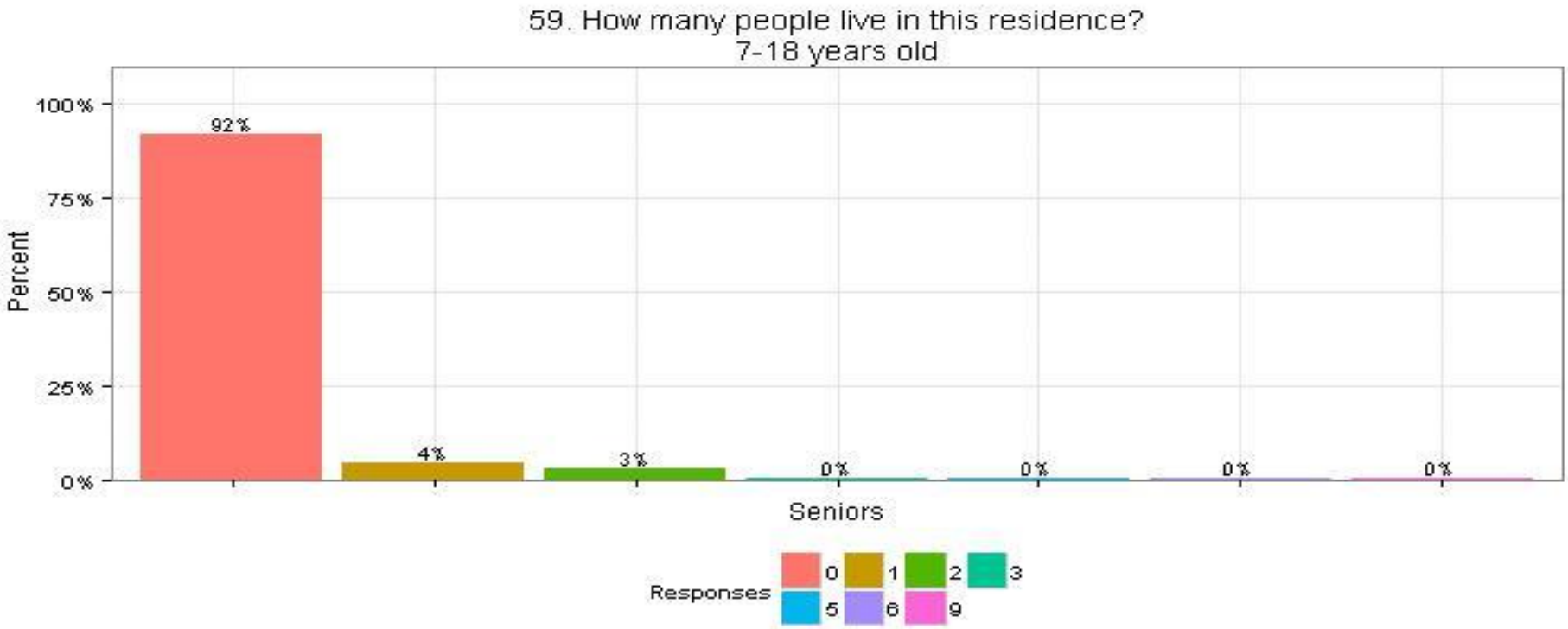
59. How many people live in this residence?
7-18 years old
Low Income Respondents



59. How many people live in this residence?
7-18 years old
High Income Respondents



59. How many people live in this residence?
7-18 years old
Seniors



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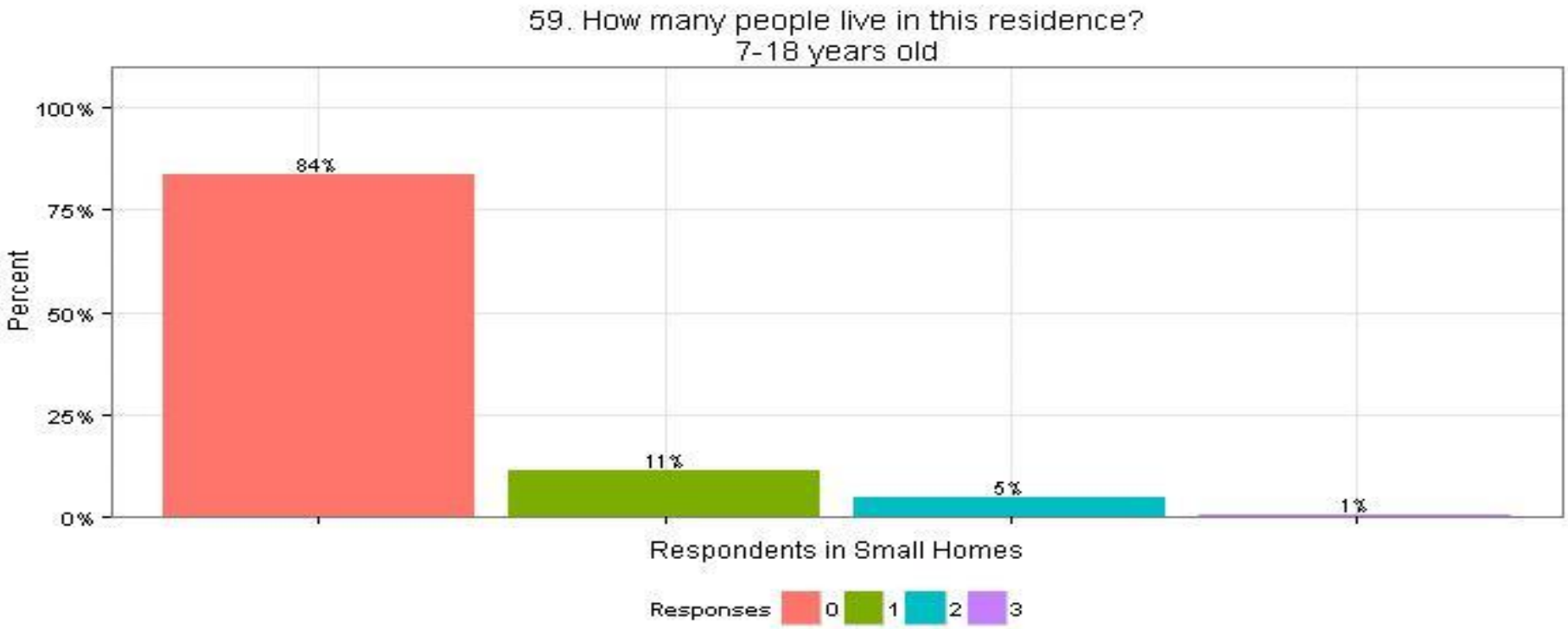
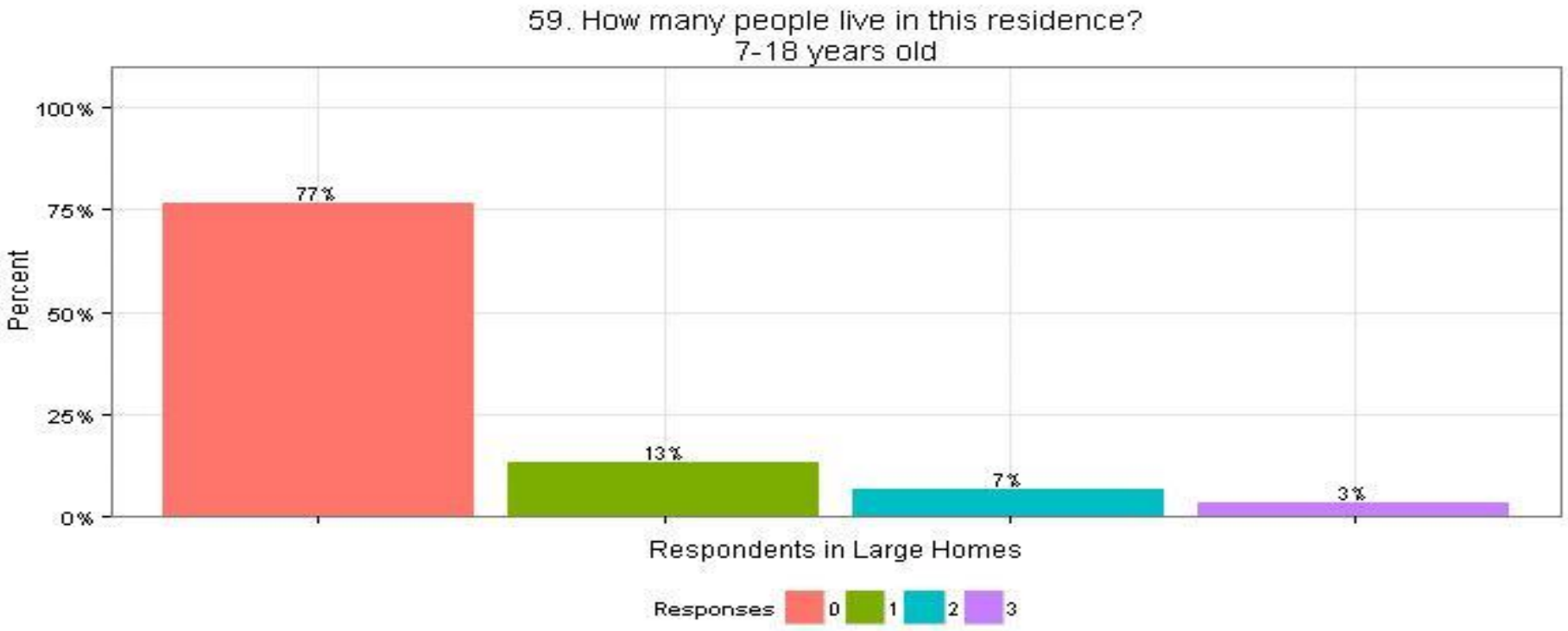
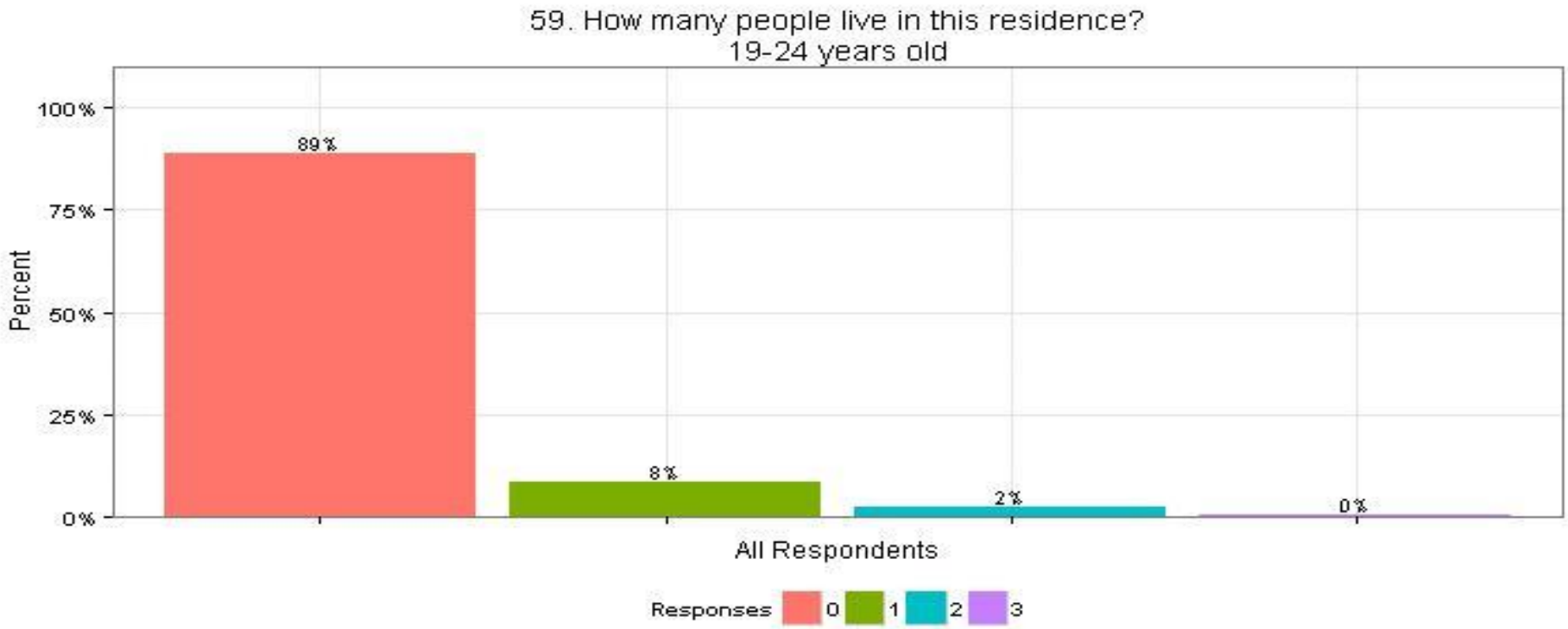
59. How many people live in this residence?
7-18 years old
Respondents in Small Homes



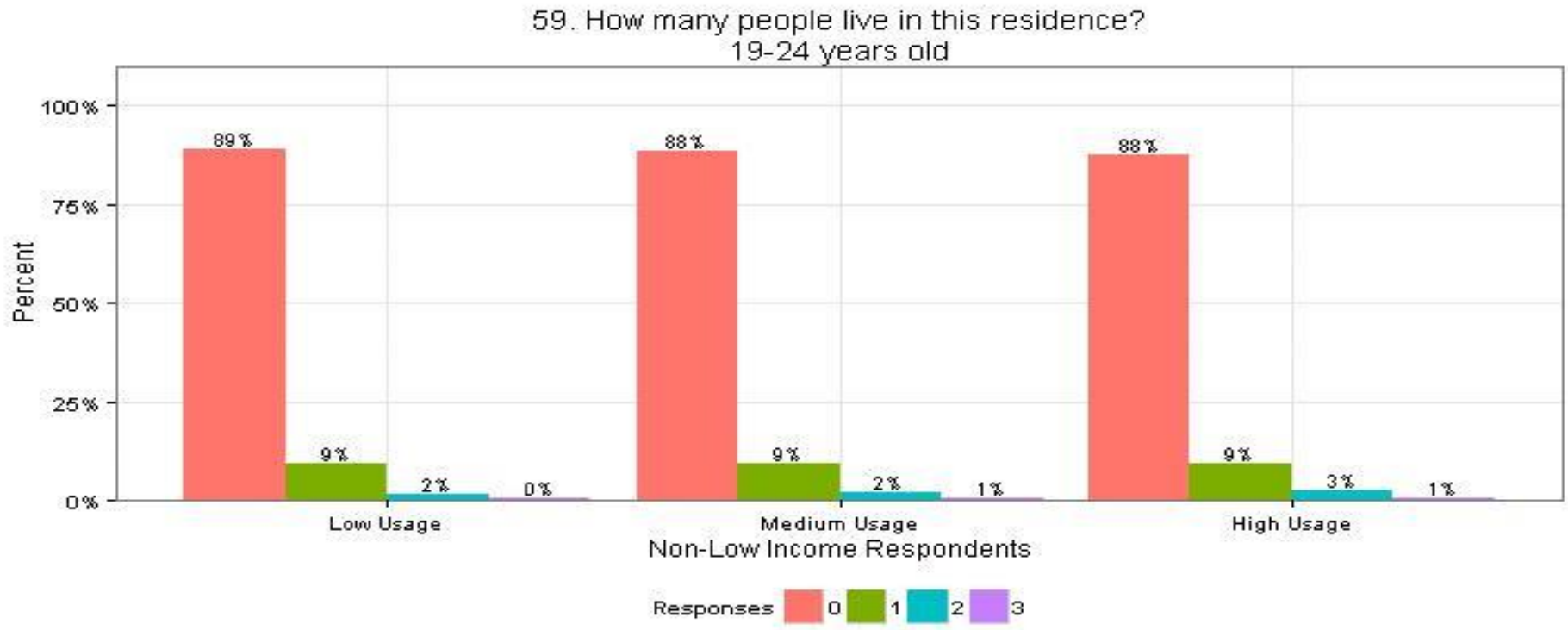
59. How many people live in this residence?
7-18 years old
Respondents in Large Homes



59. How many people live in this residence?
19-24 years old
All Respondents

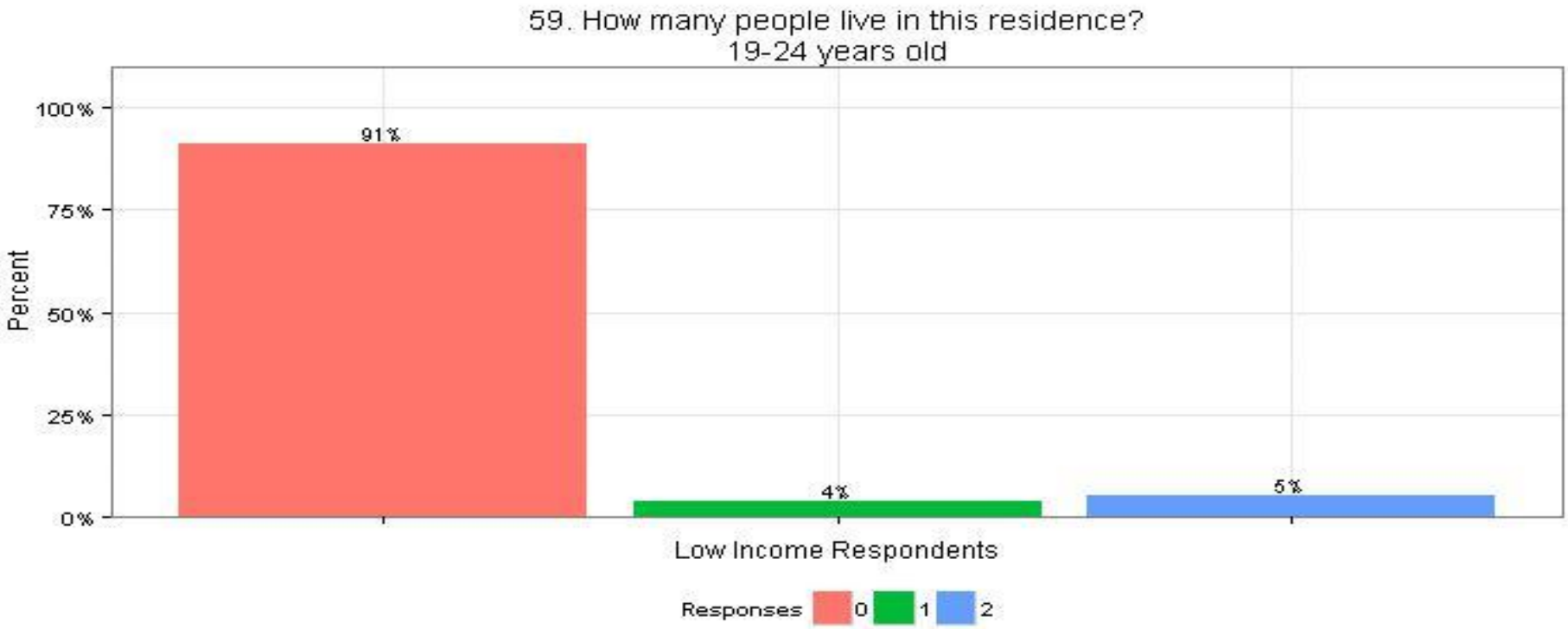


59. How many people live in this residence?
19-24 years old
Non-Low Income Respondents



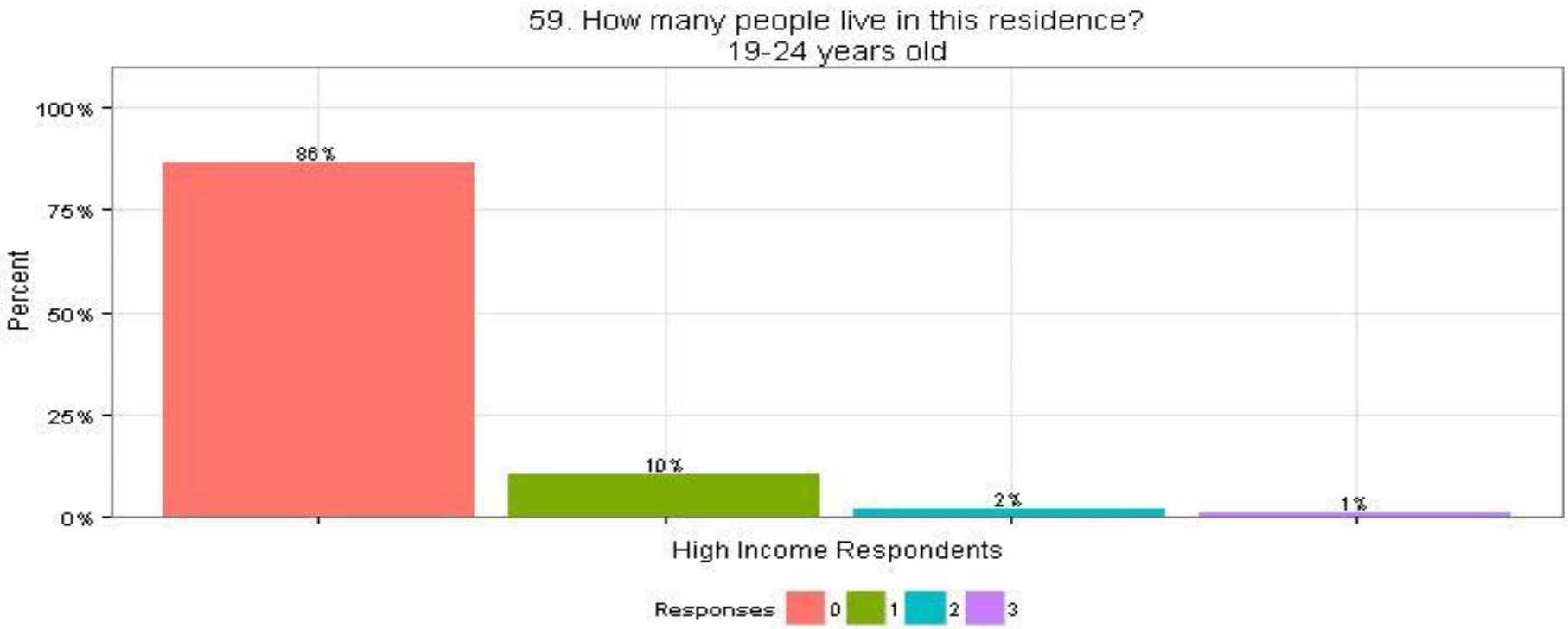
NAVIGANT

59. How many people live in this residence?
19-24 years old
Low Income Respondents

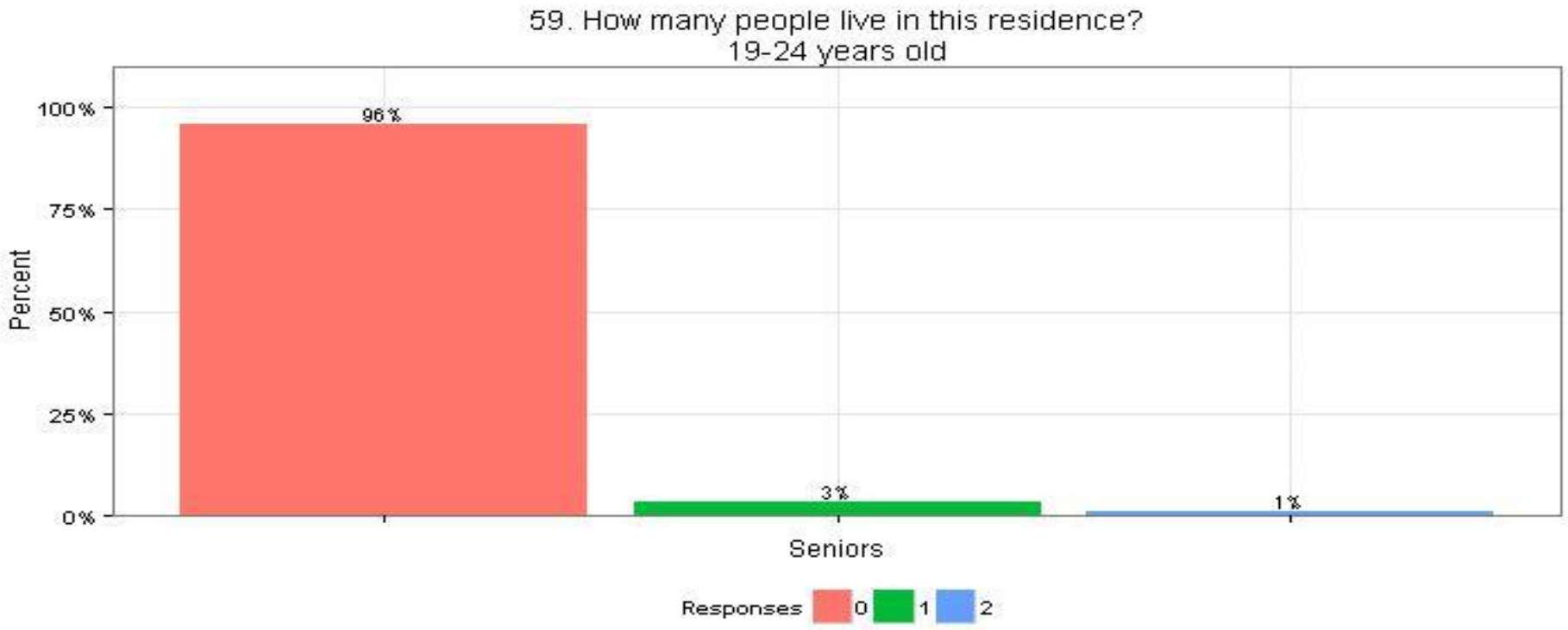


NAVIGANT

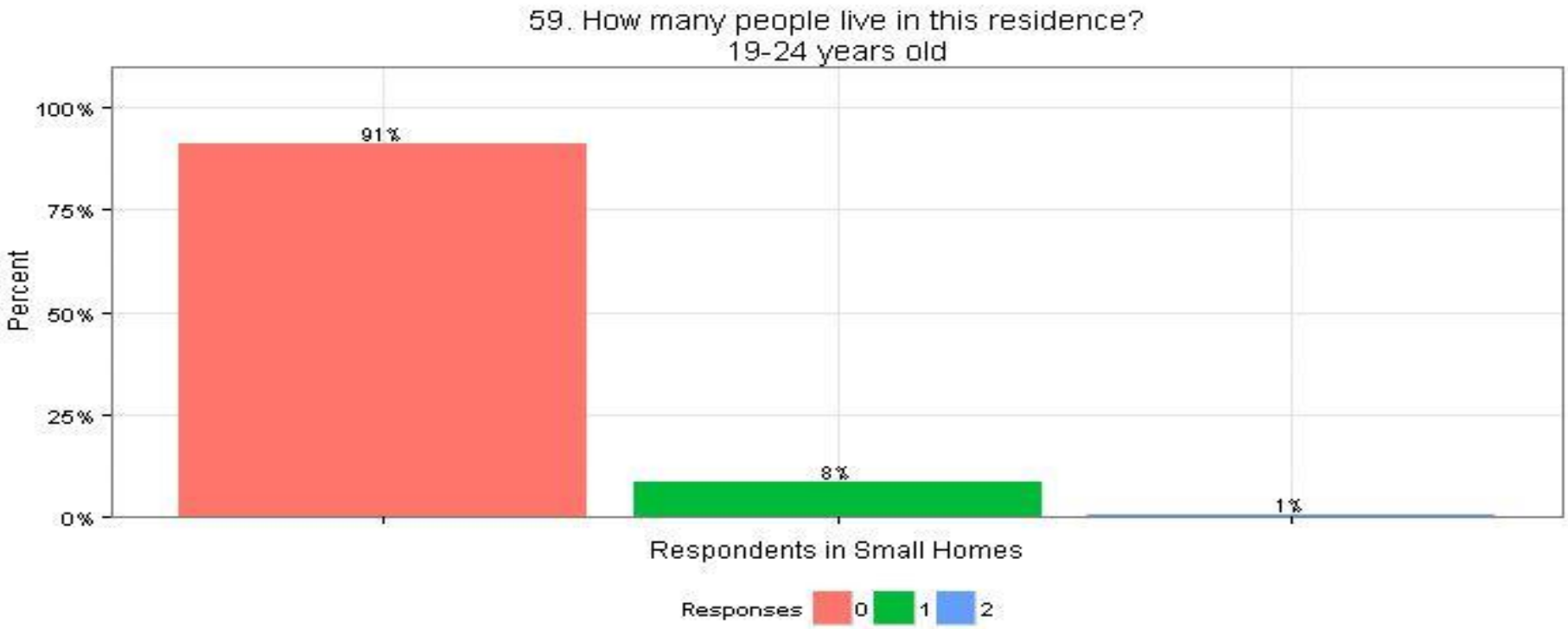
59. How many people live in this residence?
19-24 years old
High Income Respondents



59. How many people live in this residence?
19-24 years old
Seniors



59. How many people live in this residence?
19-24 years old
Respondents in Small Homes



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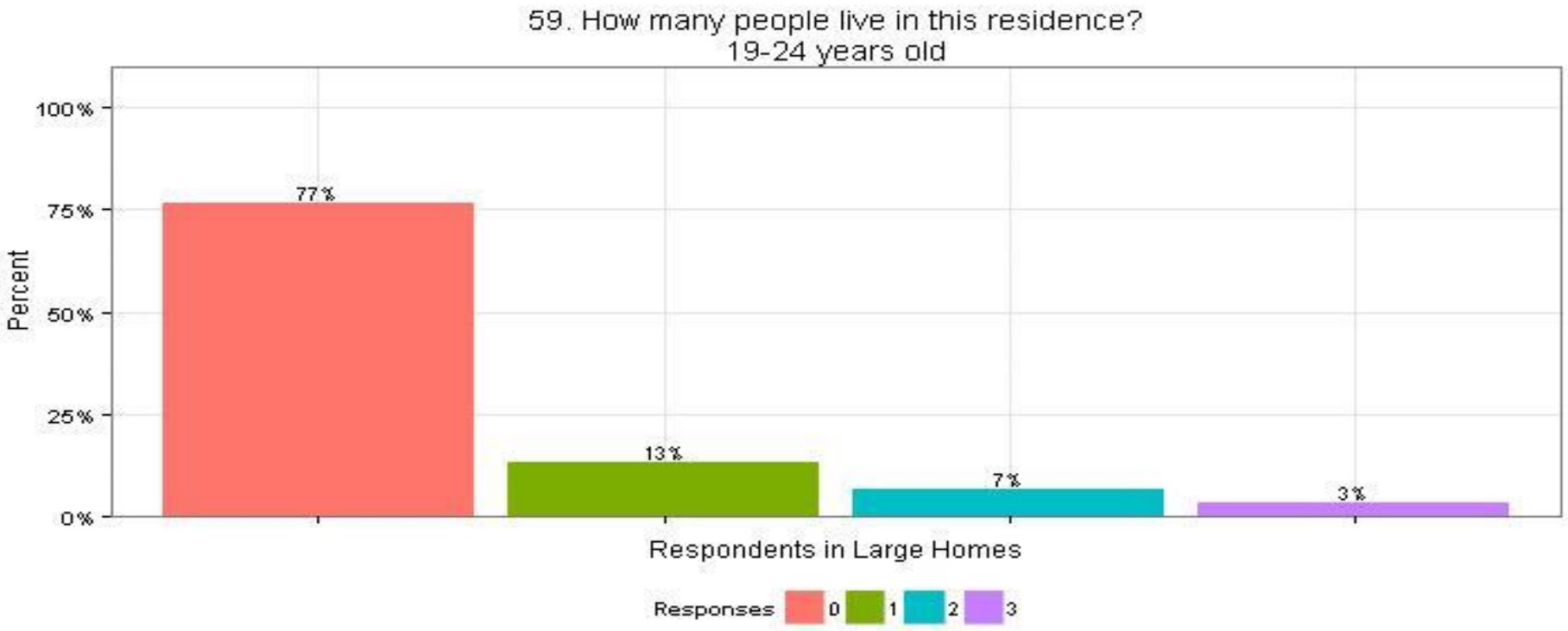
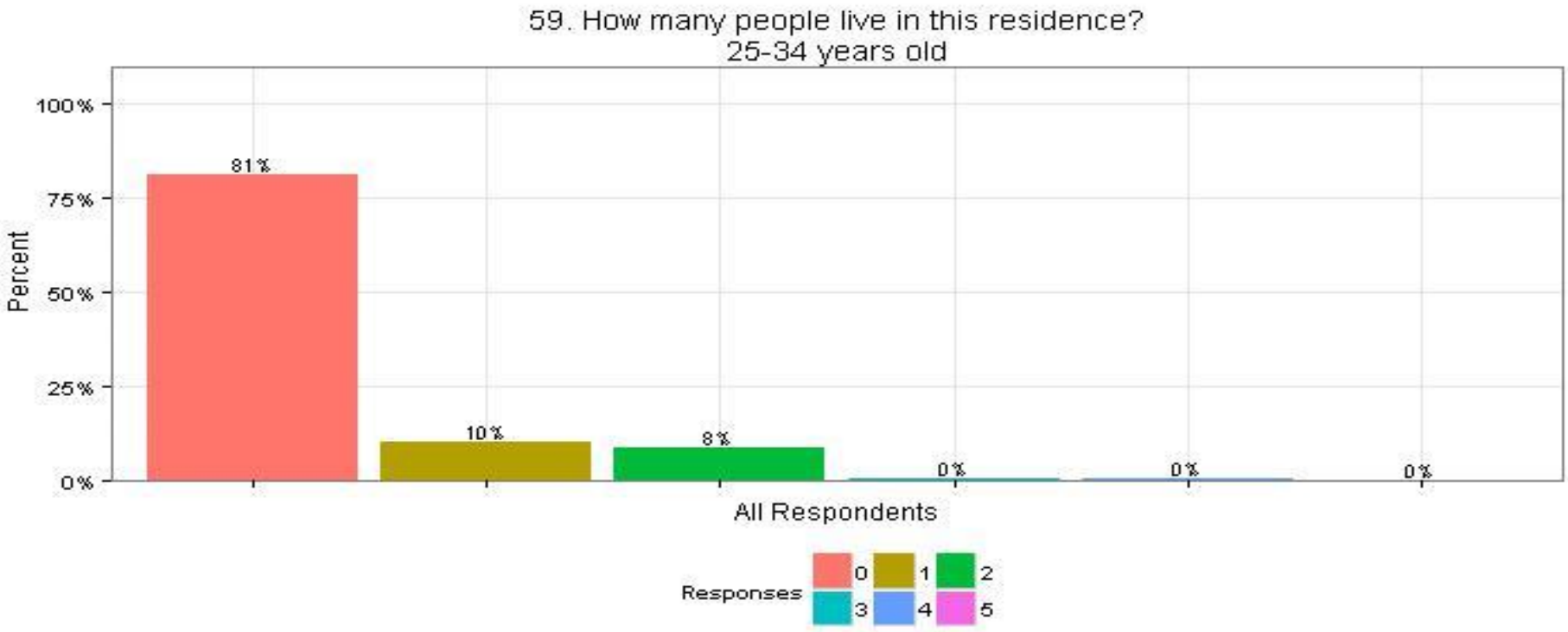
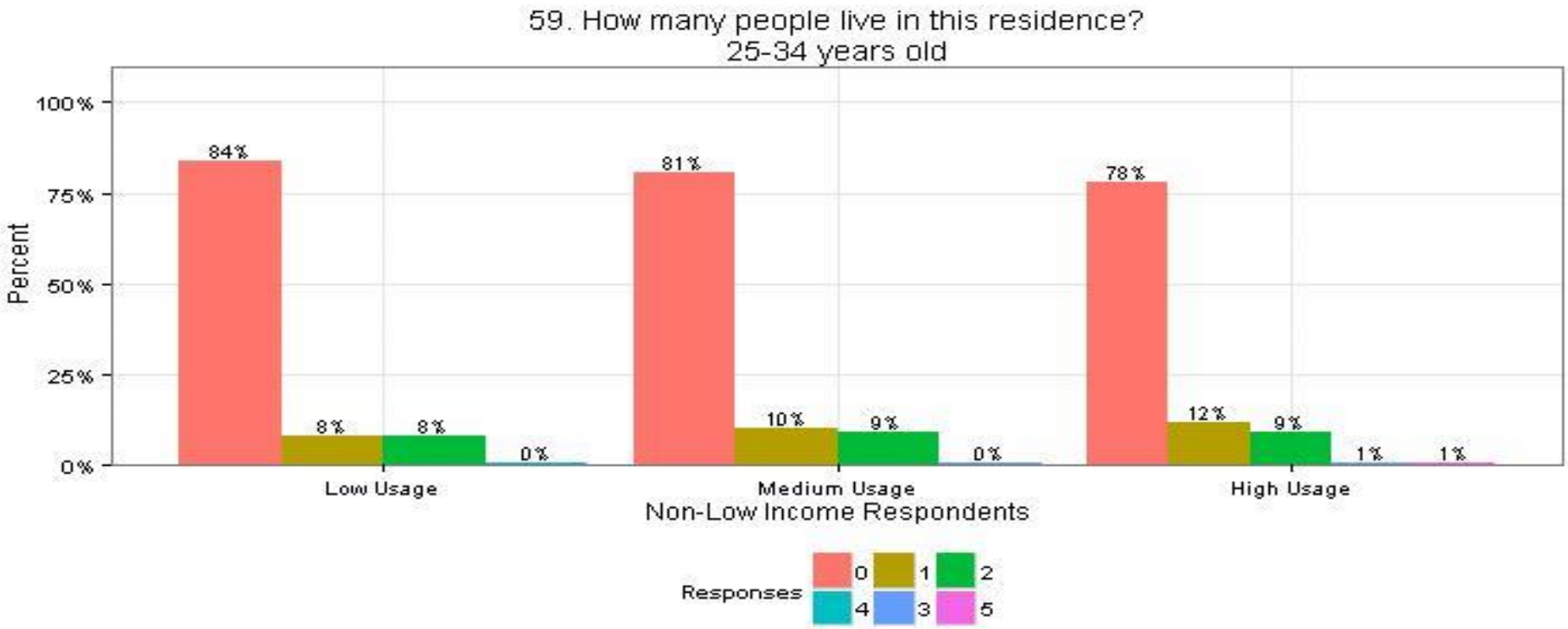
59. How many people live in this residence?
19-24 years old
Respondents in Large Homes



59. How many people live in this residence?
25-34 years old
All Respondents



59. How many people live in this residence?
25-34 years old
Non-Low Income Respondents



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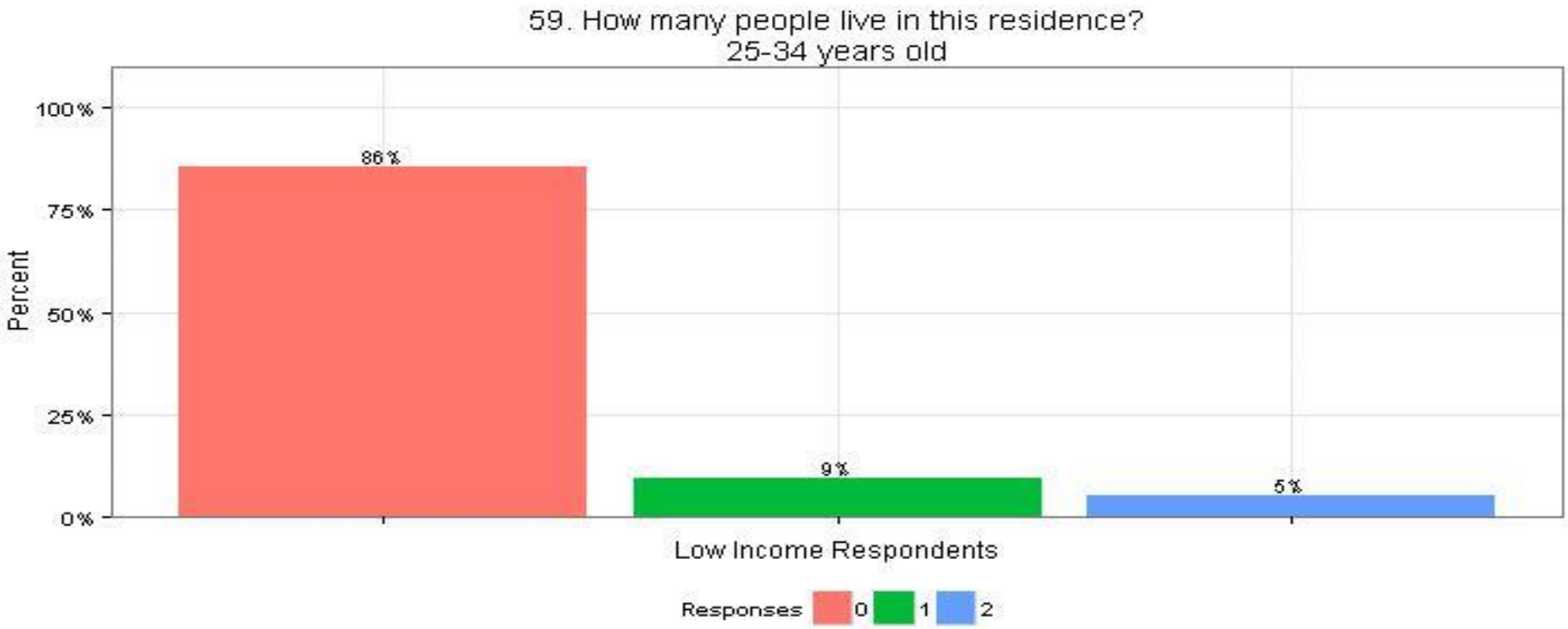
59. How many people live in this residence?
25-34 years old
Low Income Respondents



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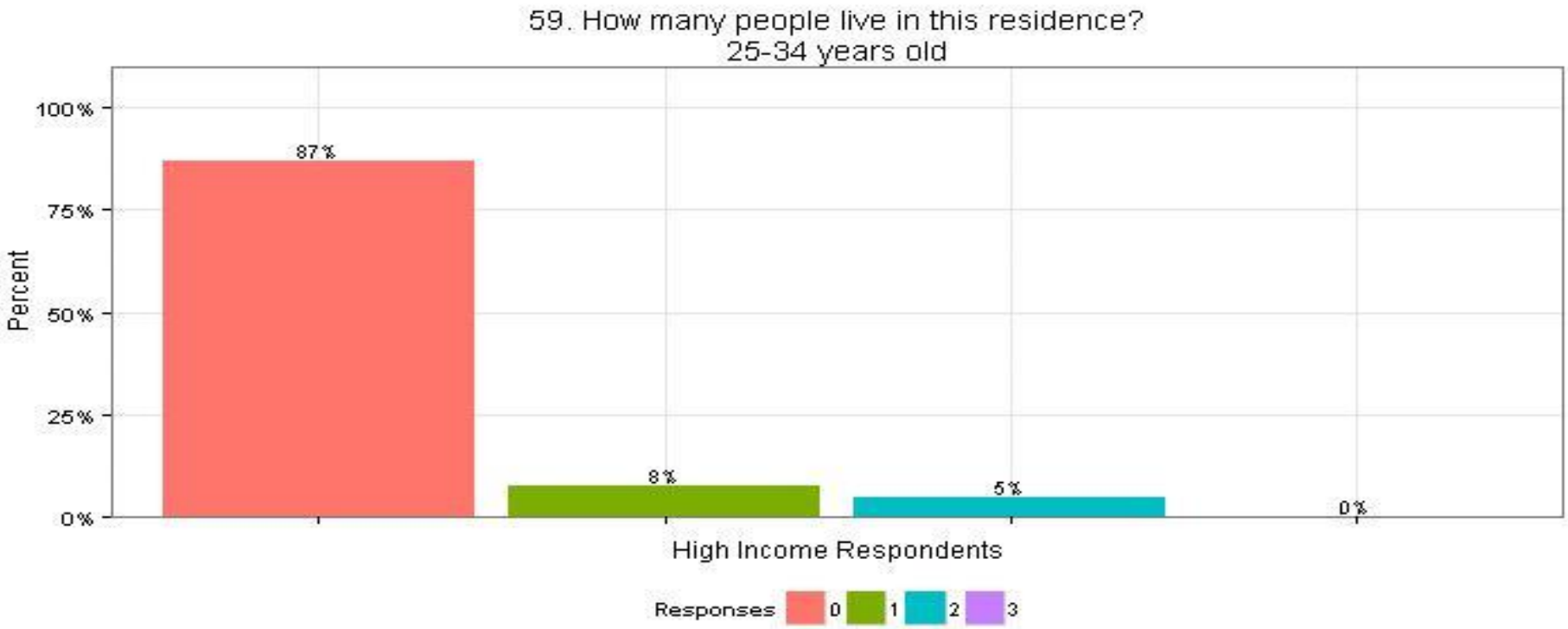
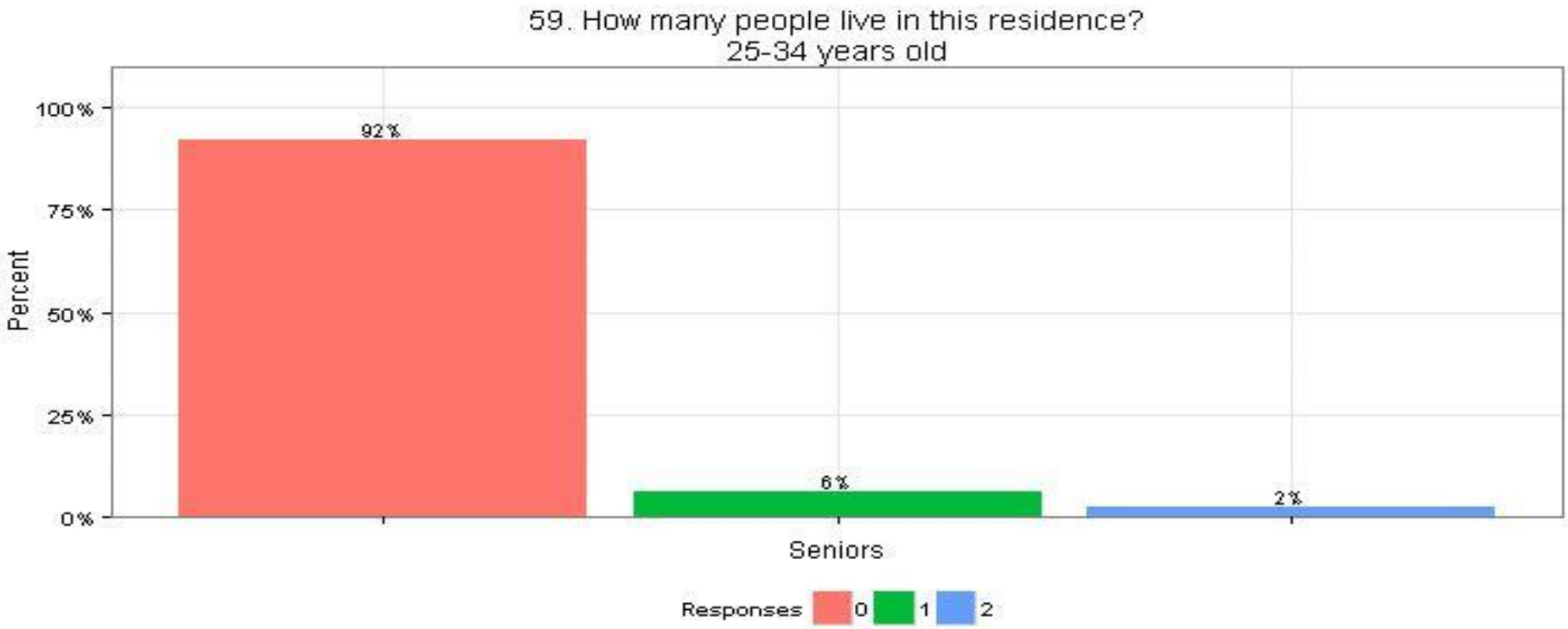
59. How many people live in this residence?
25-34 years old
High Income Respondents

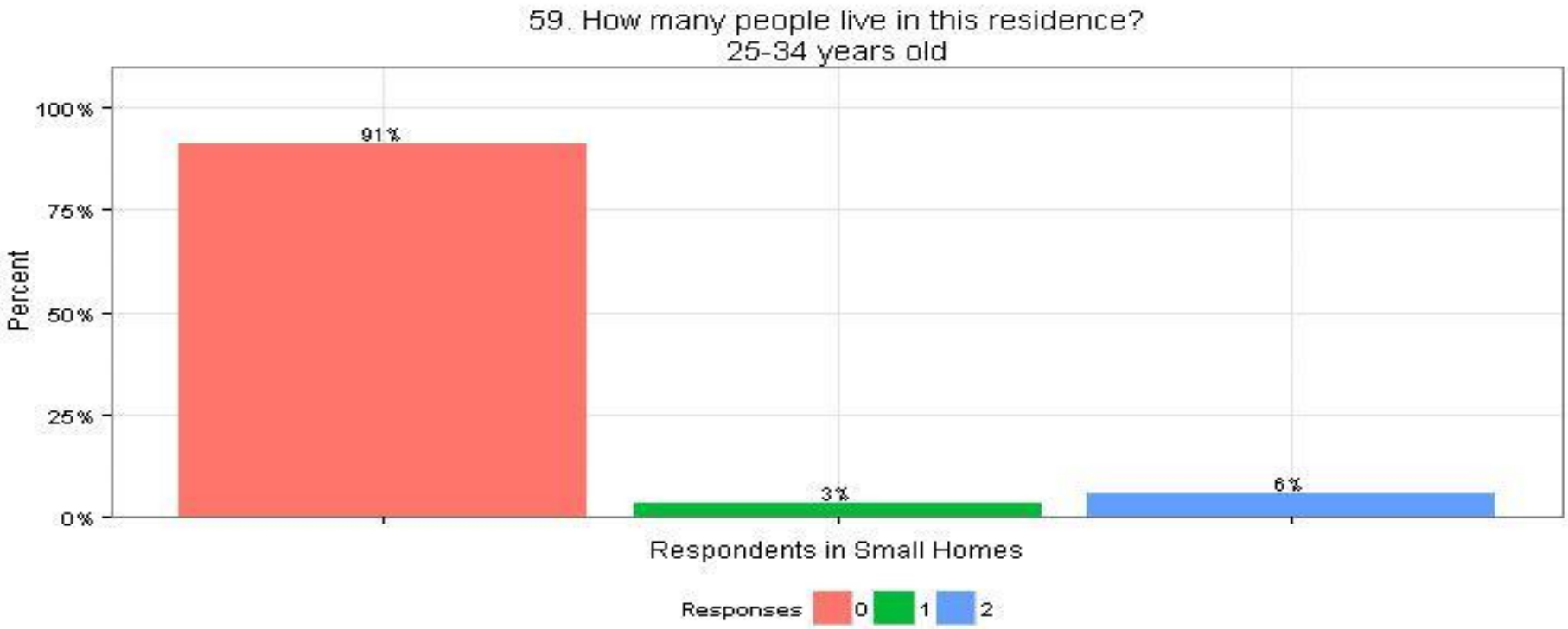


NAVIGANT

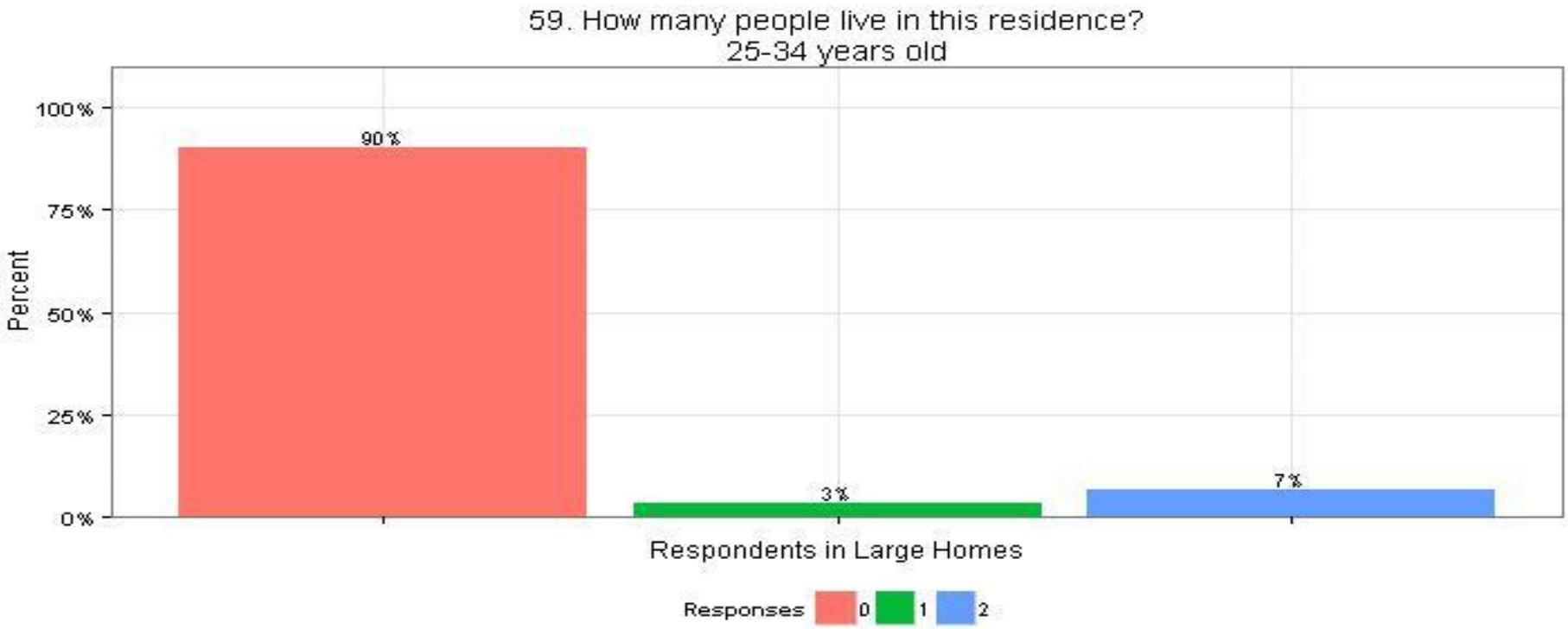
59. How many people live in this residence?
25-34 years old
Seniors



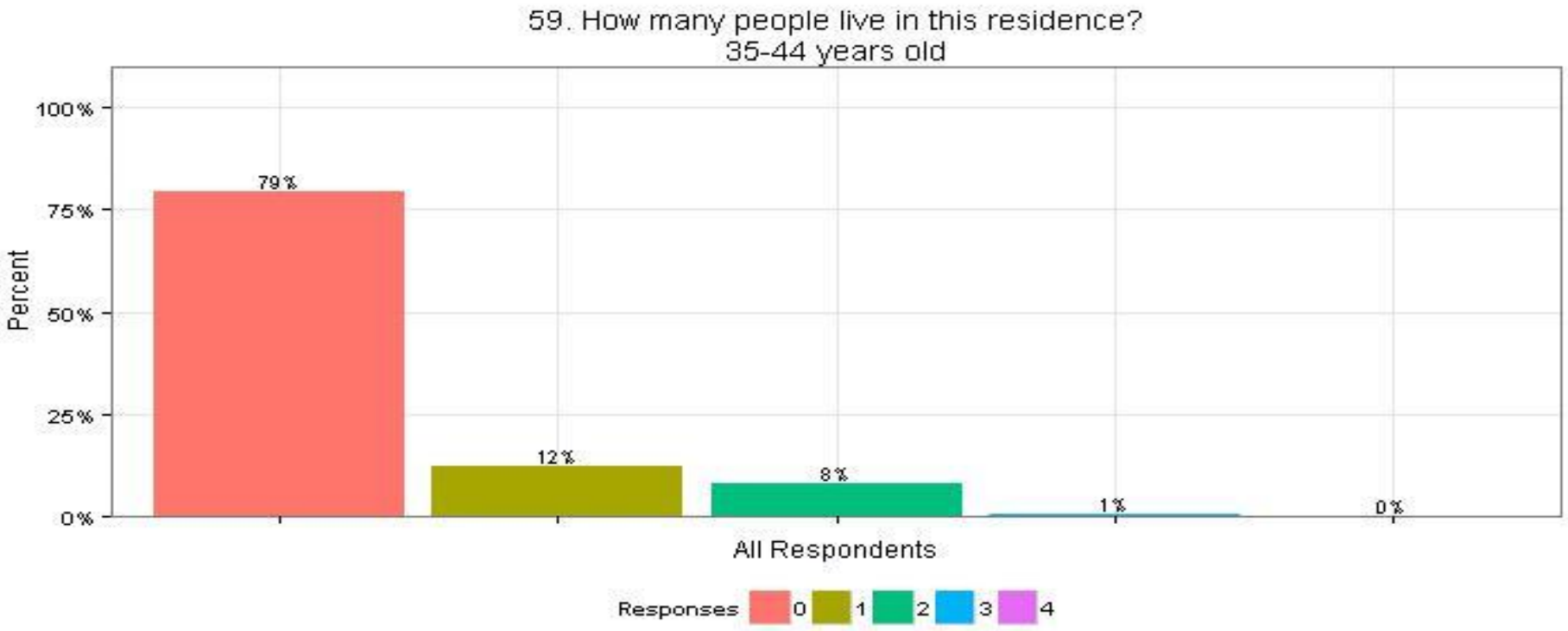
59. How many people live in this residence?
25-34 years old
Respondents in Small Homes



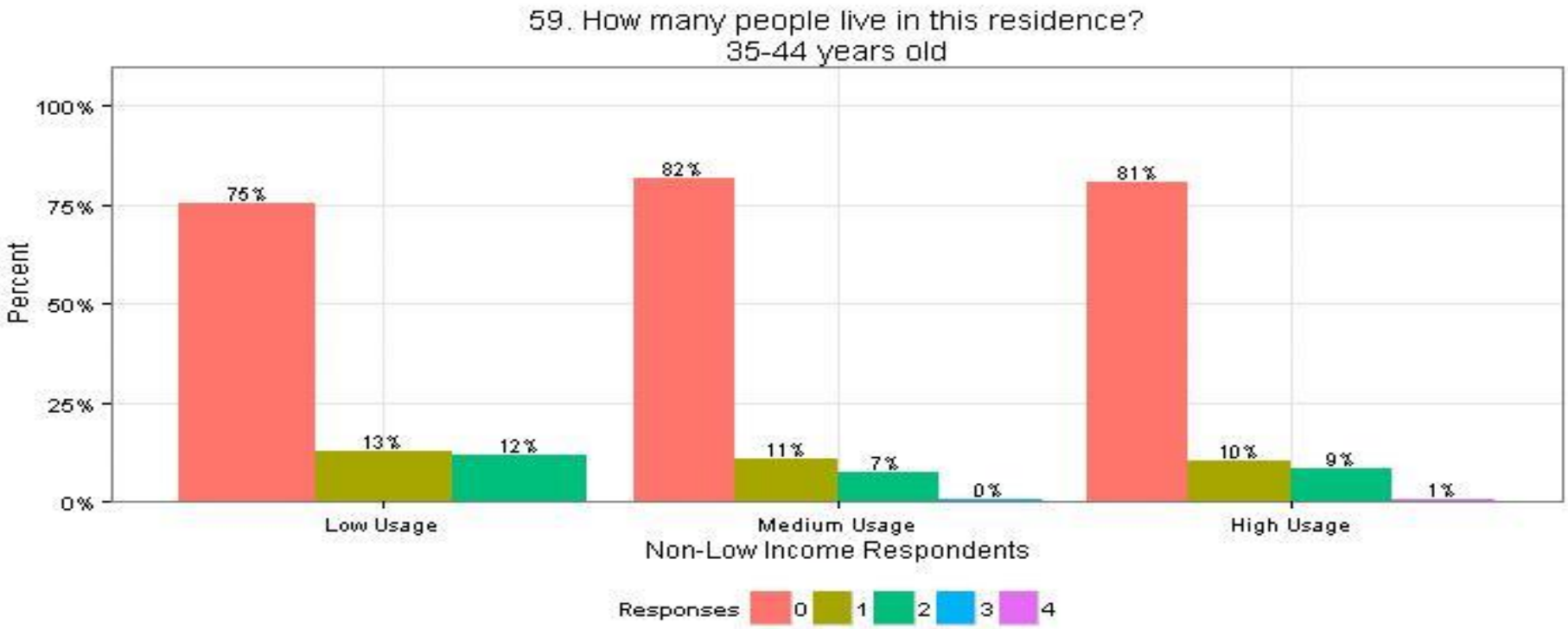
59. How many people live in this residence?
25-34 years old
Respondents in Large Homes



59. How many people live in this residence?
35-44 years old
All Respondents

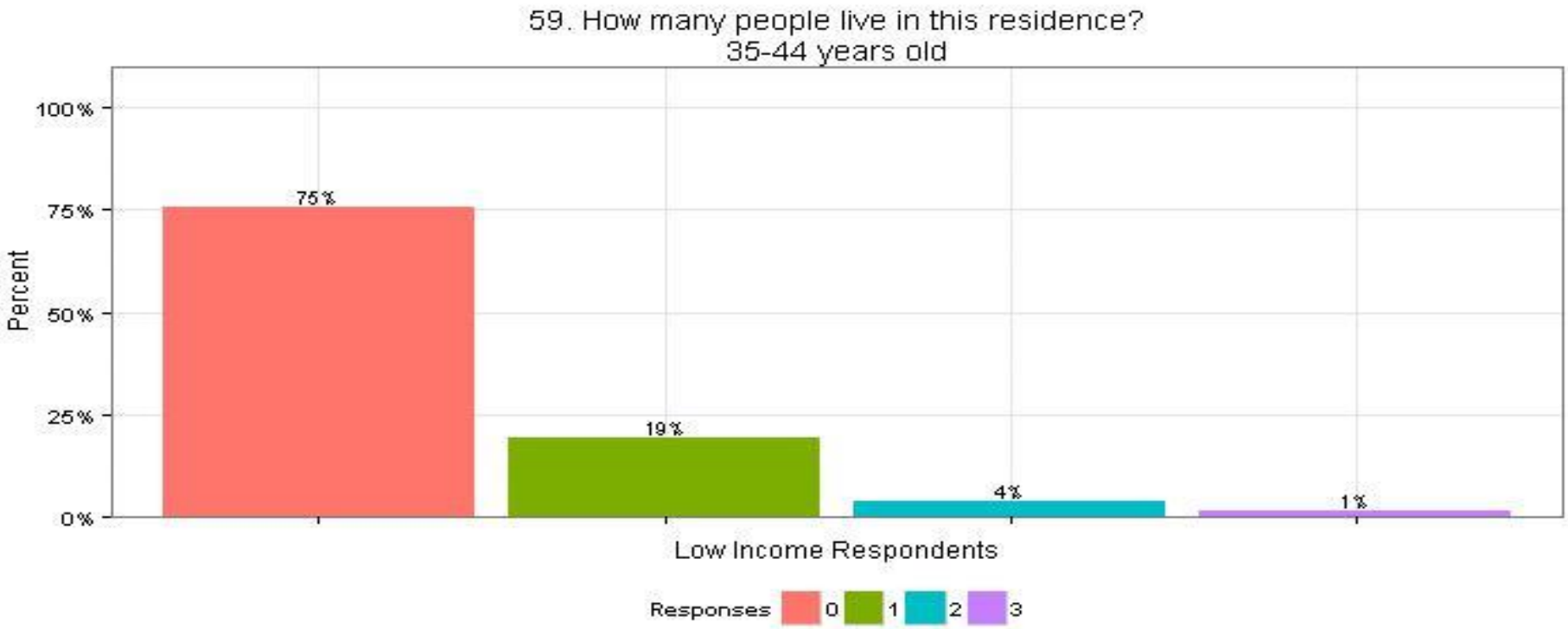


59. How many people live in this residence?
35-44 years old
Non-Low Income Respondents



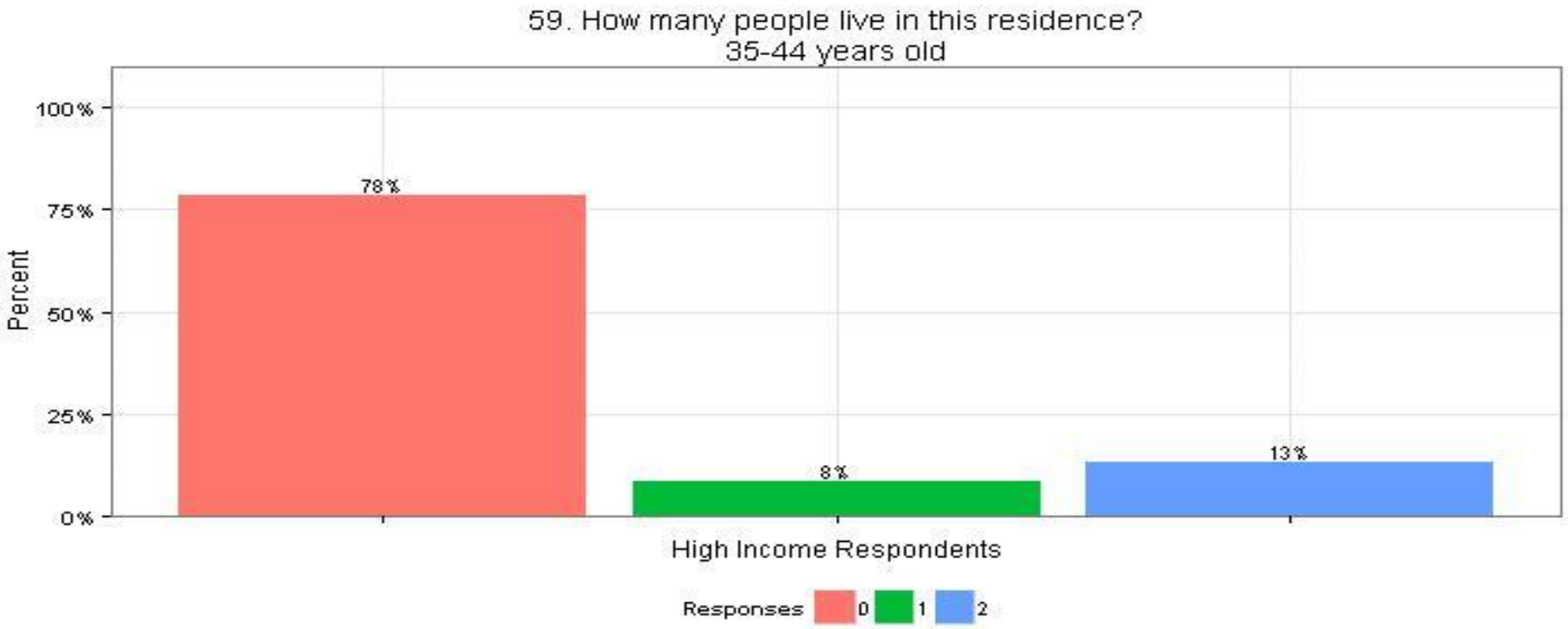
NAVIGANT

59. How many people live in this residence?
35-44 years old
Low Income Respondents



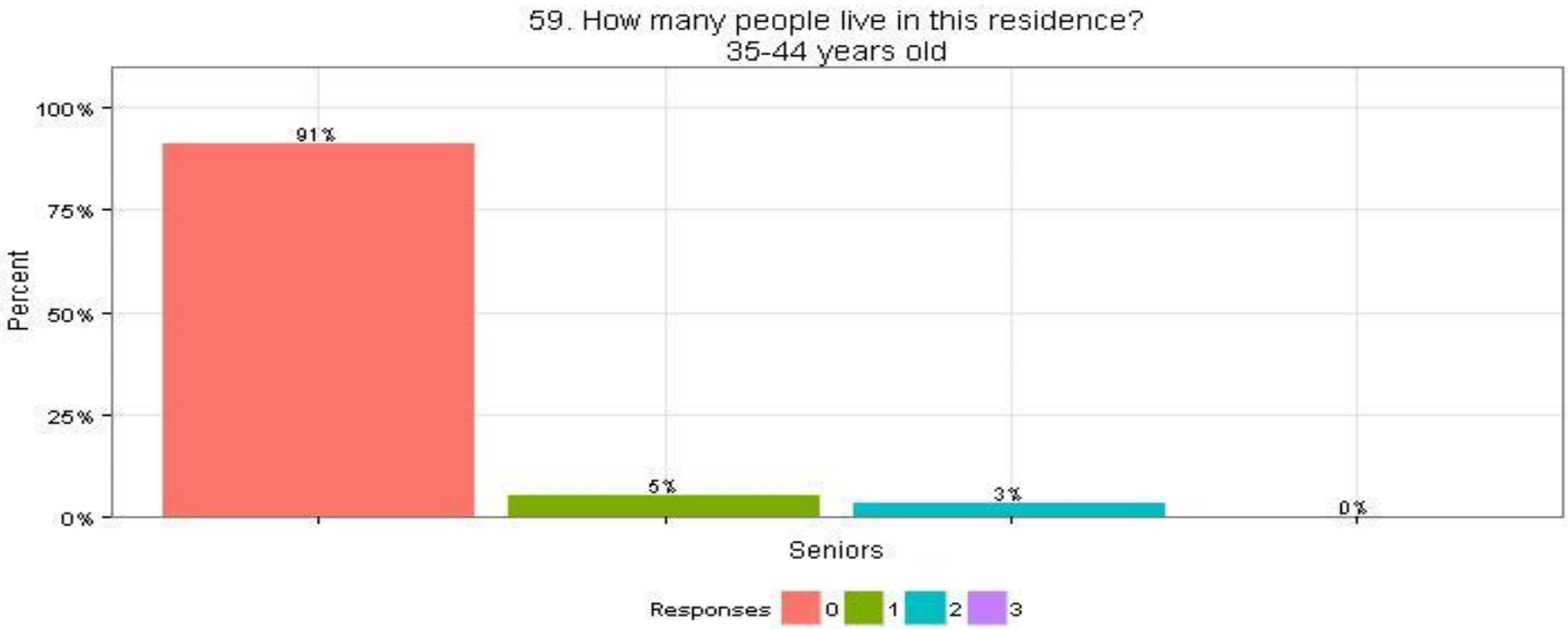
NAVIGANT

59. How many people live in this residence?
35-44 years old
High Income Respondents

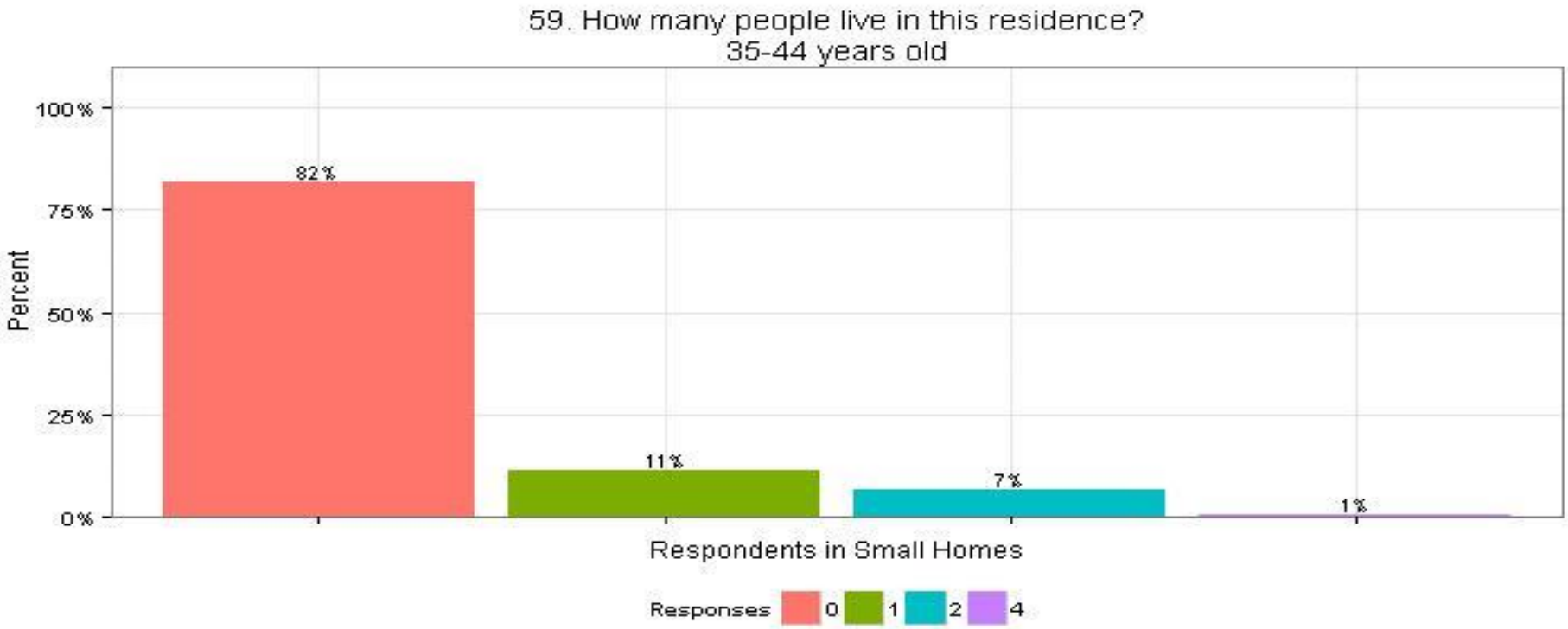


NAVIGANT

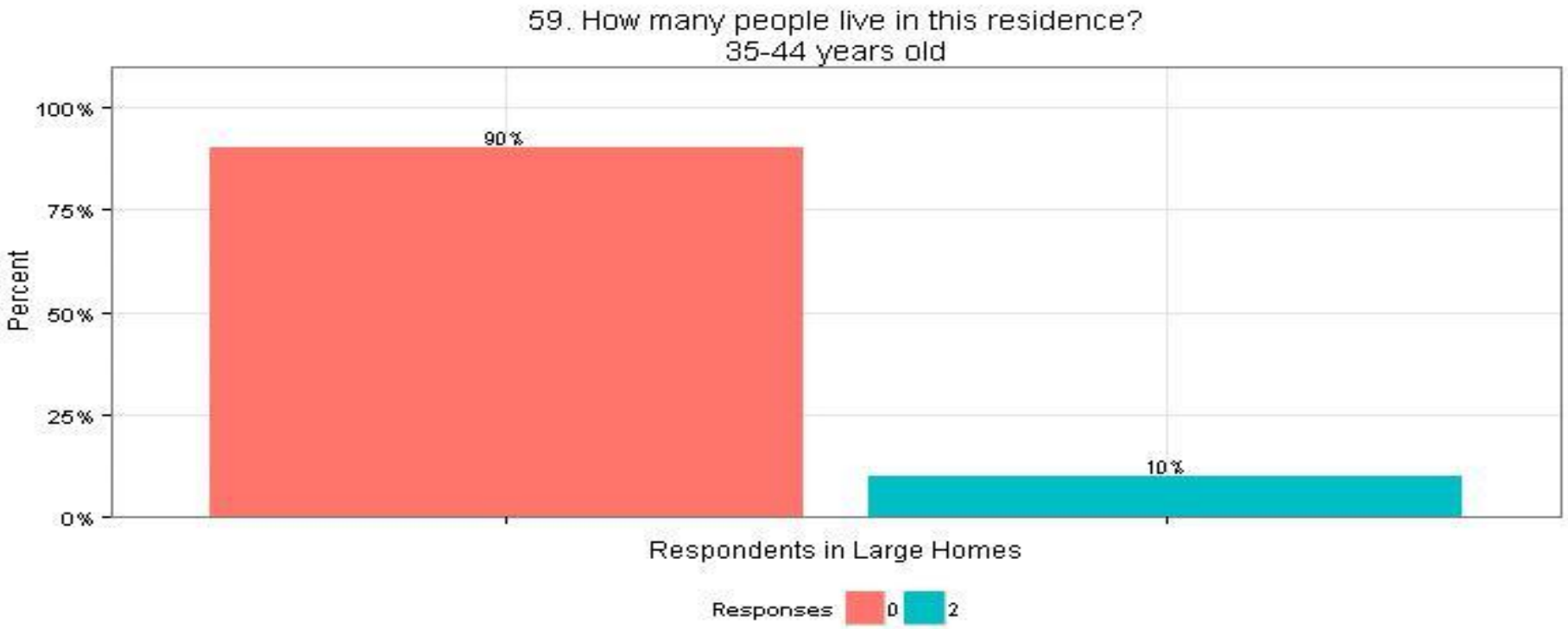
59. How many people live in this residence?
35-44 years old
Seniors



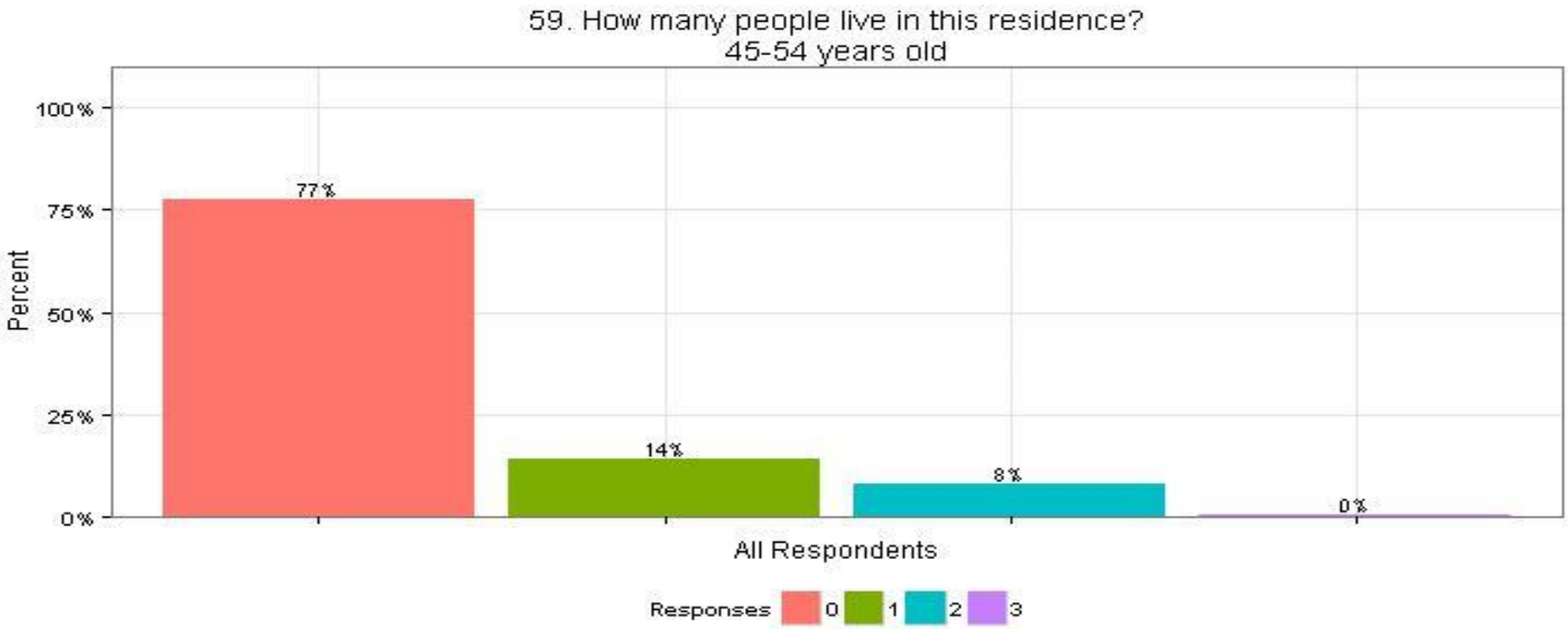
59. How many people live in this residence?
35-44 years old
Respondents in Small Homes



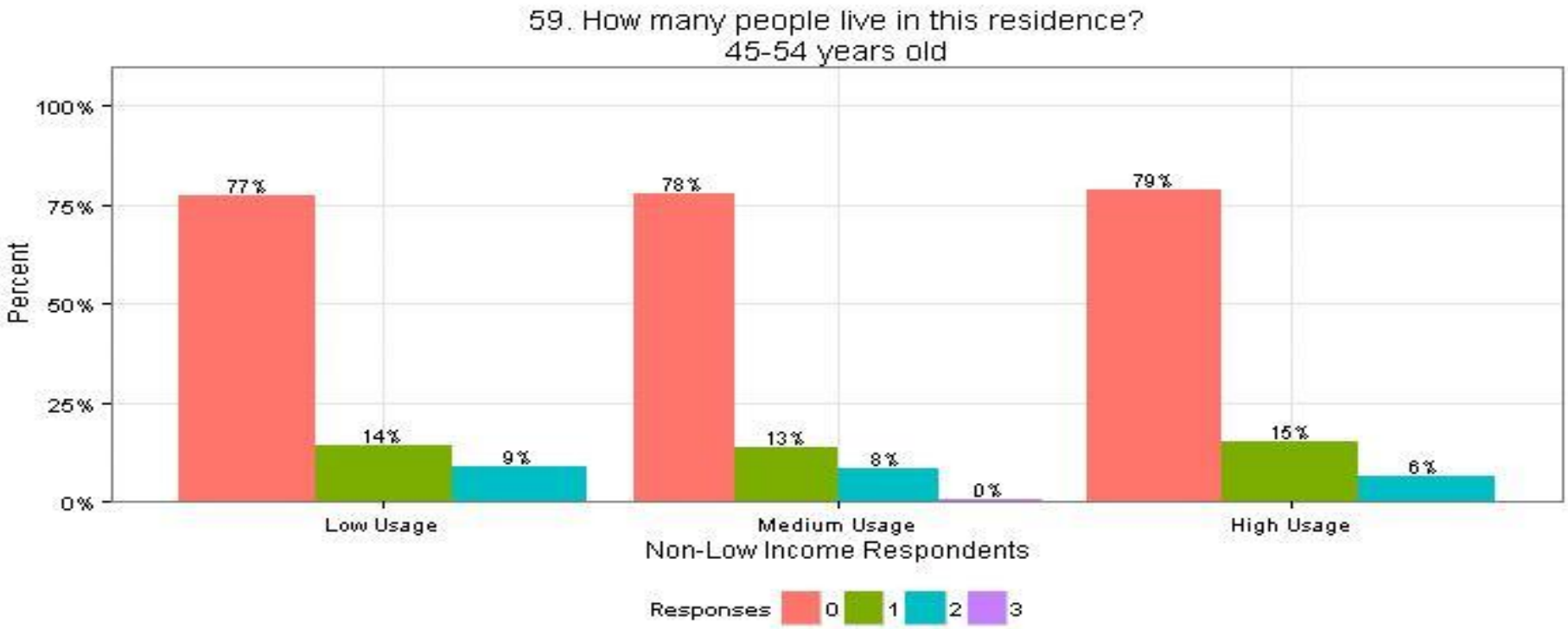
59. How many people live in this residence?
35-44 years old
Respondents in Large Homes



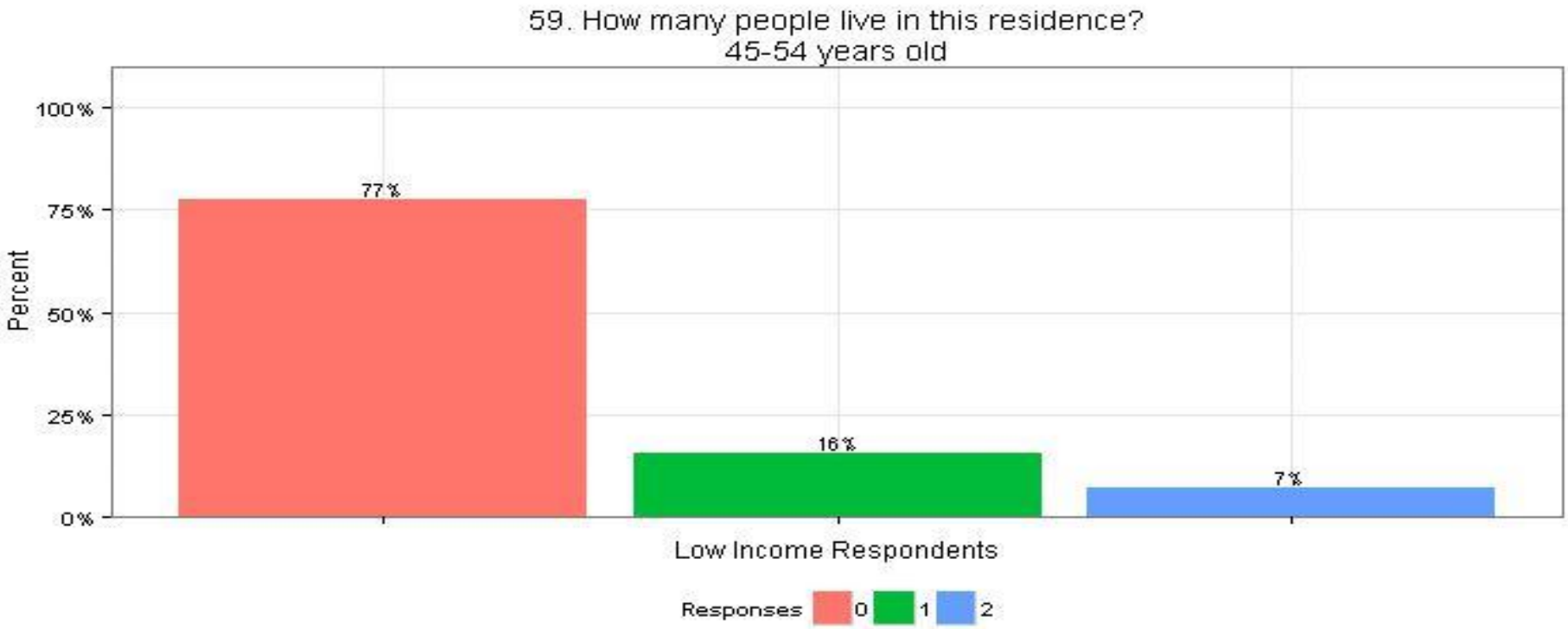
59. How many people live in this residence?
45-54 years old
All Respondents



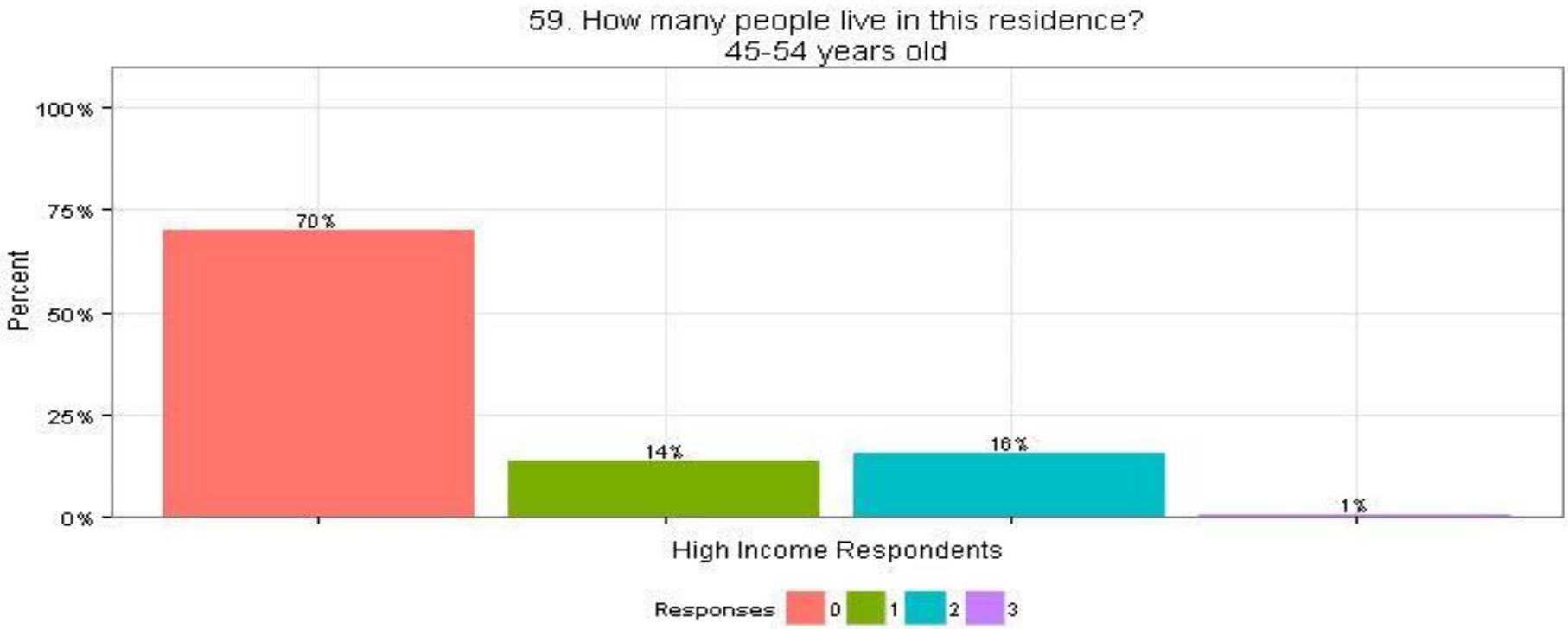
59. How many people live in this residence?
45-54 years old
Non-Low Income Respondents



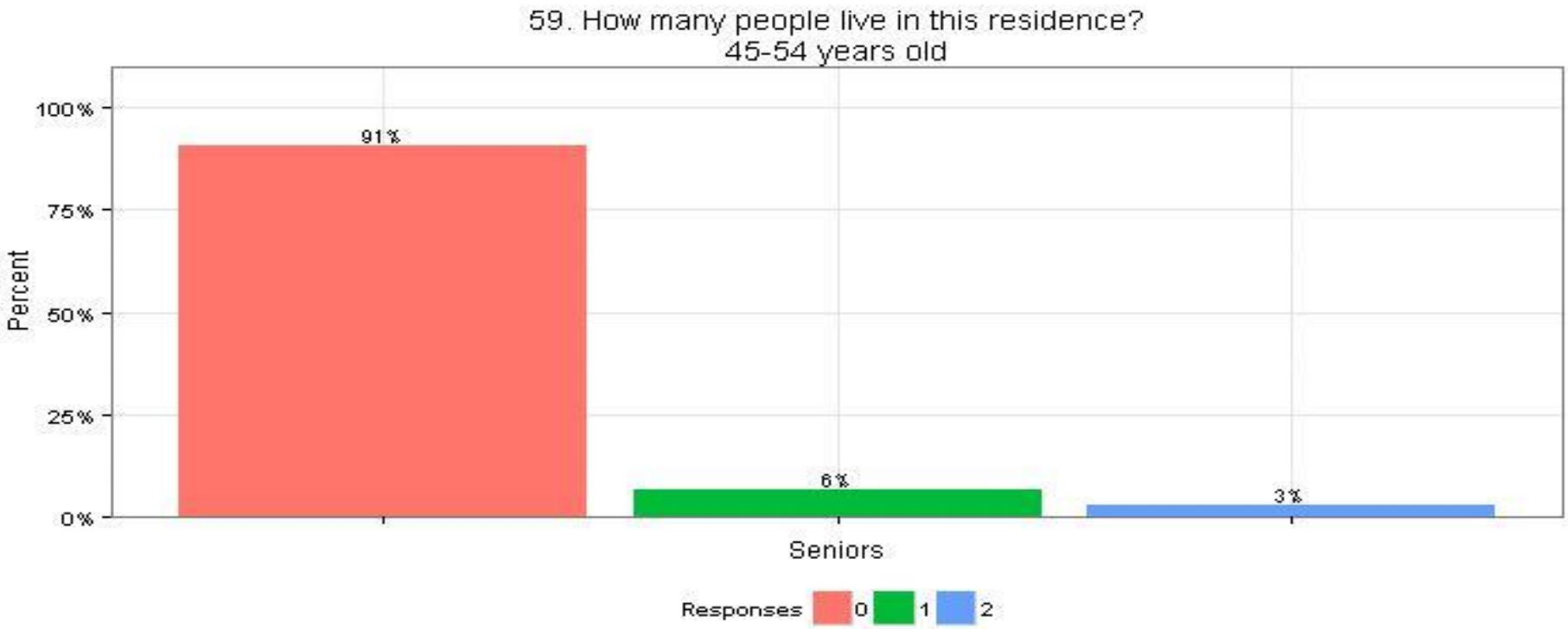
59. How many people live in this residence?
45-54 years old
Low Income Respondents



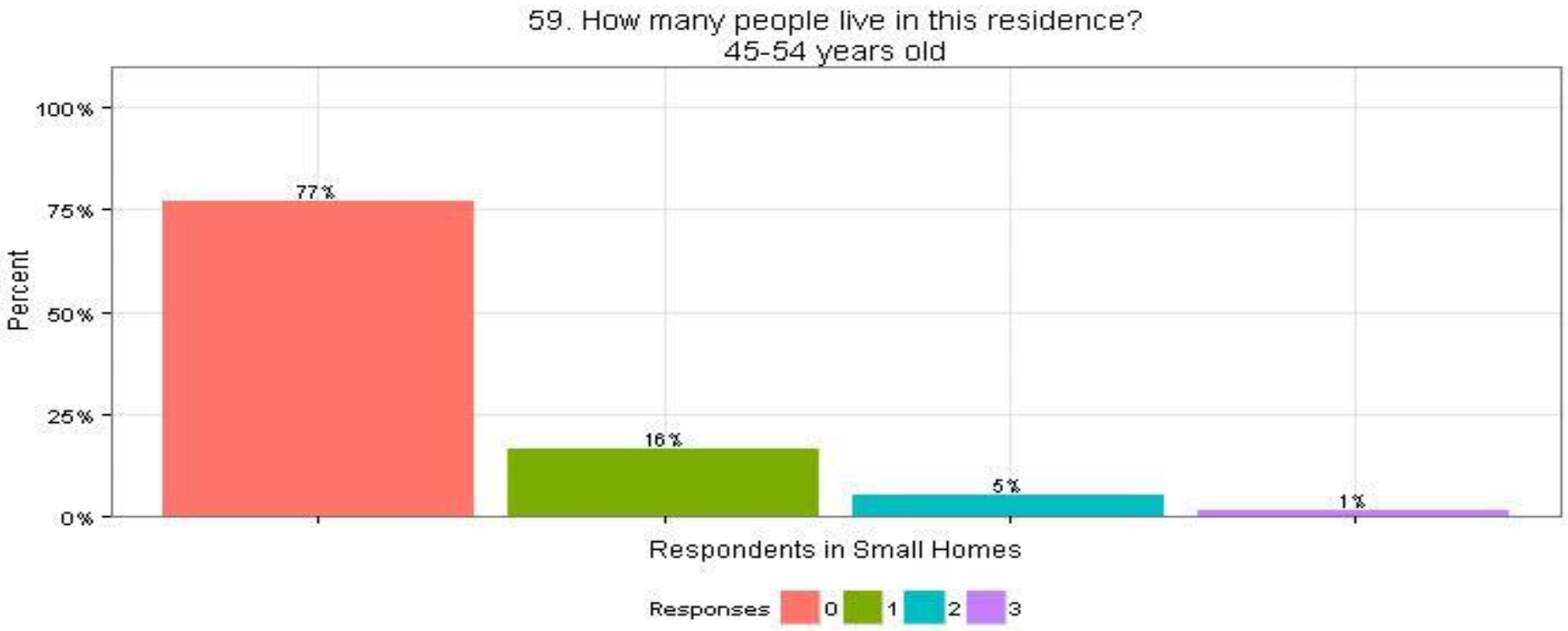
59. How many people live in this residence?
45-54 years old
High Income Respondents



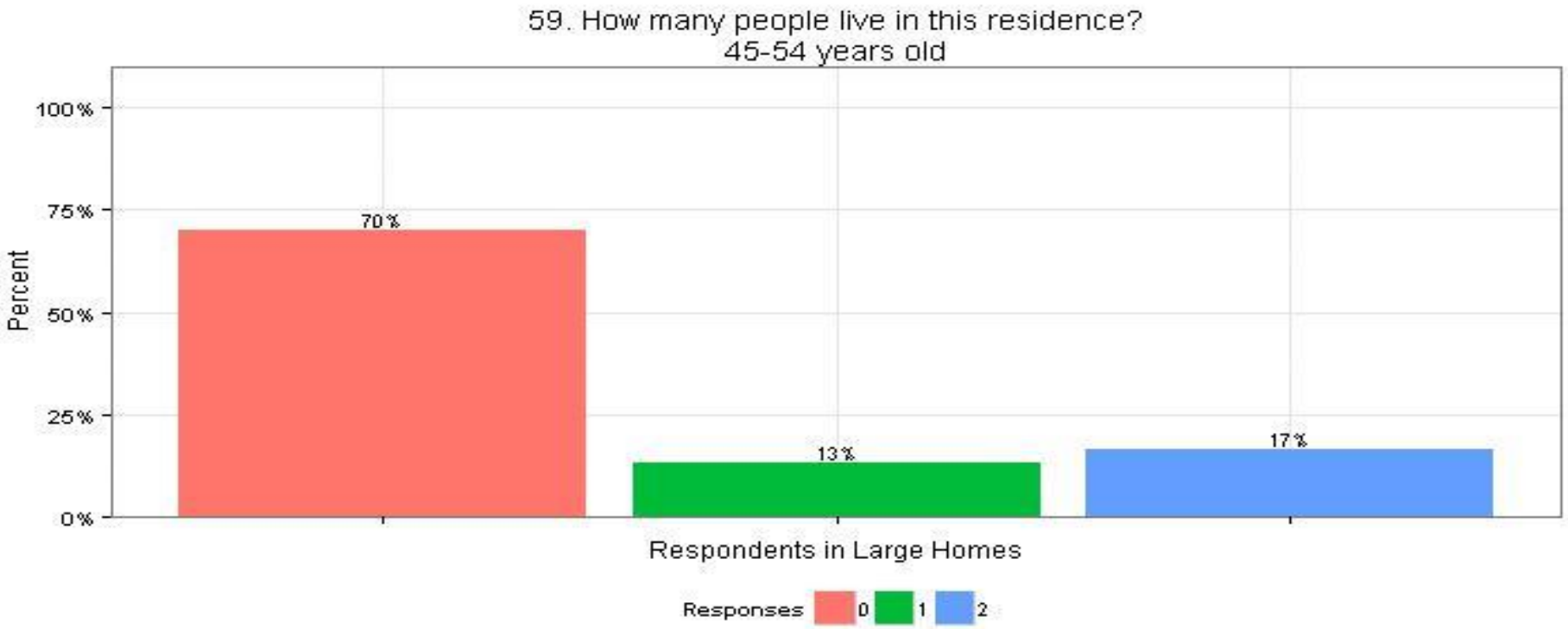
59. How many people live in this residence?
45-54 years old
Seniors



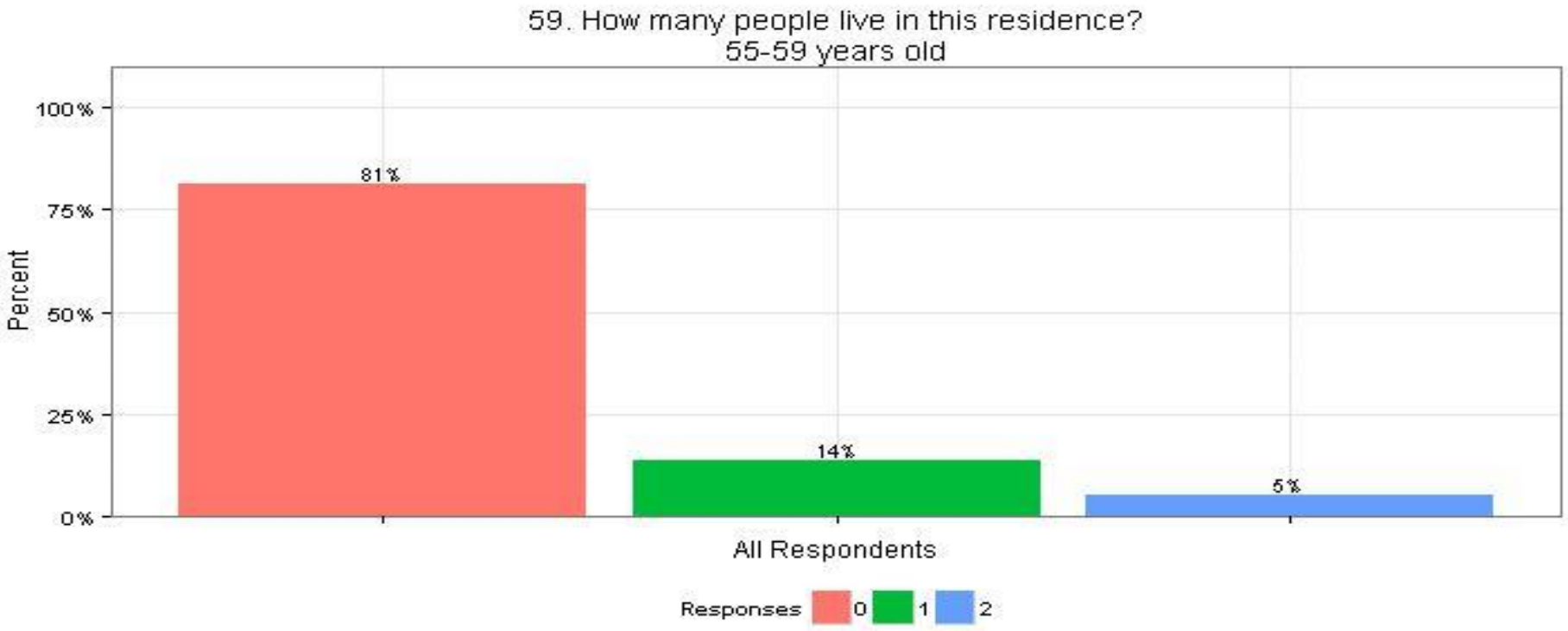
59. How many people live in this residence?
45-54 years old
Respondents in Small Homes



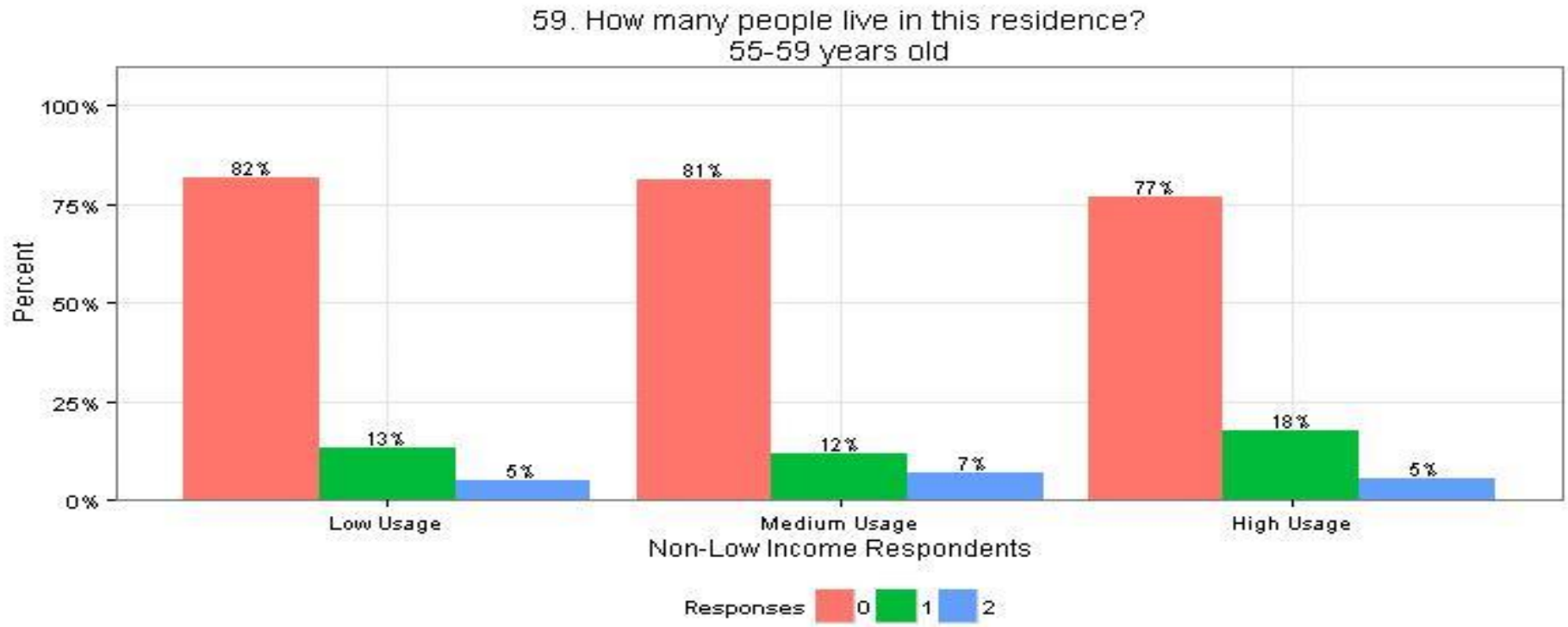
59. How many people live in this residence?
45-54 years old
Respondents in Large Homes



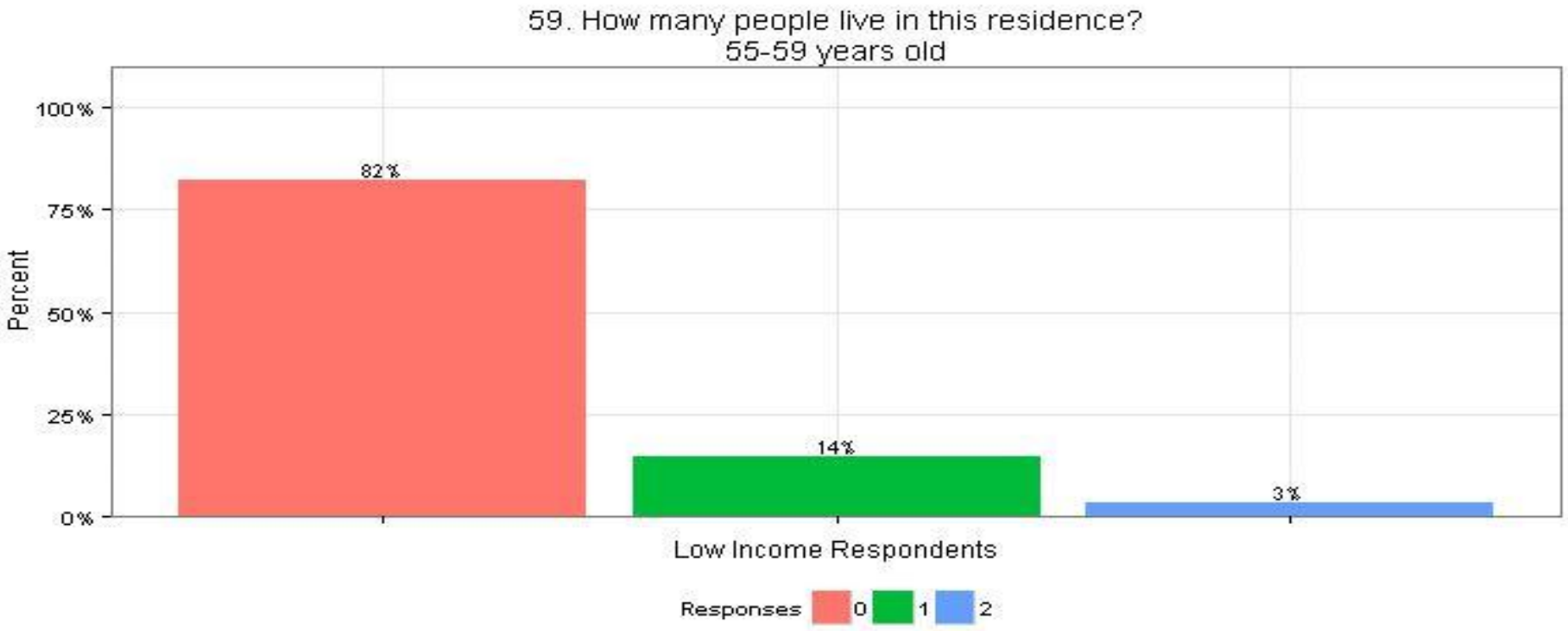
59. How many people live in this residence?
55-59 years old
All Respondents



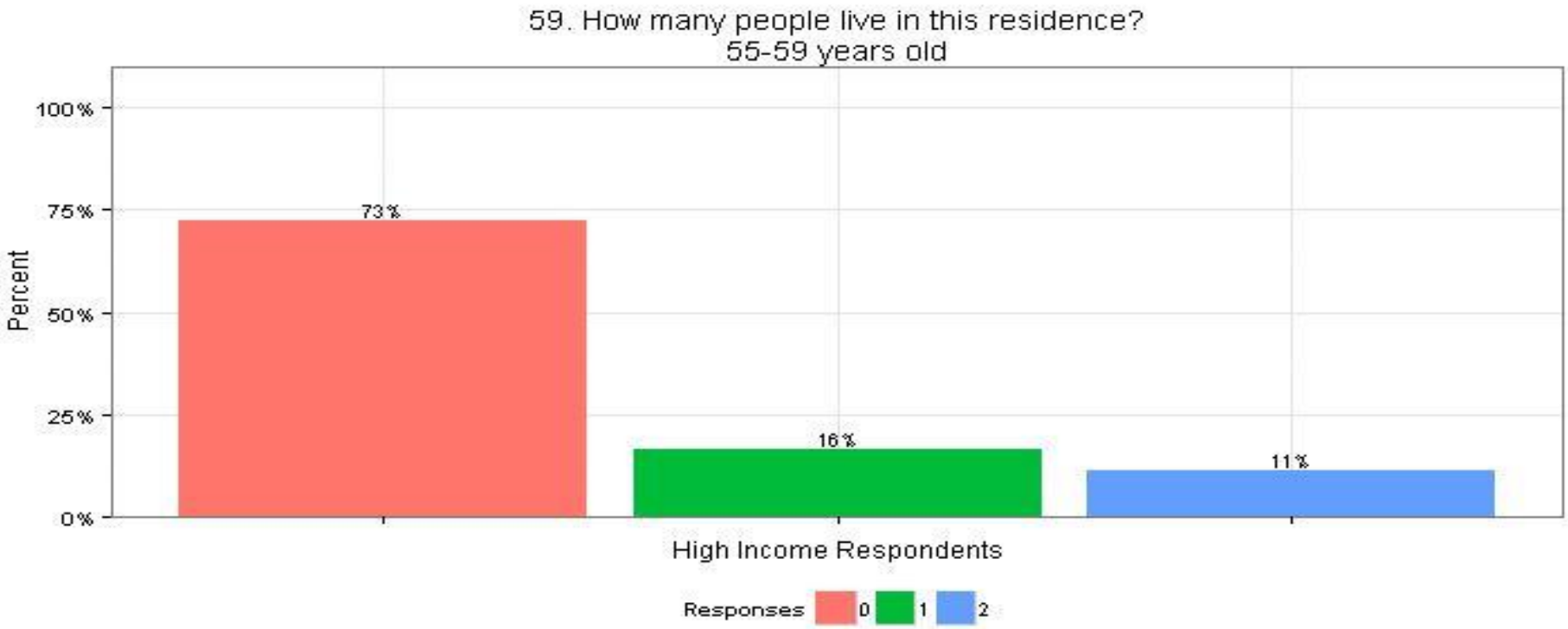
59. How many people live in this residence?
55-59 years old
Non-Low Income Respondents



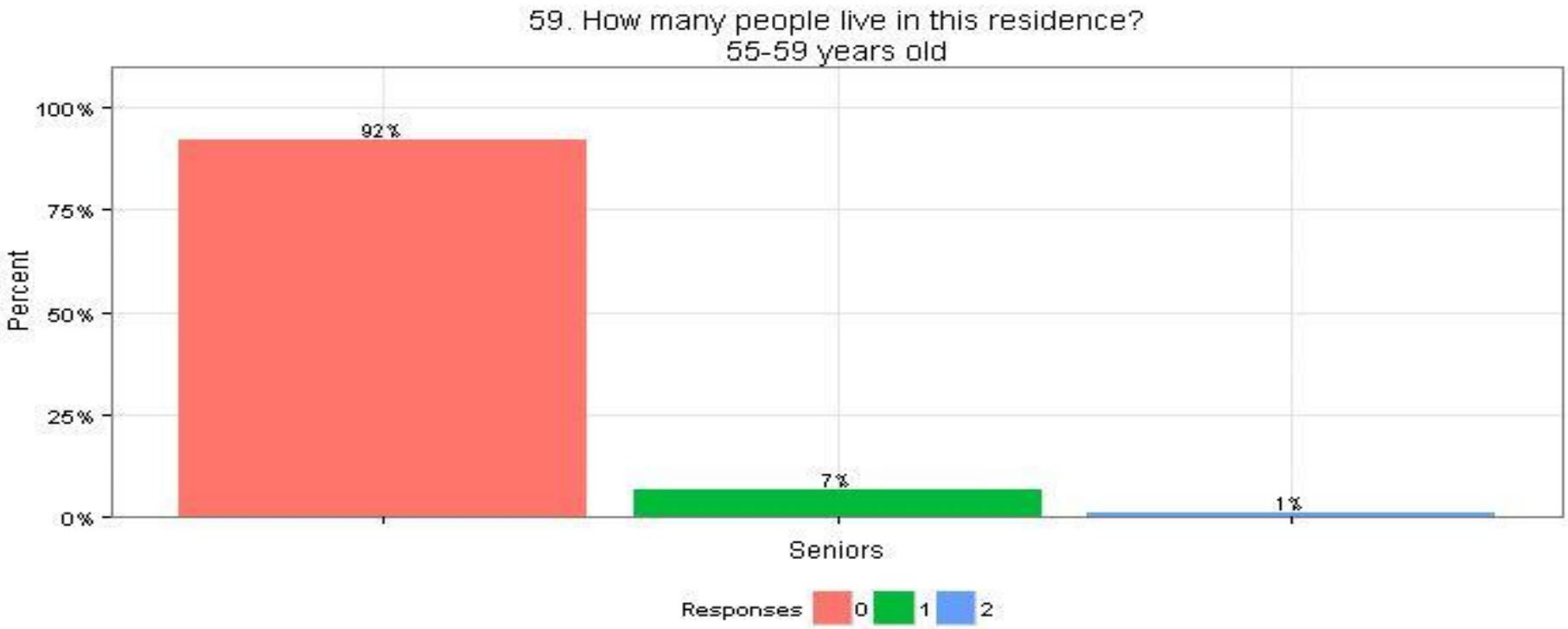
59. How many people live in this residence?
55-59 years old
Low Income Respondents



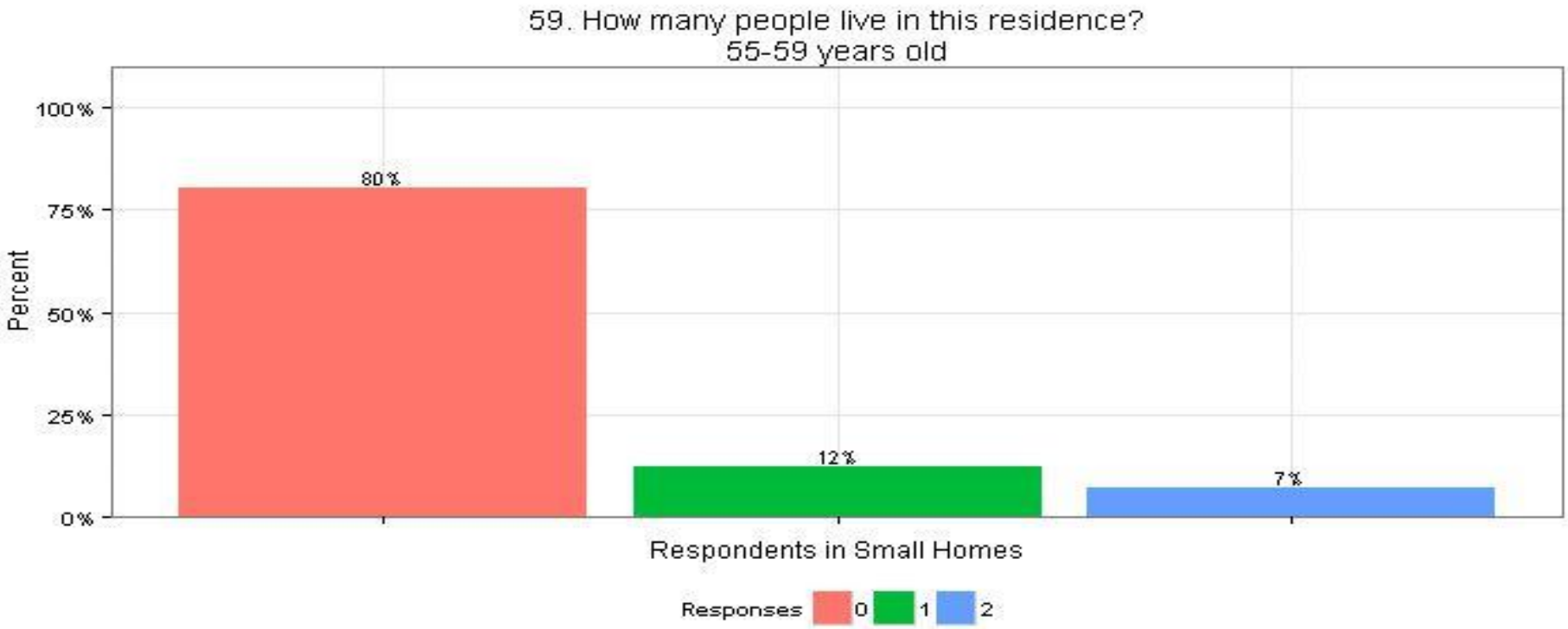
59. How many people live in this residence?
55-59 years old
High Income Respondents



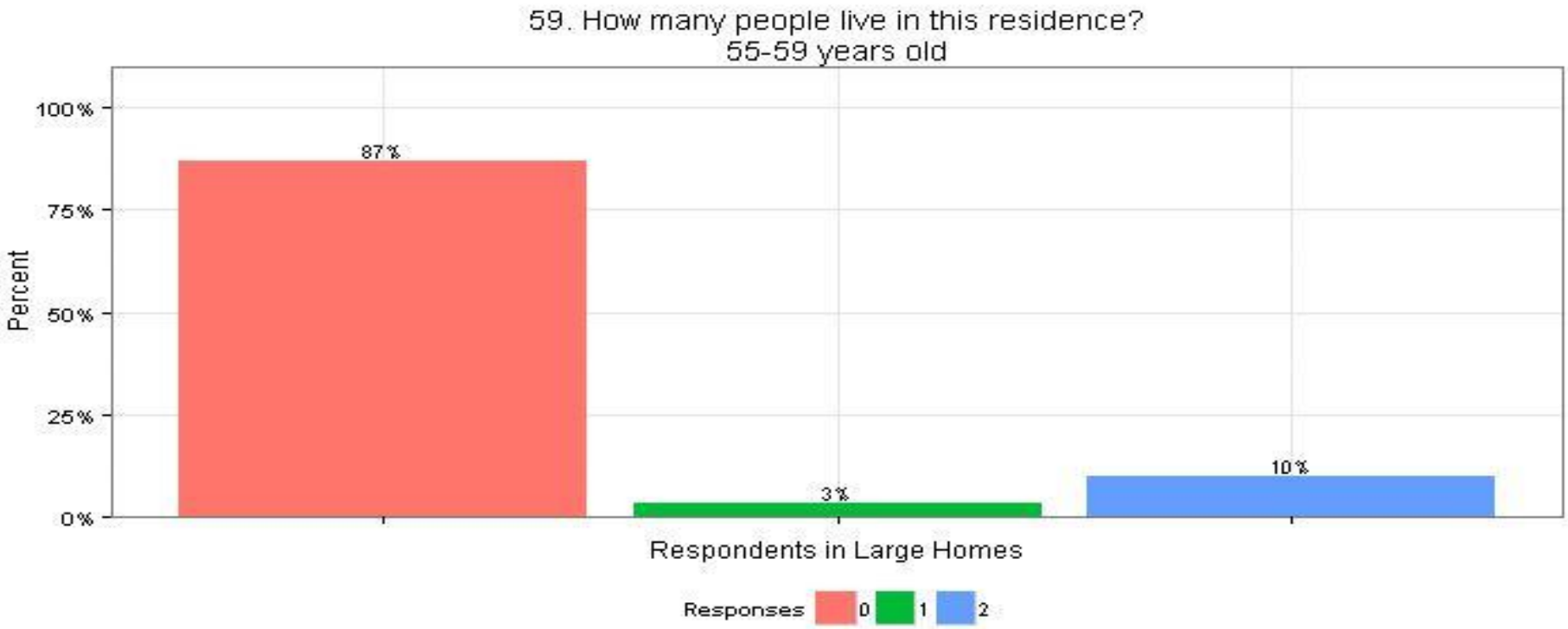
59. How many people live in this residence?
55-59 years old
Seniors



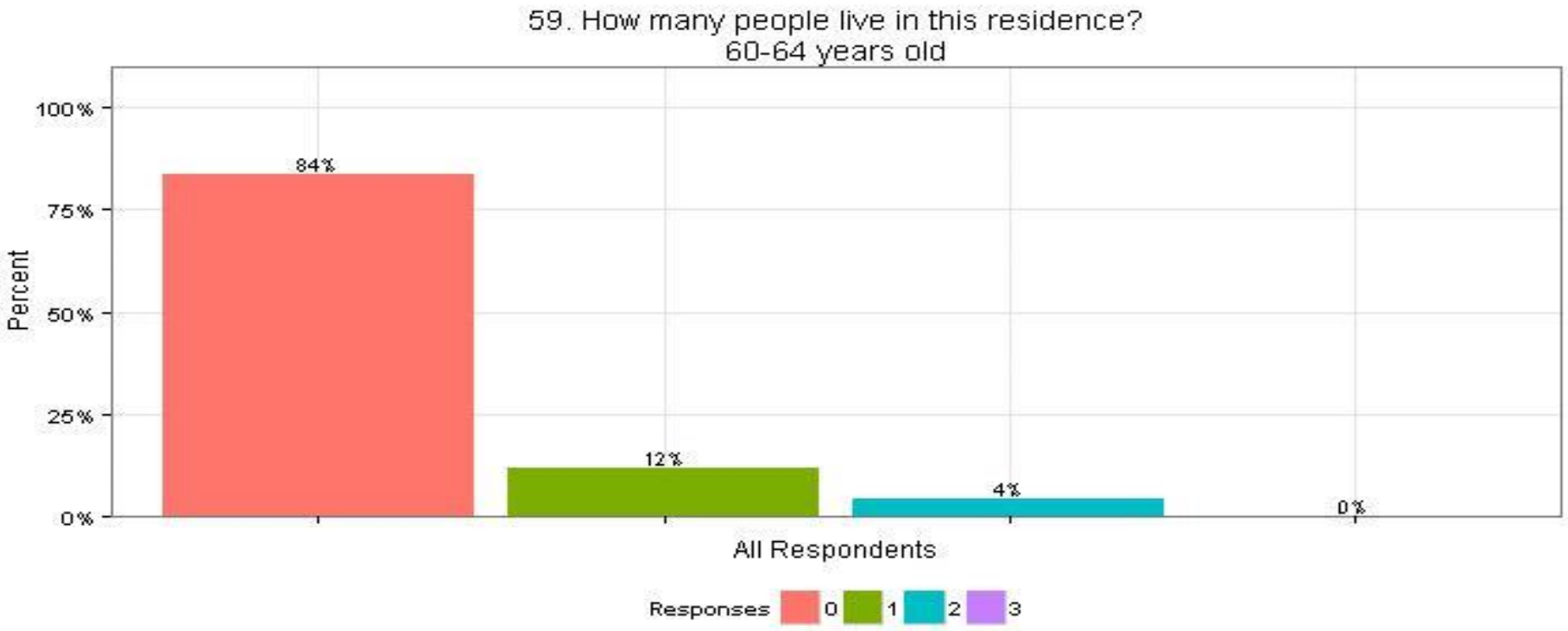
59. How many people live in this residence?
55-59 years old
Respondents in Small Homes



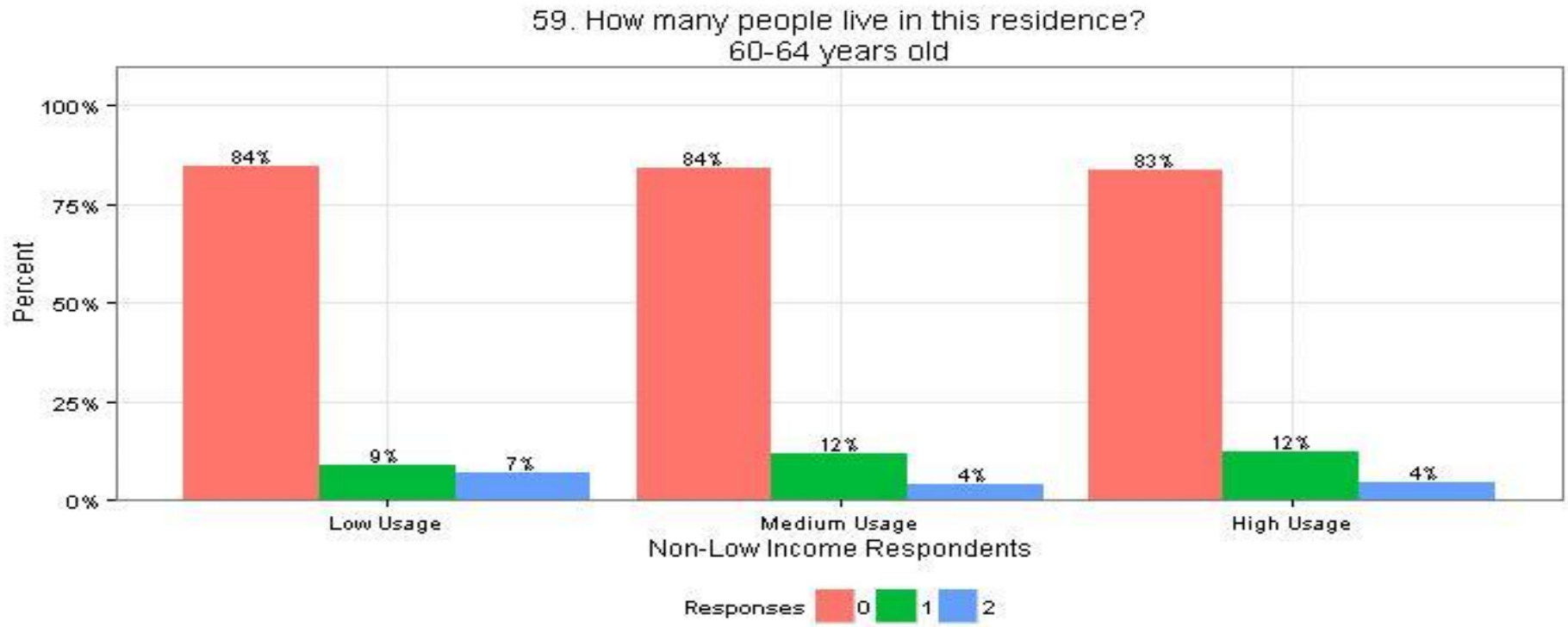
59. How many people live in this residence?
55-59 years old
Respondents in Large Homes



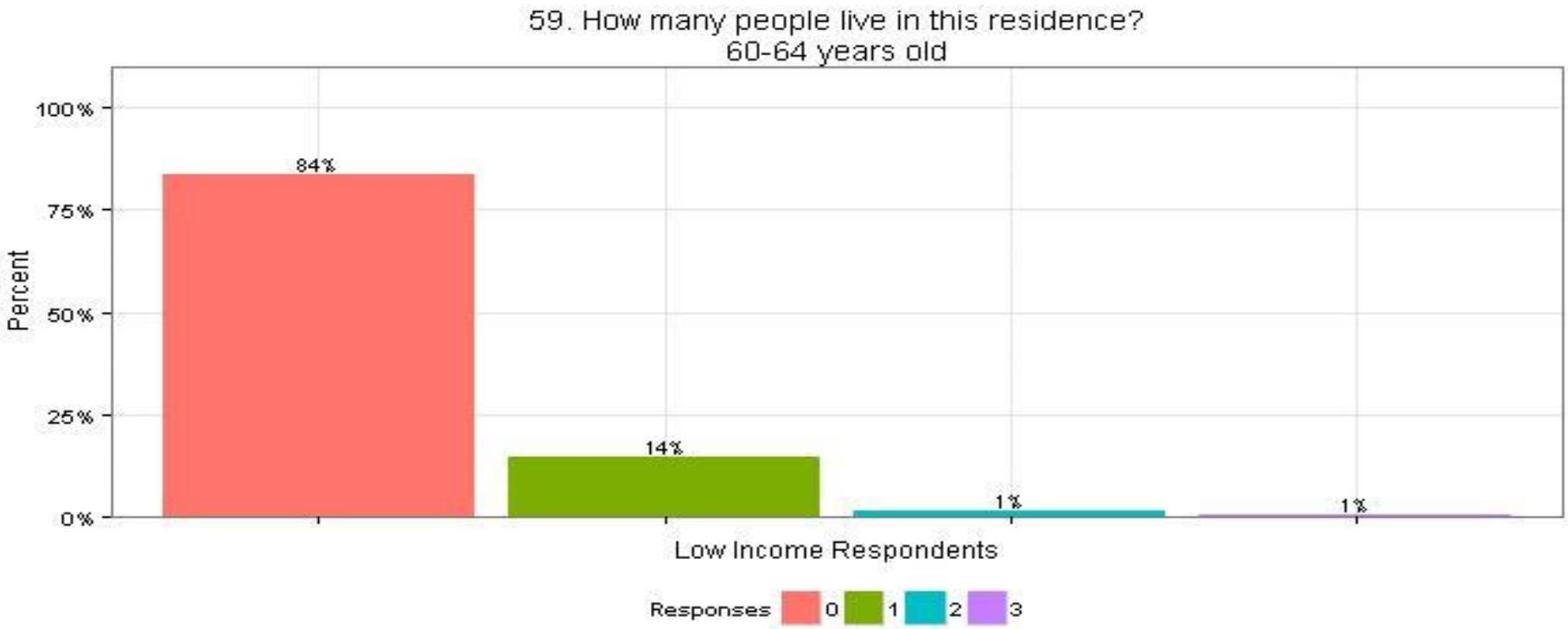
59. How many people live in this residence?
60-64 years old
All Respondents



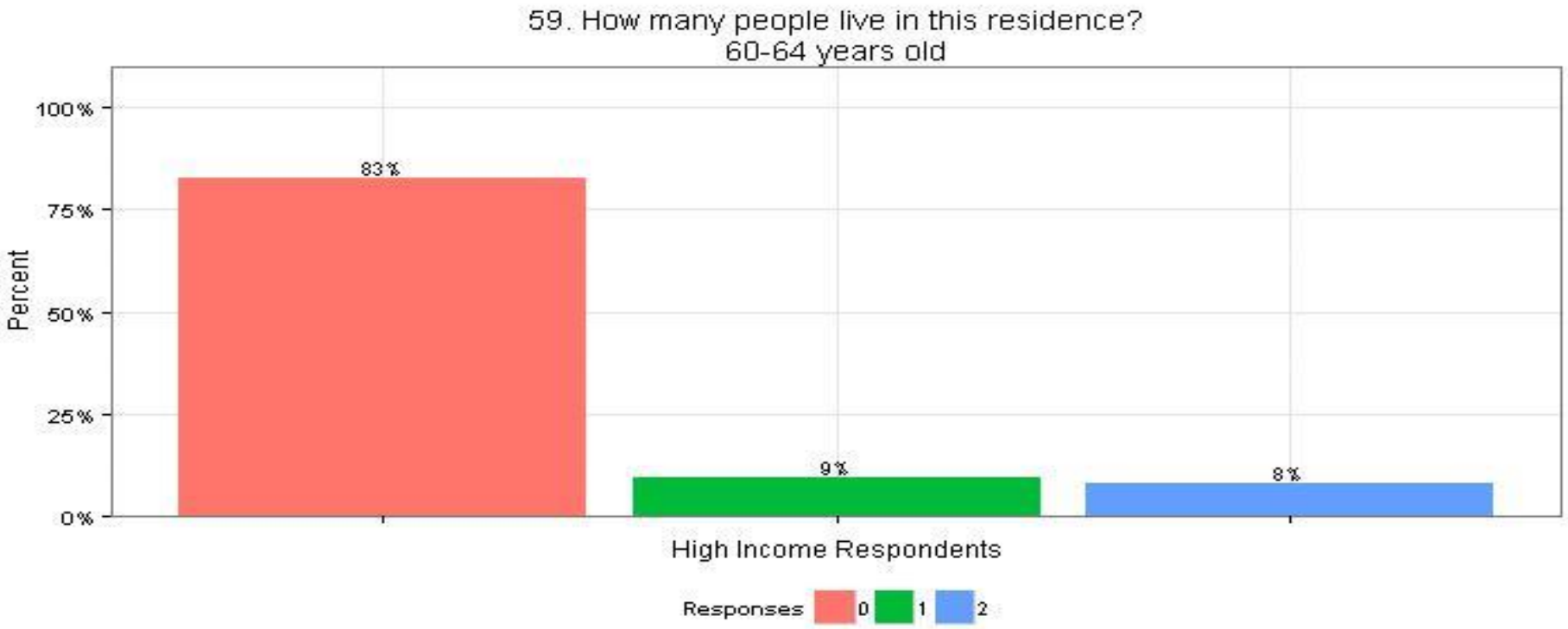
59. How many people live in this residence?
60-64 years old
Non-Low Income Respondents



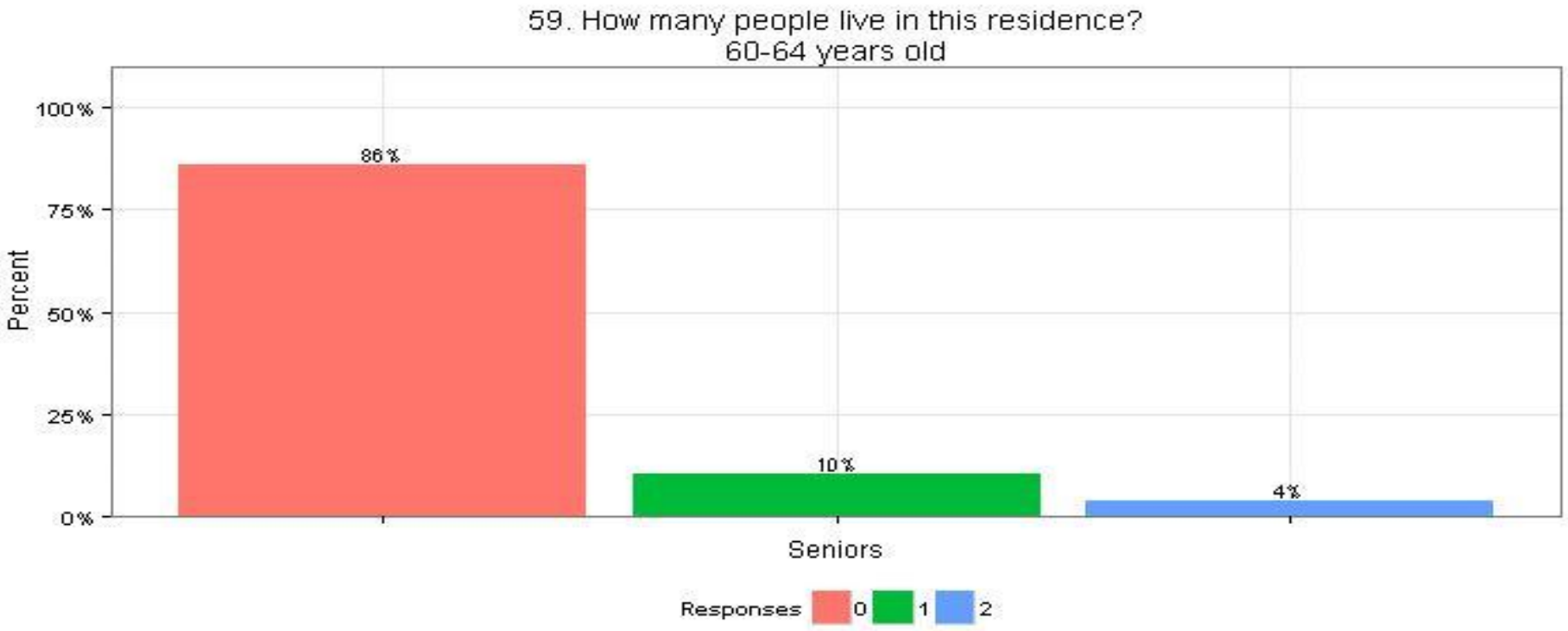
59. How many people live in this residence?
60-64 years old
Low Income Respondents



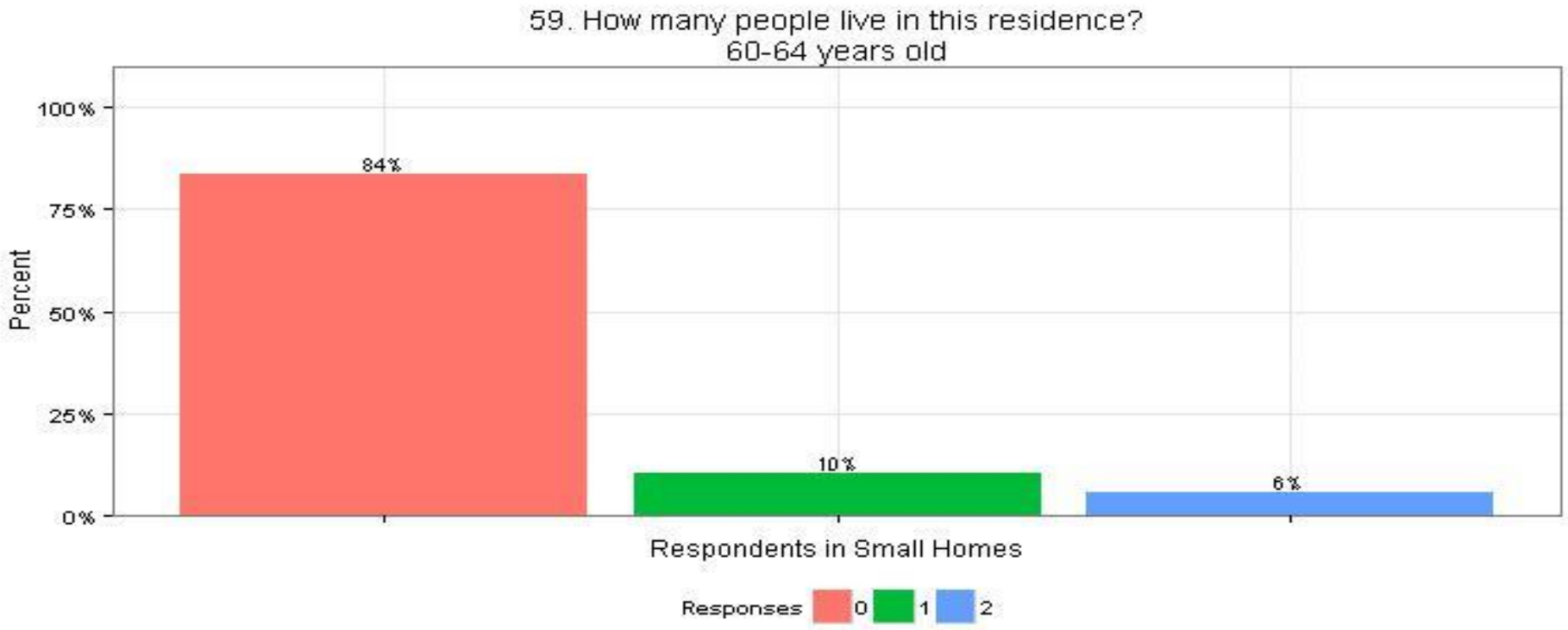
59. How many people live in this residence?
60-64 years old
High Income Respondents



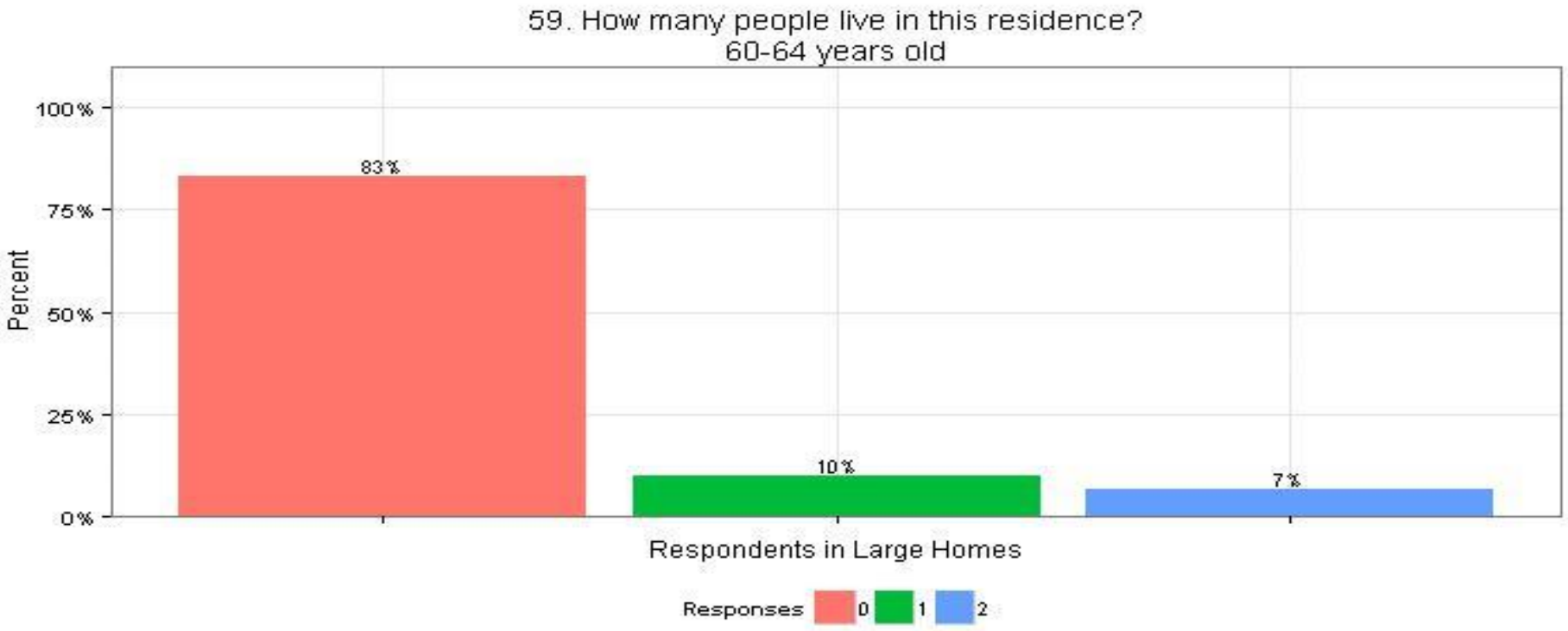
59. How many people live in this residence?
60-64 years old
Seniors



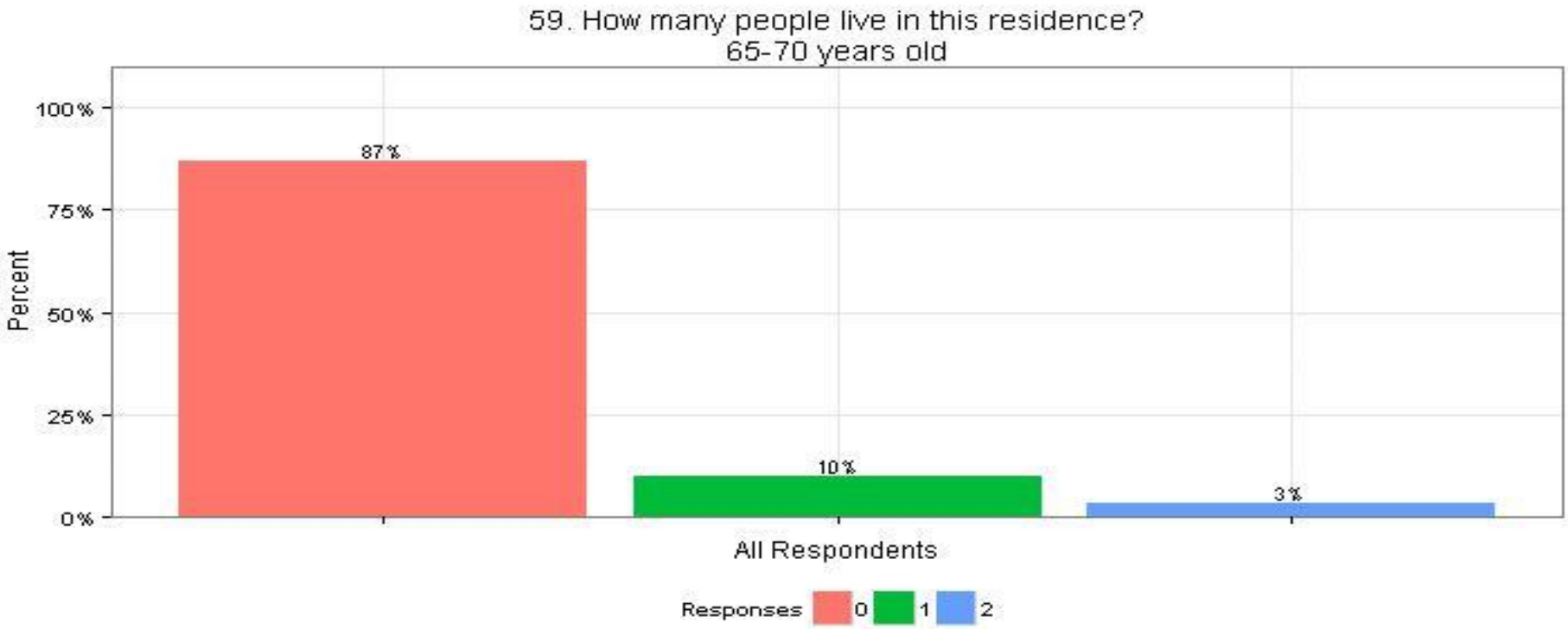
59. How many people live in this residence?
60-64 years old
Respondents in Small Homes



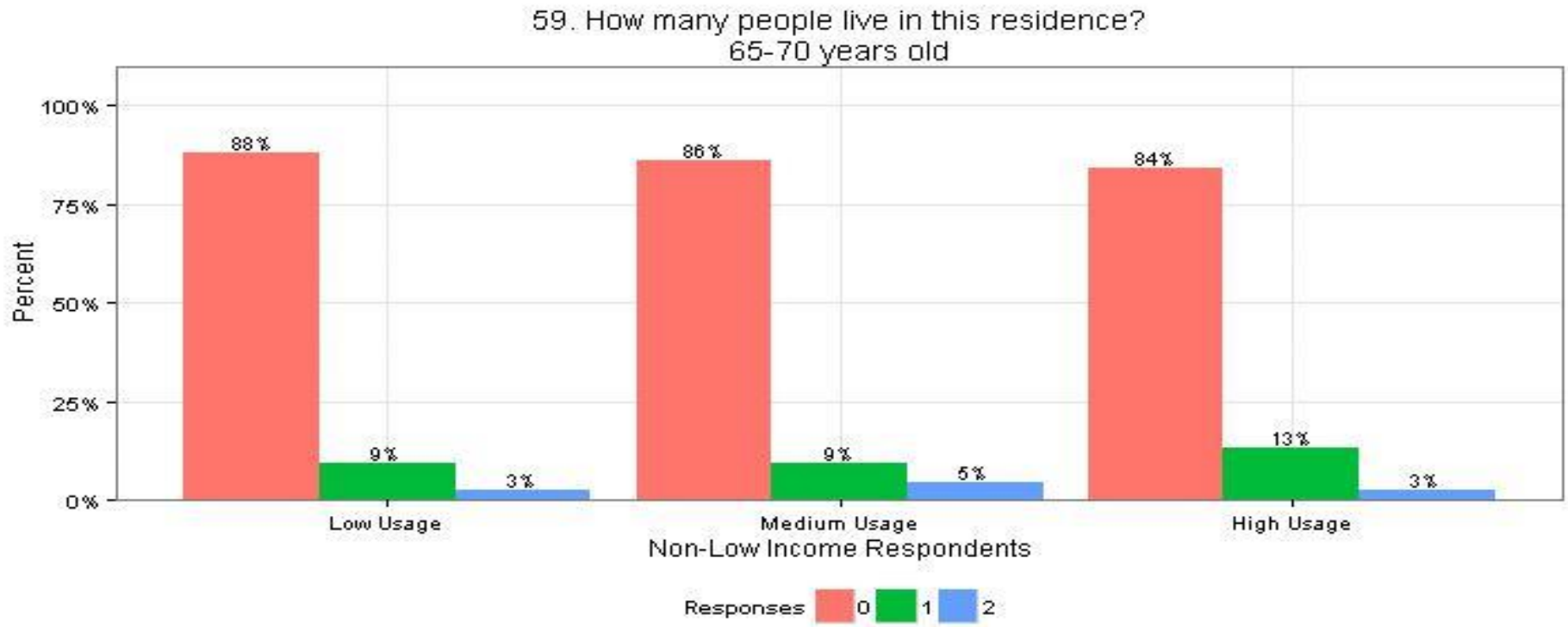
59. How many people live in this residence?
60-64 years old
Respondents in Large Homes



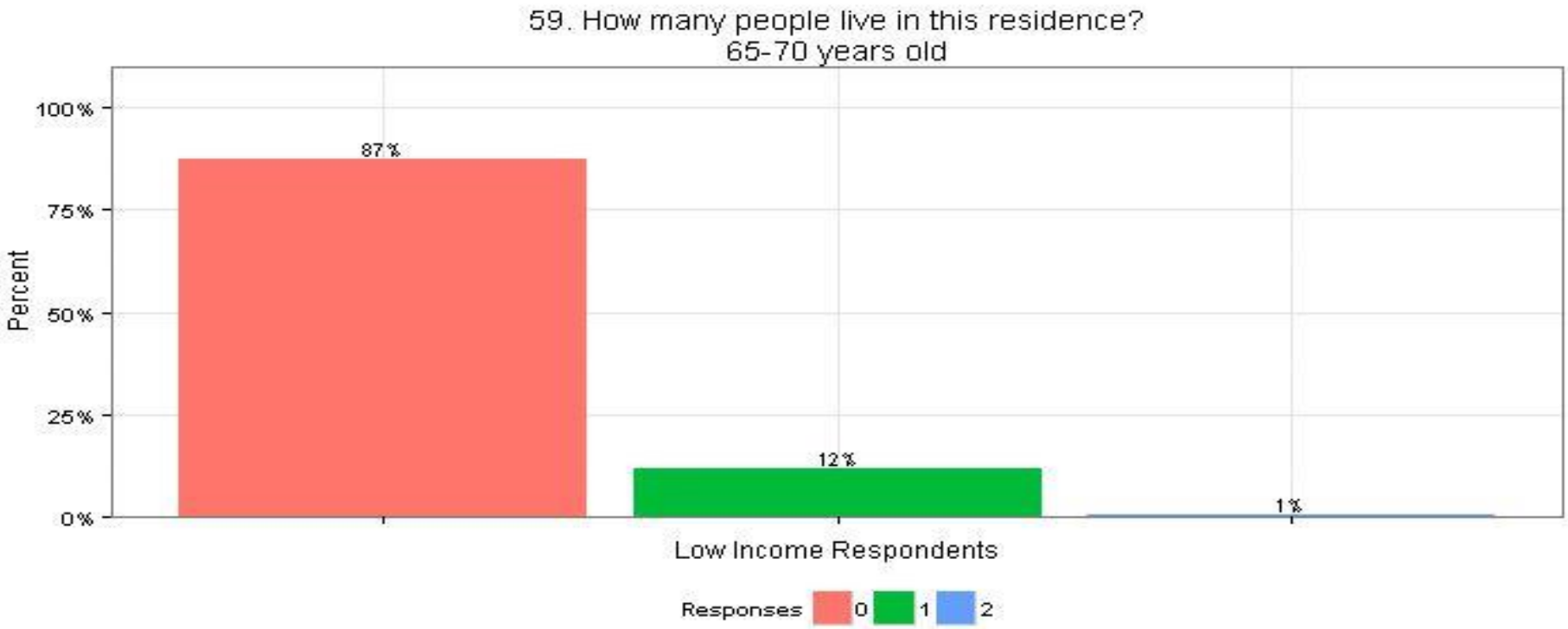
59. How many people live in this residence?
65-70 years old
All Respondents



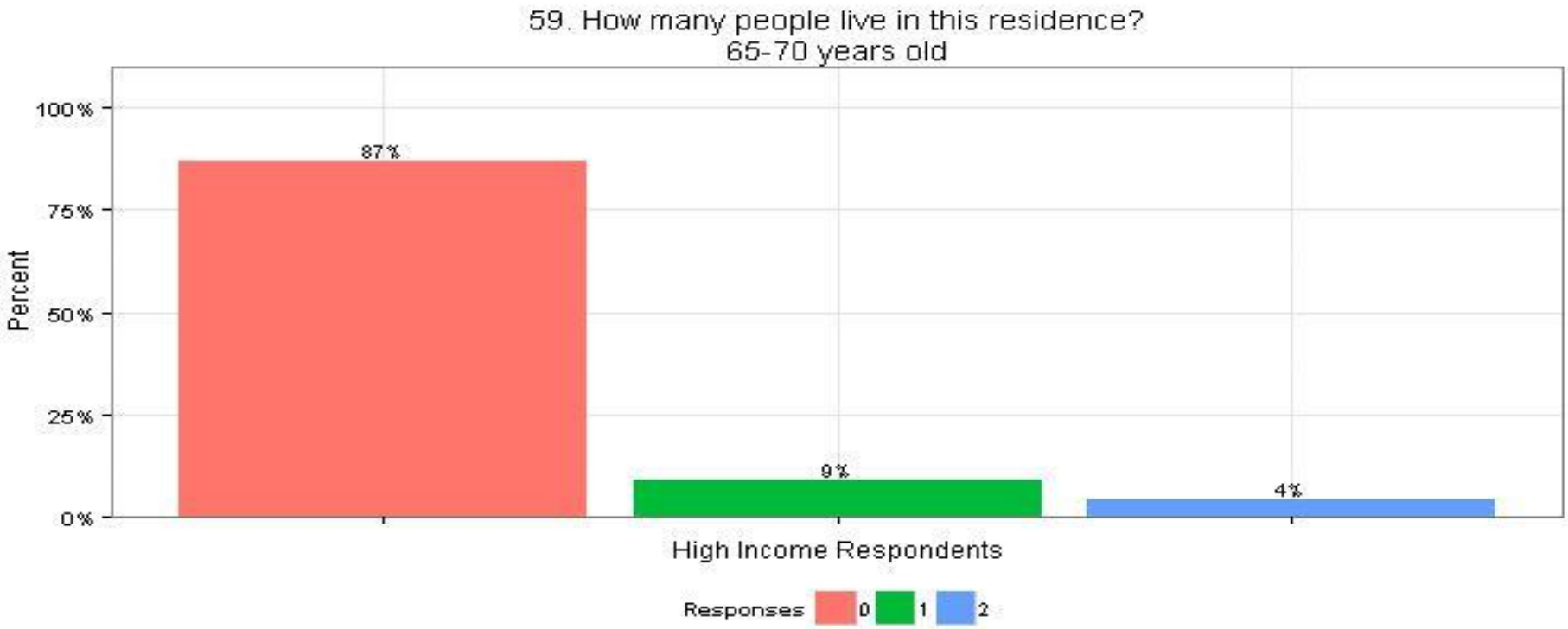
59. How many people live in this residence?
65-70 years old
Non-Low Income Respondents



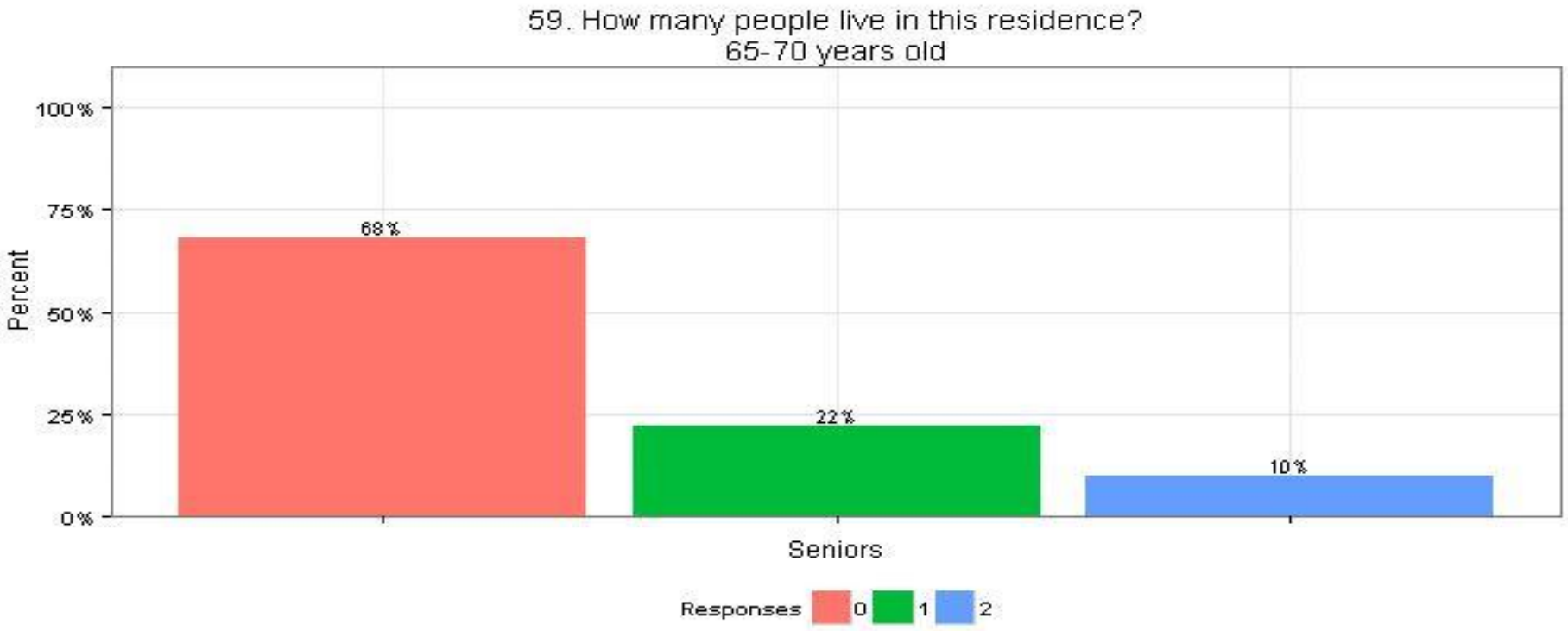
59. How many people live in this residence?
65-70 years old
Low Income Respondents



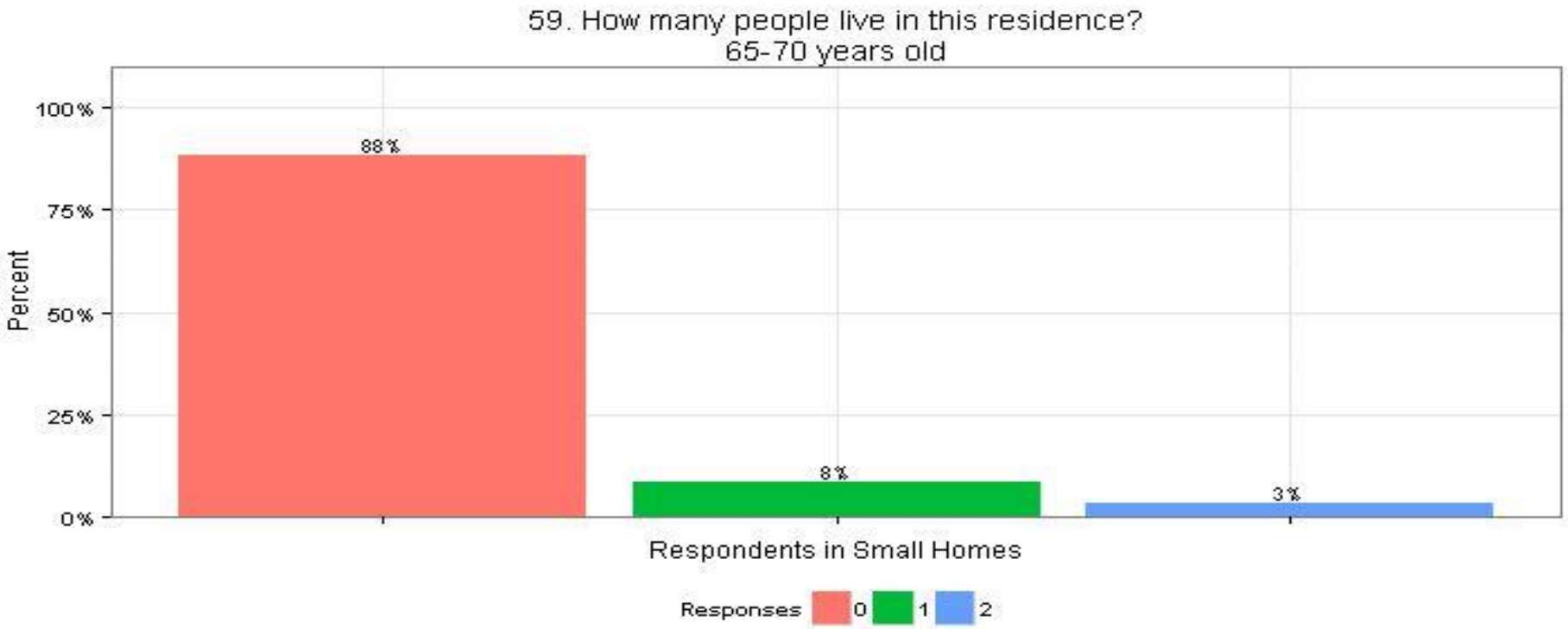
59. How many people live in this residence?
65-70 years old
High Income Respondents



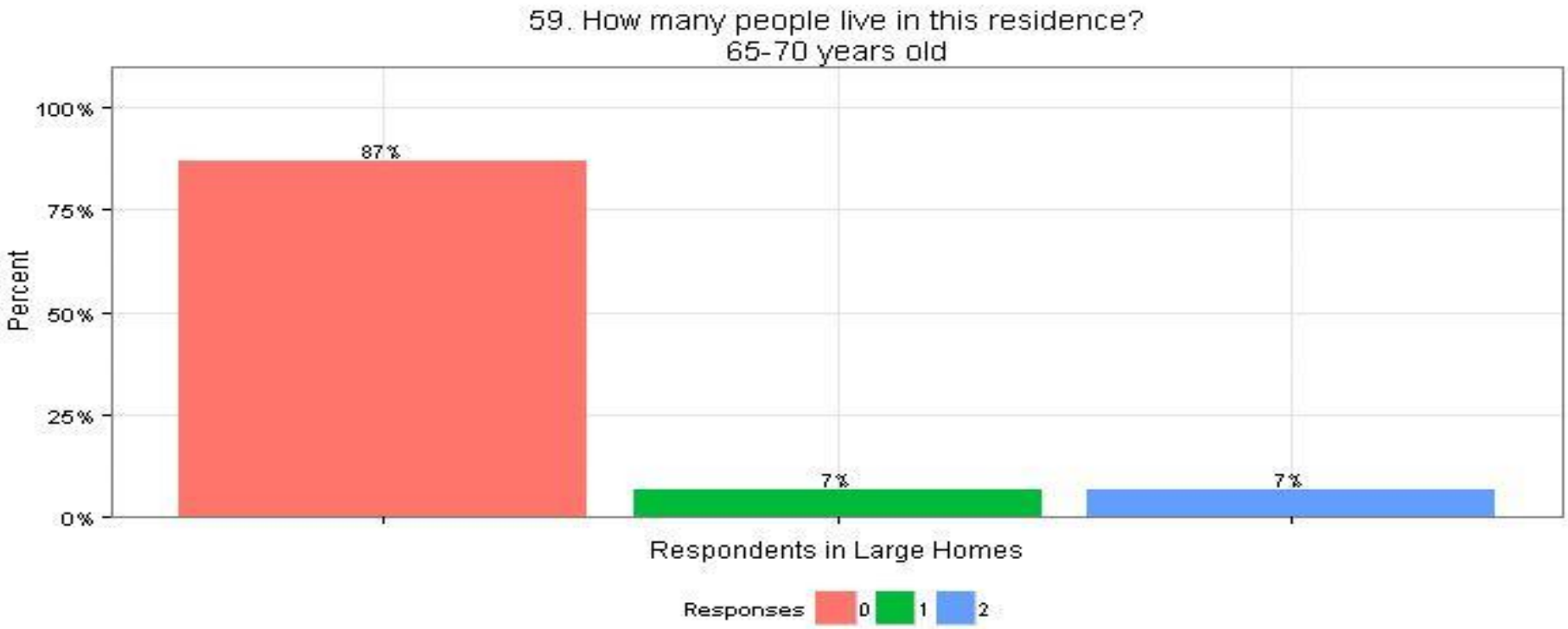
59. How many people live in this residence?
65-70 years old
Seniors



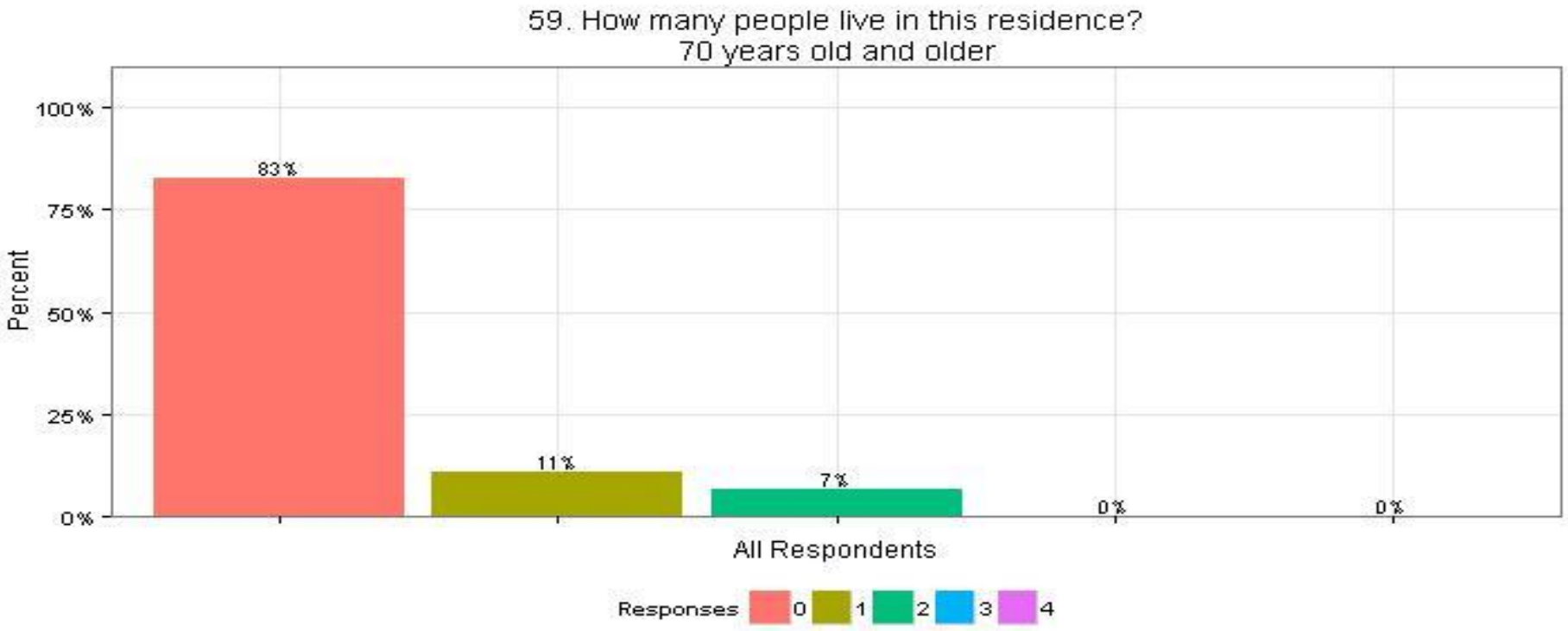
59. How many people live in this residence?
65-70 years old
Respondents in Small Homes



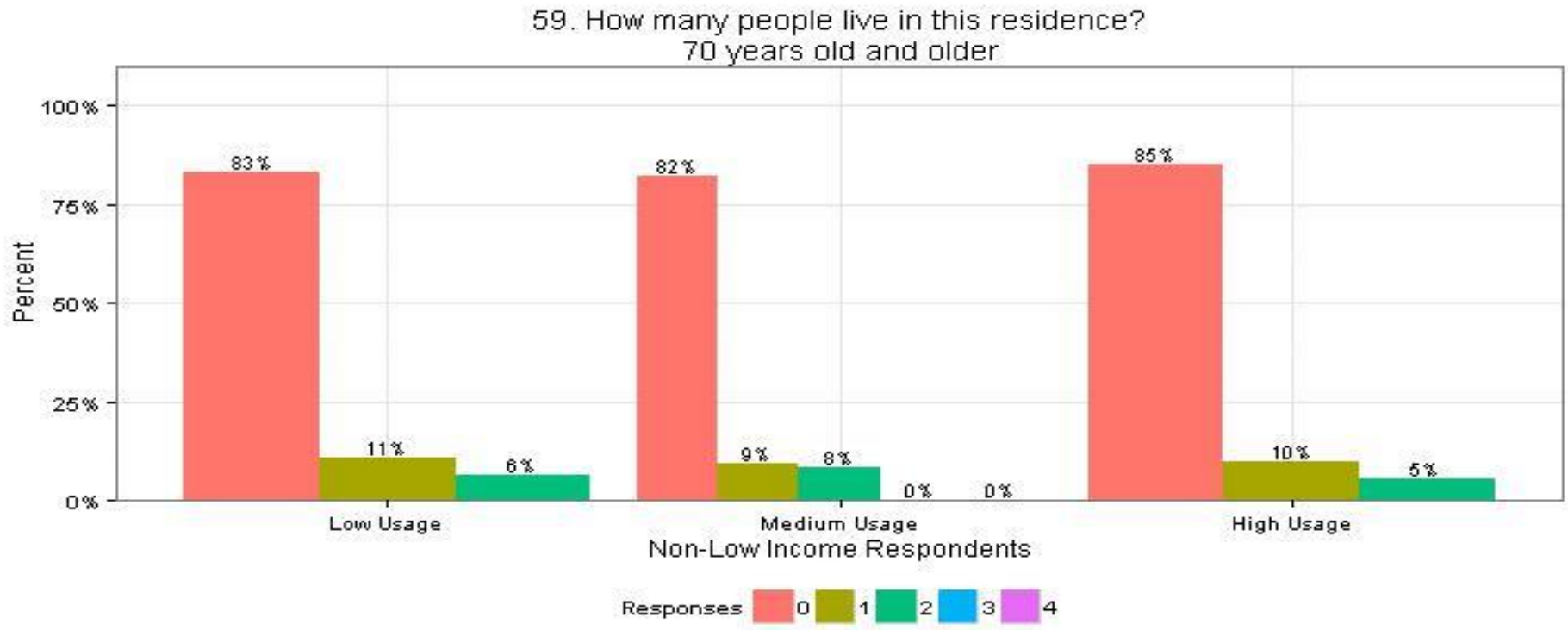
59. How many people live in this residence? 65-70 years old Respondents in Large Homes



59. How many people live in this residence?
70 years old and older
All Respondents



59. How many people live in this residence?
70 years old and older
Non-Low Income Respondents



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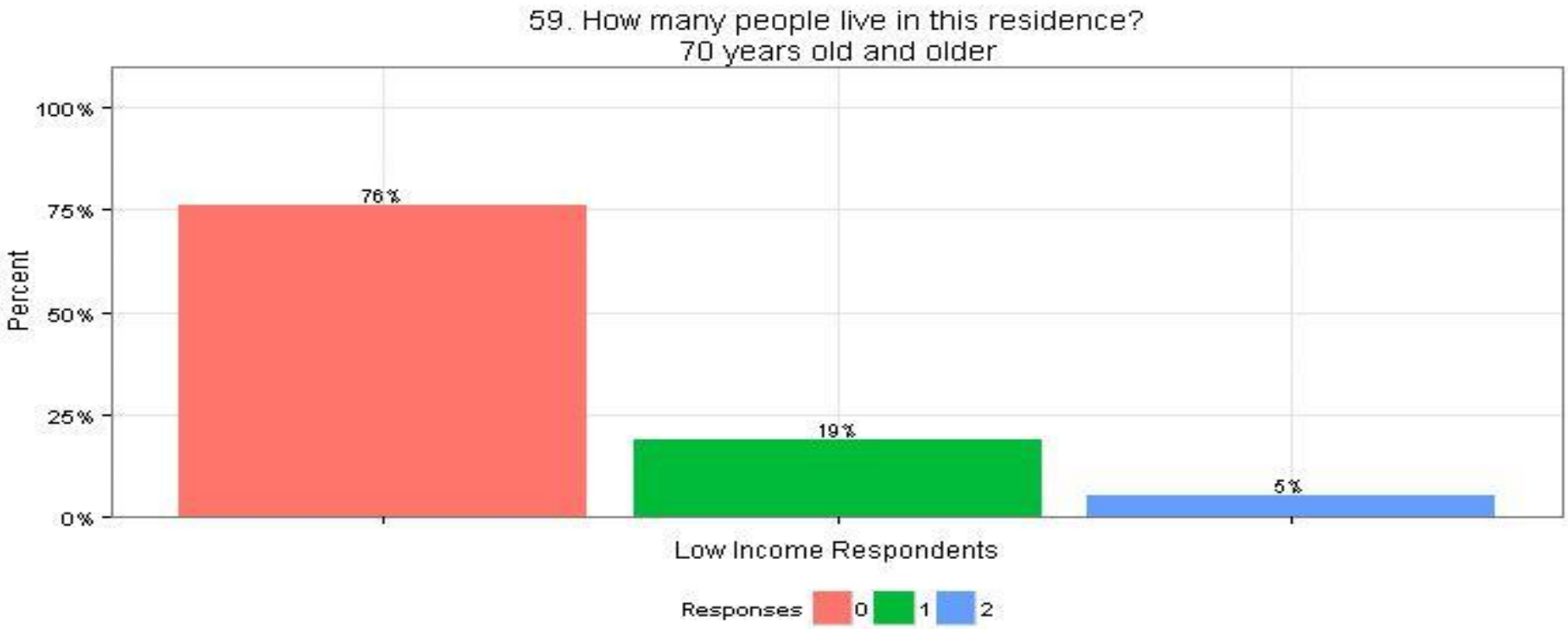
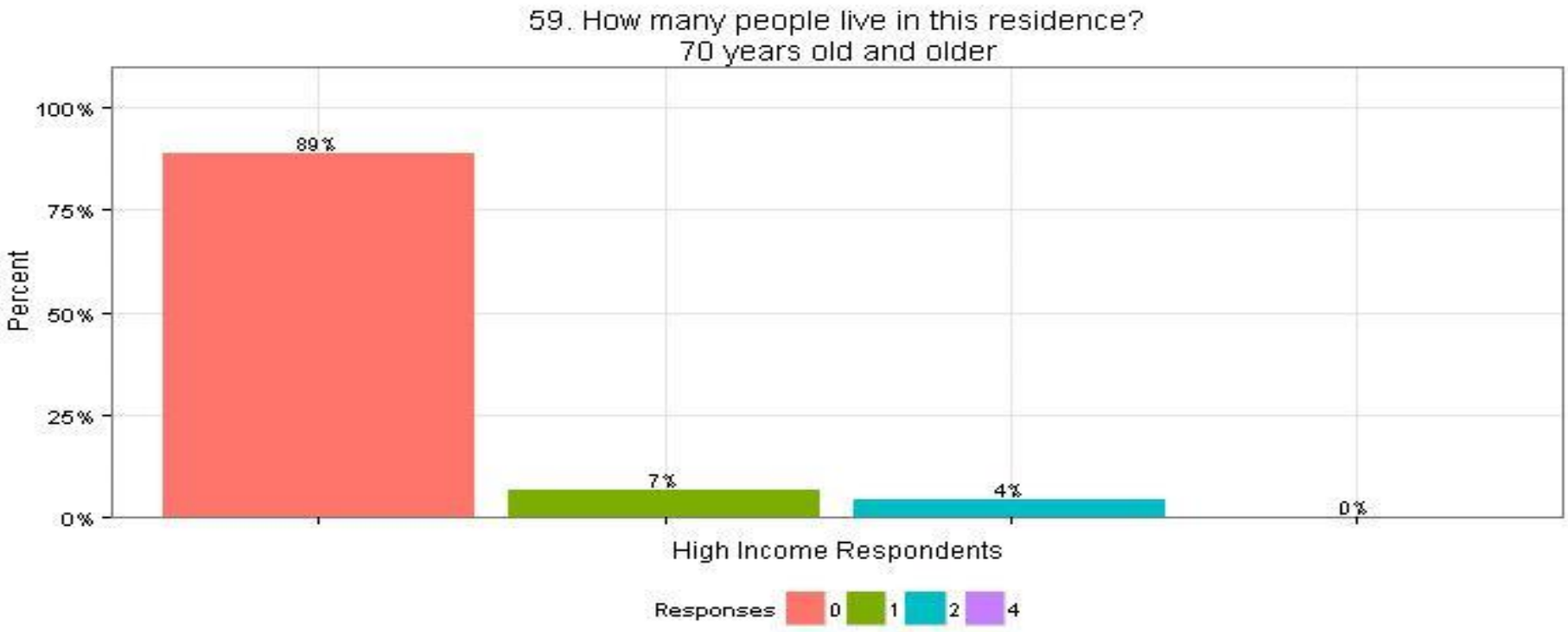
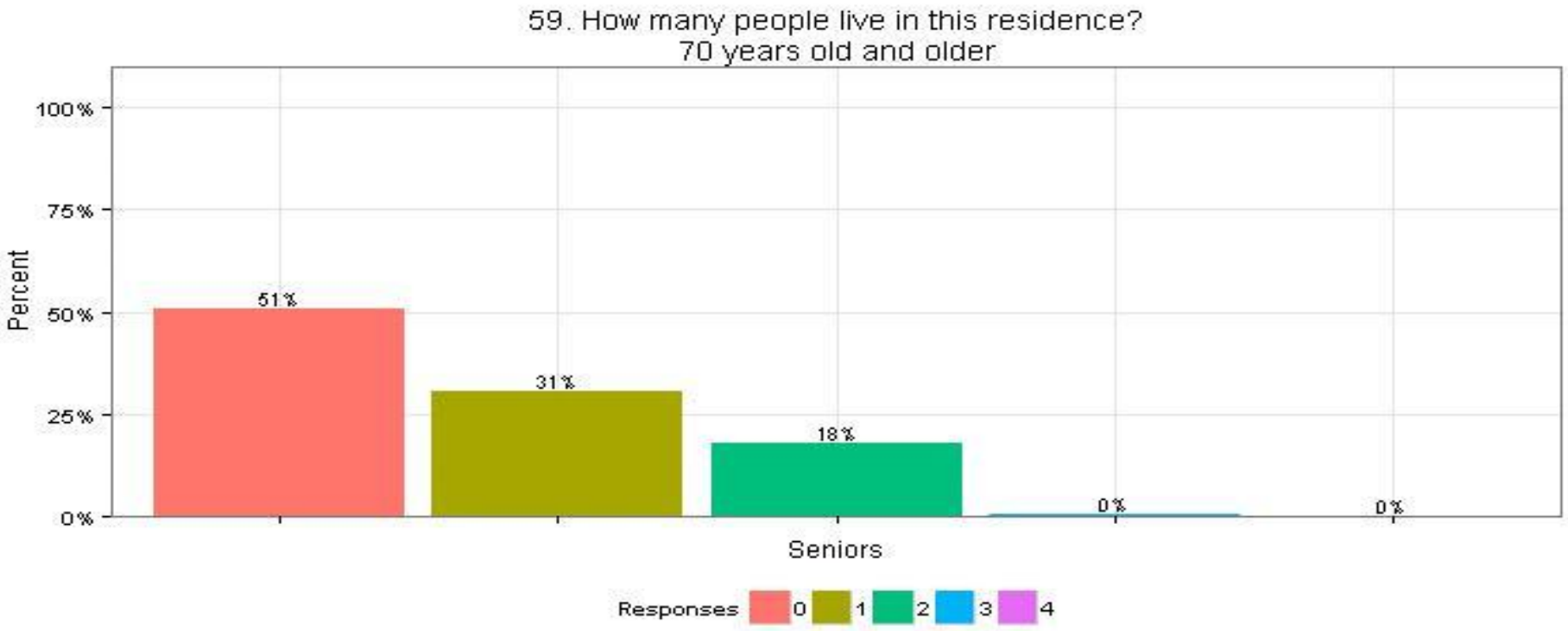
59. How many people live in this residence?
70 years old and older
Low Income Respondents



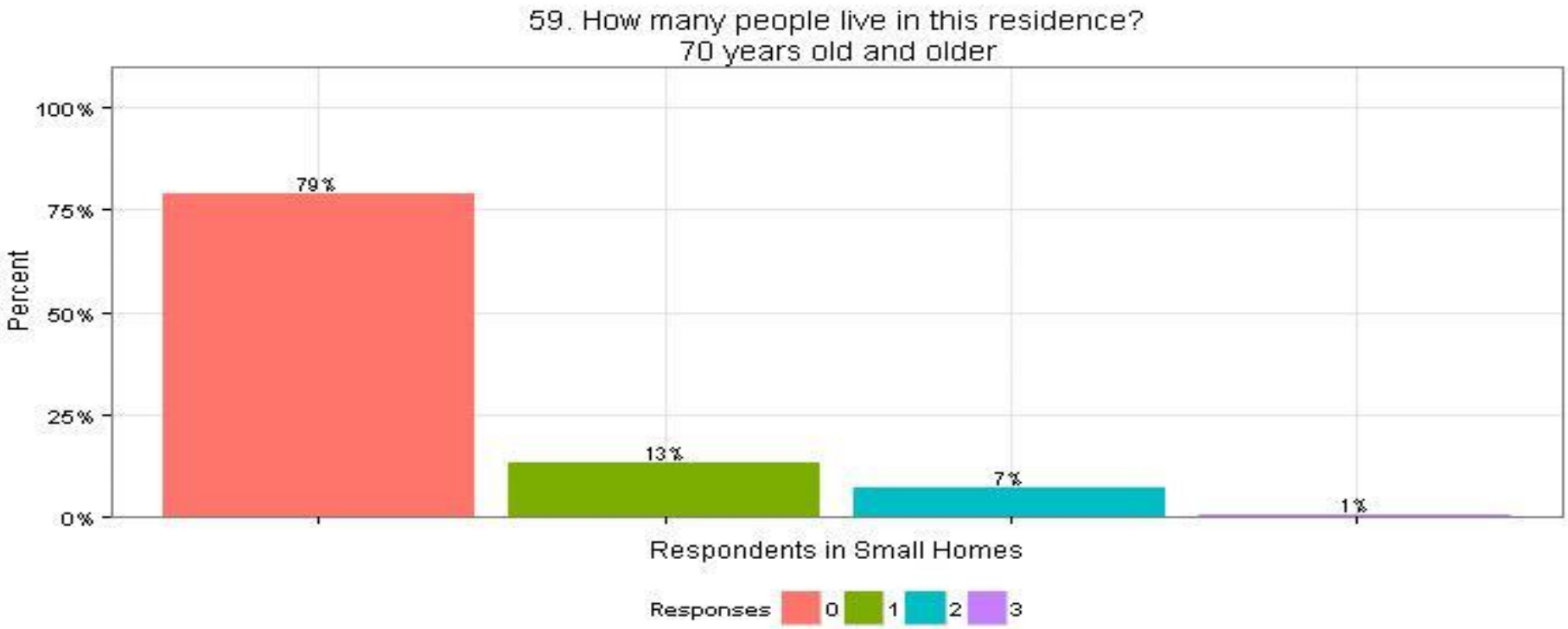
59. How many people live in this residence?
70 years old and older
High Income Respondents



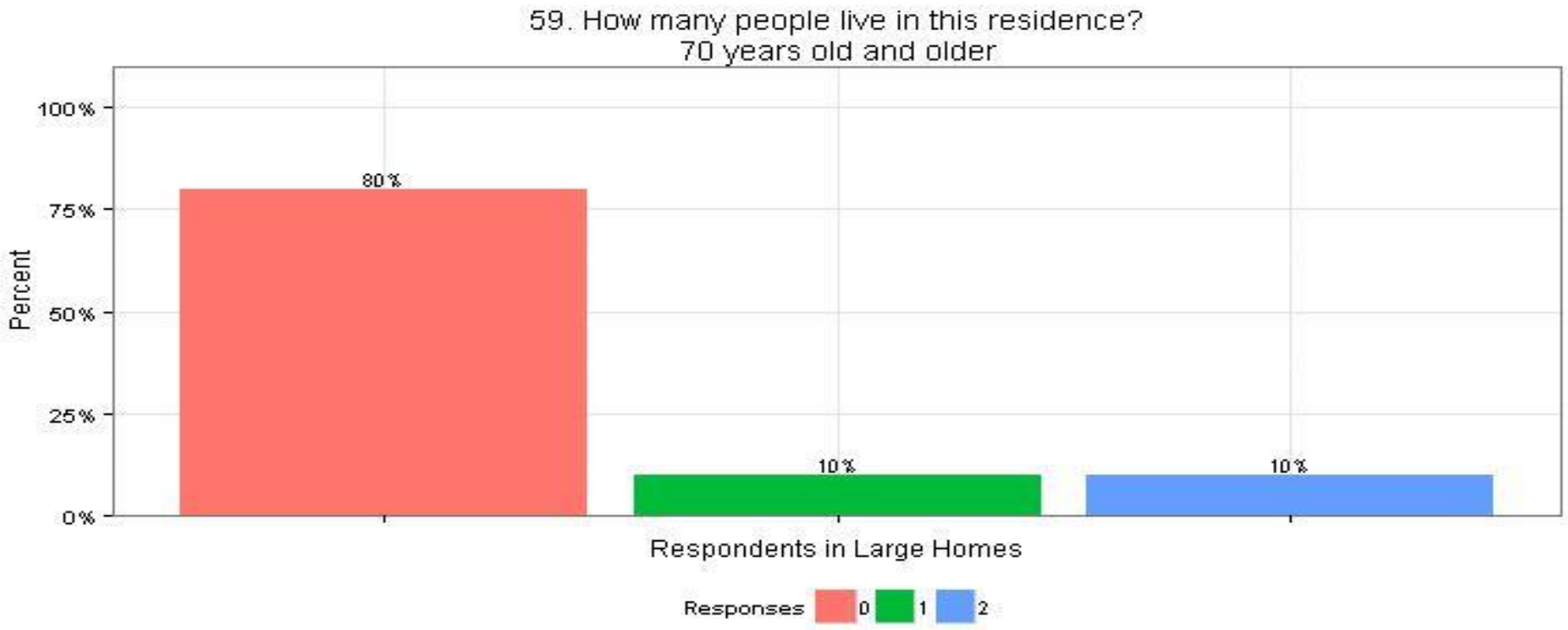
59. How many people live in this residence?
70 years old and older
Seniors



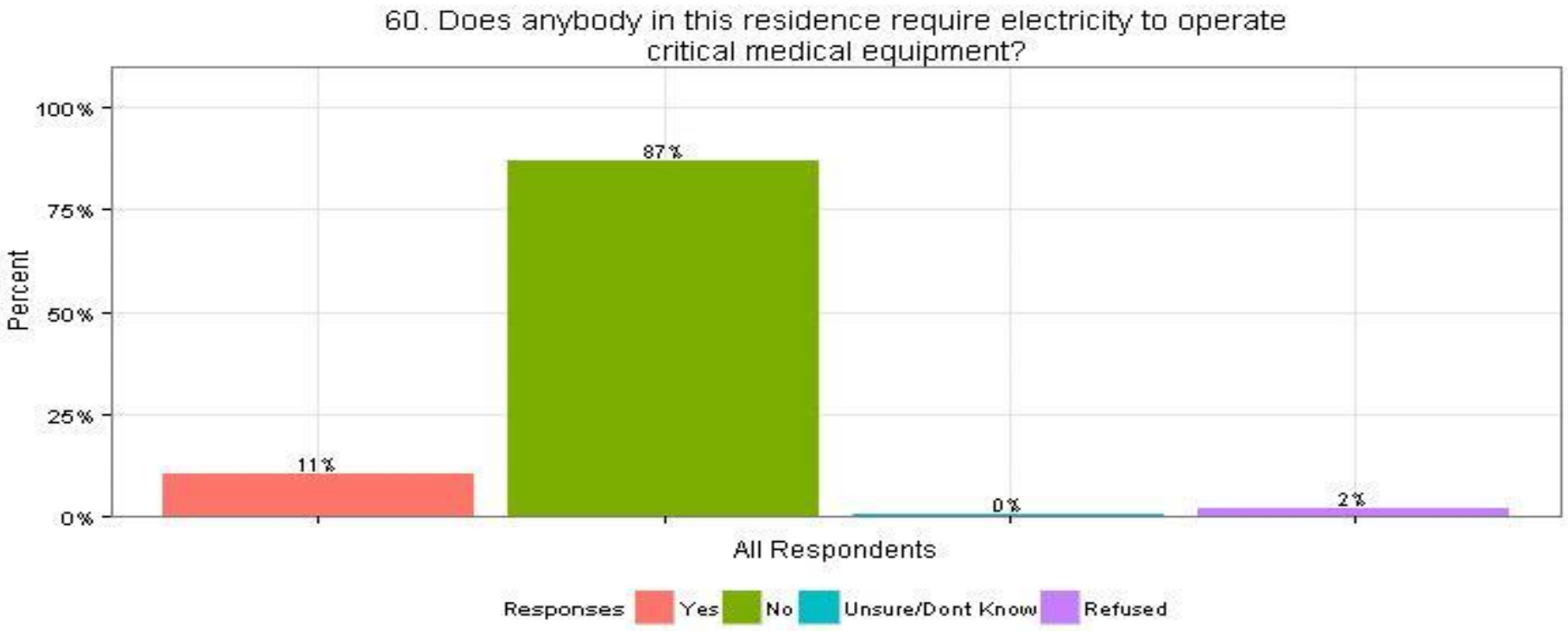
59. How many people live in this residence? 70 years old and older Respondents in Small Homes



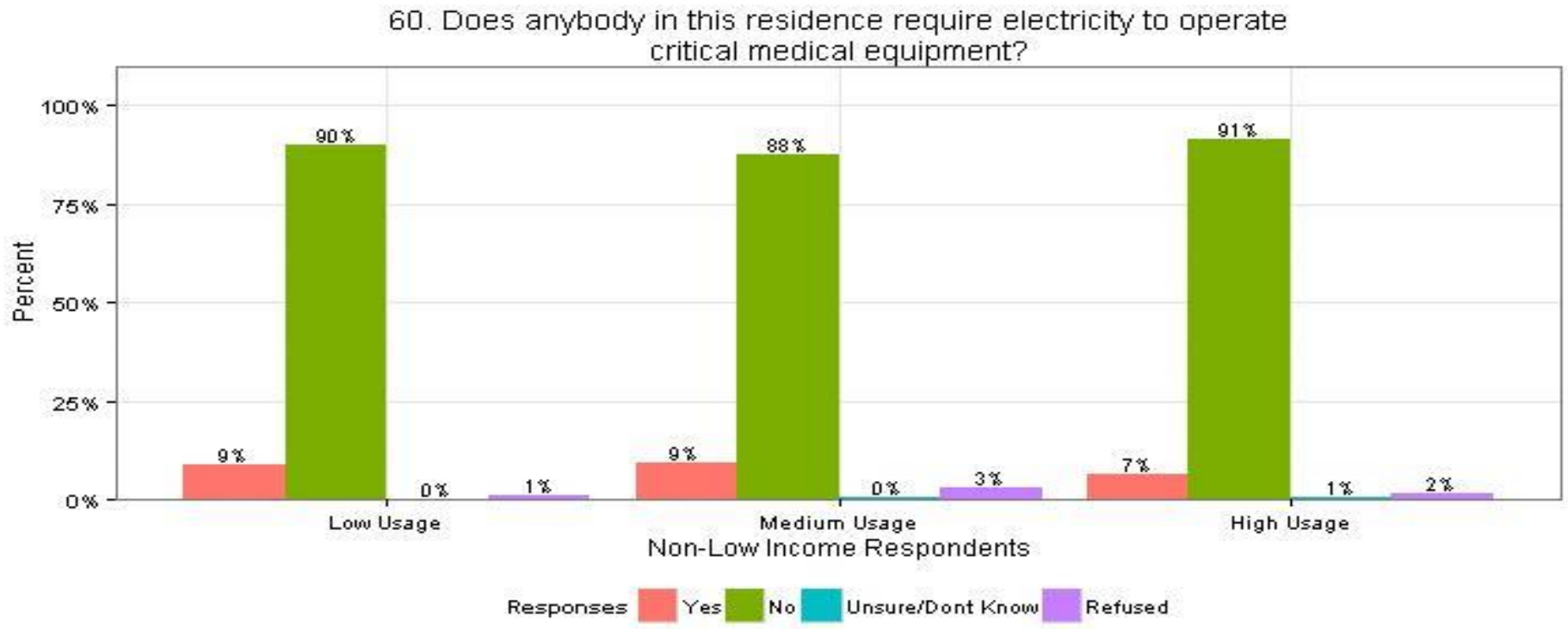
59. How many people live in this residence? 70 years old and older Respondents in Large Homes



60. Does anybody in this residence require electricity to operate critical medical equipment?
All Respondents



60. Does anybody in this residence require electricity to operate critical medical equipment?
Non-Low Income Respondents



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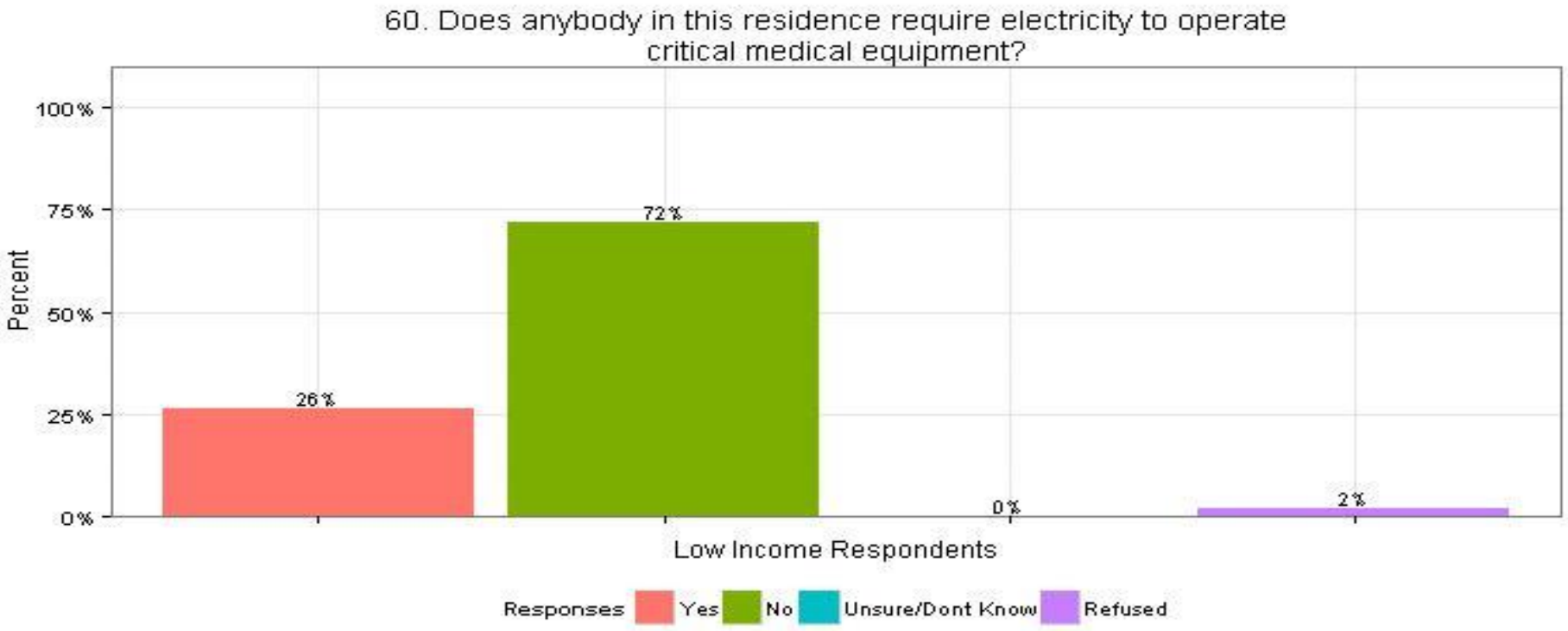
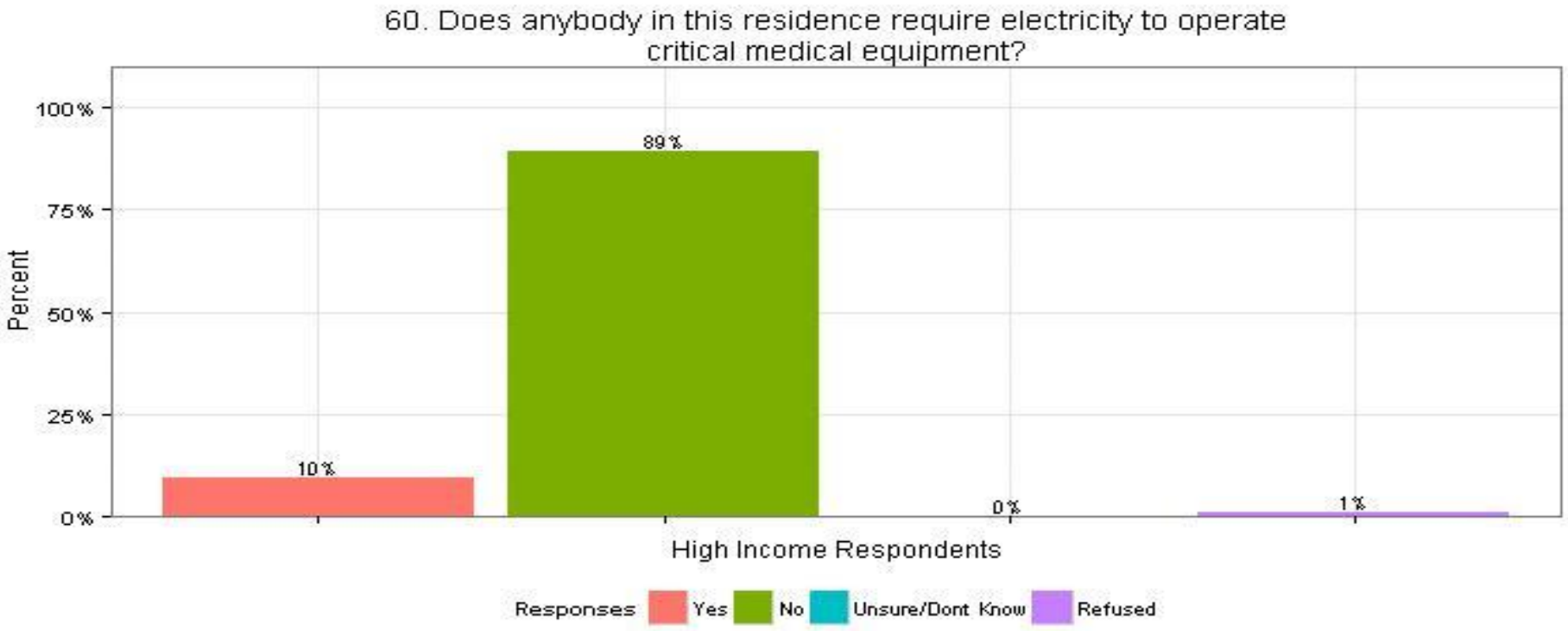
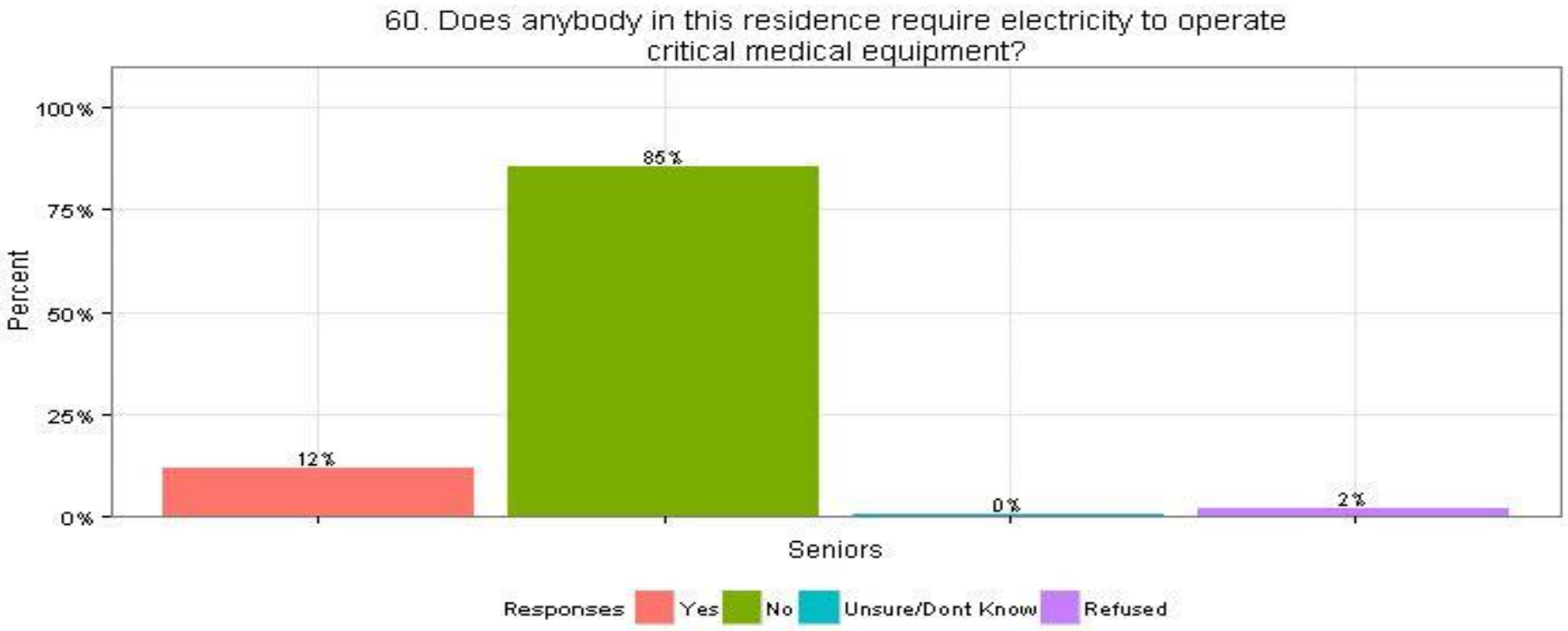
60. Does anybody in this residence require electricity to operate critical medical equipment?
Low Income Respondents



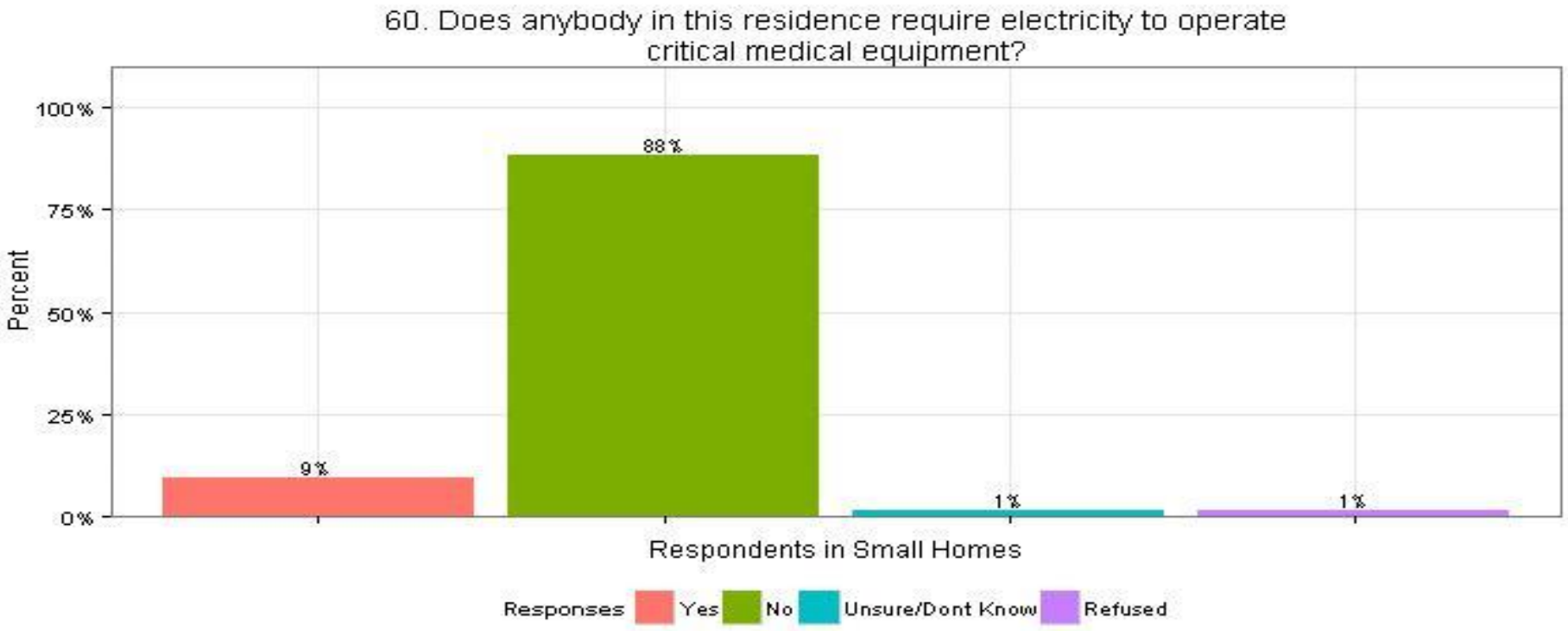
60. Does anybody in this residence require electricity to operate critical medical equipment?
High Income Respondents



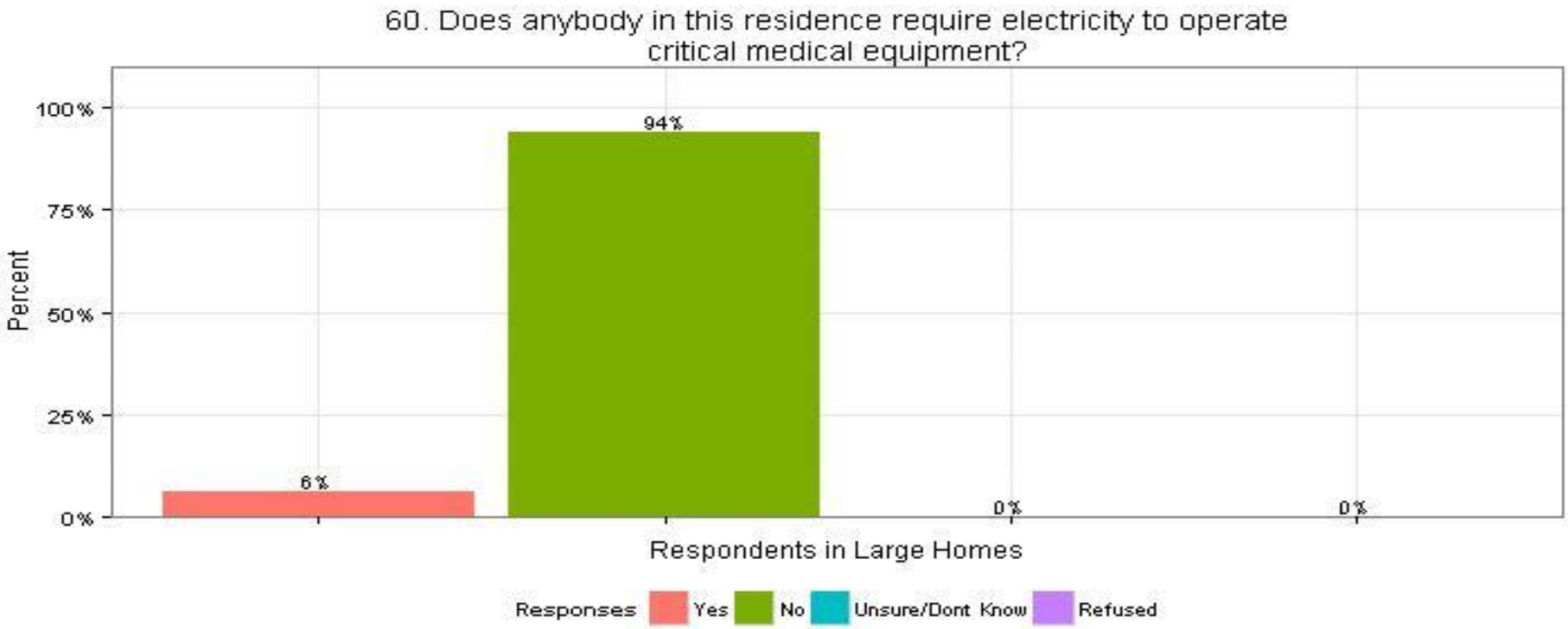
60. Does anybody in this residence require electricity to operate critical medical equipment?
Seniors



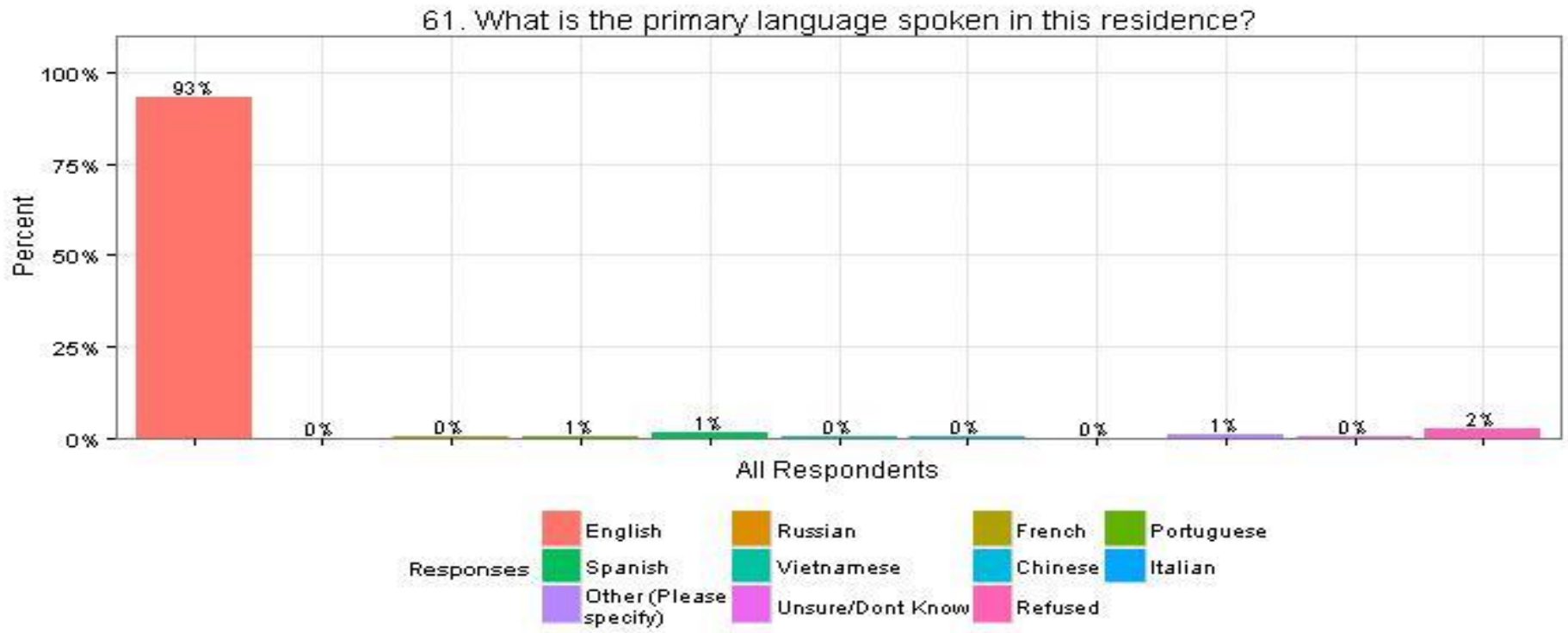
60. Does anybody in this residence require electricity to operate critical medical equipment?
Respondents in Small Homes



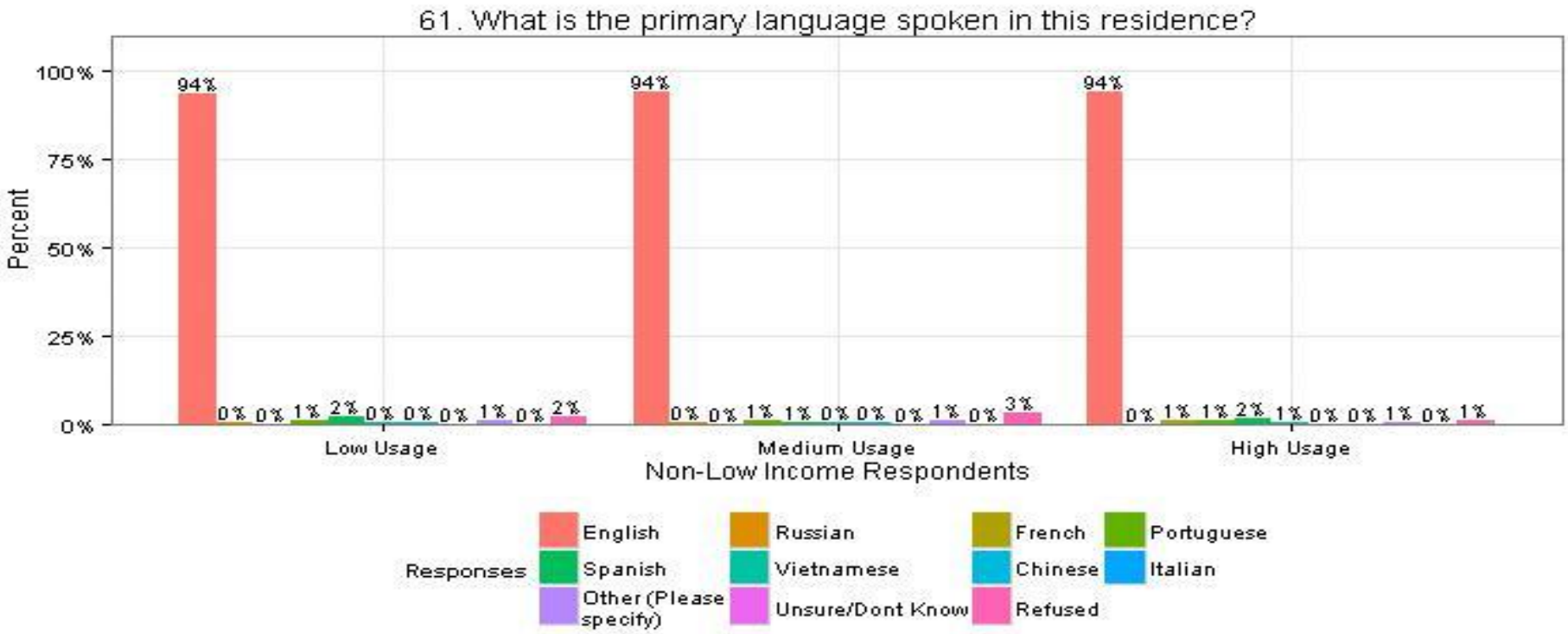
60. Does anybody in this residence require electricity to operate critical medical equipment?
Respondents in Large Homes



61. What is the primary language spoken in this residence? All Respondents



61. What is the primary language spoken in this residence? Non-Low Income Respondents



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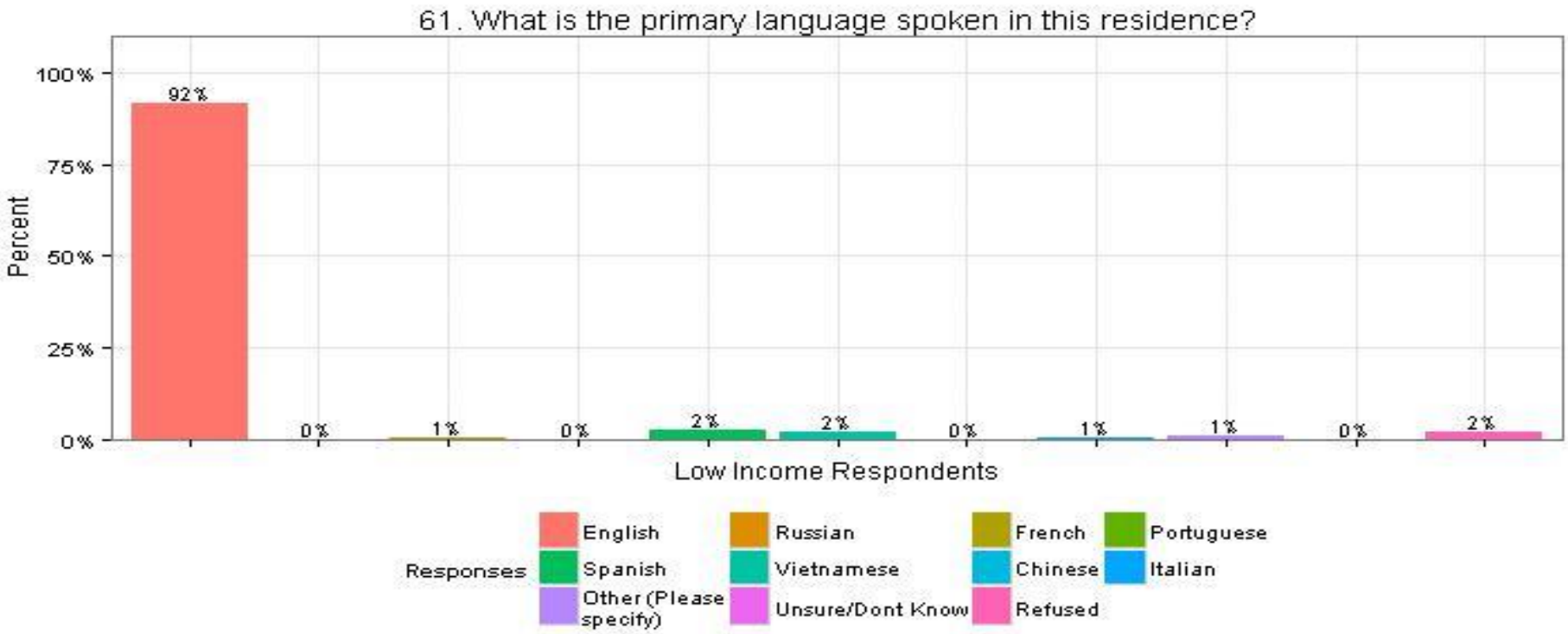
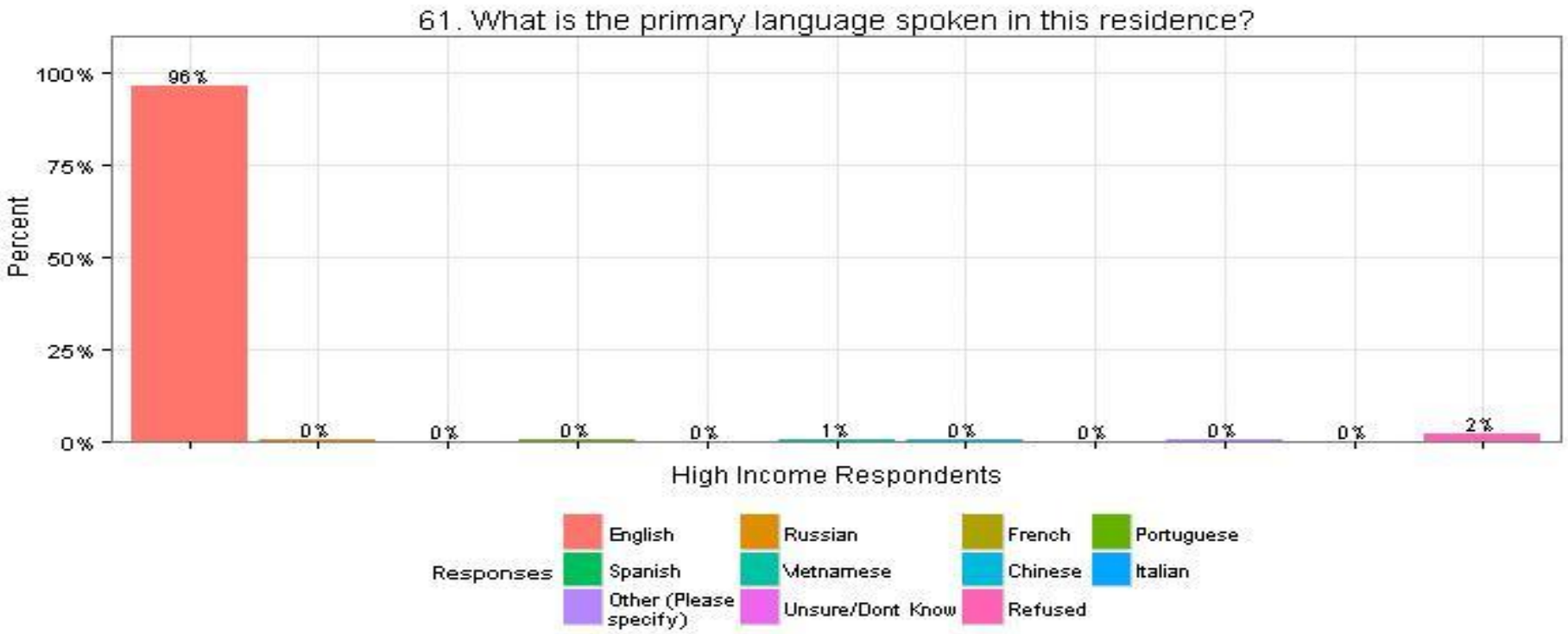
61. What is the primary language spoken in this residence? Low Income Respondents

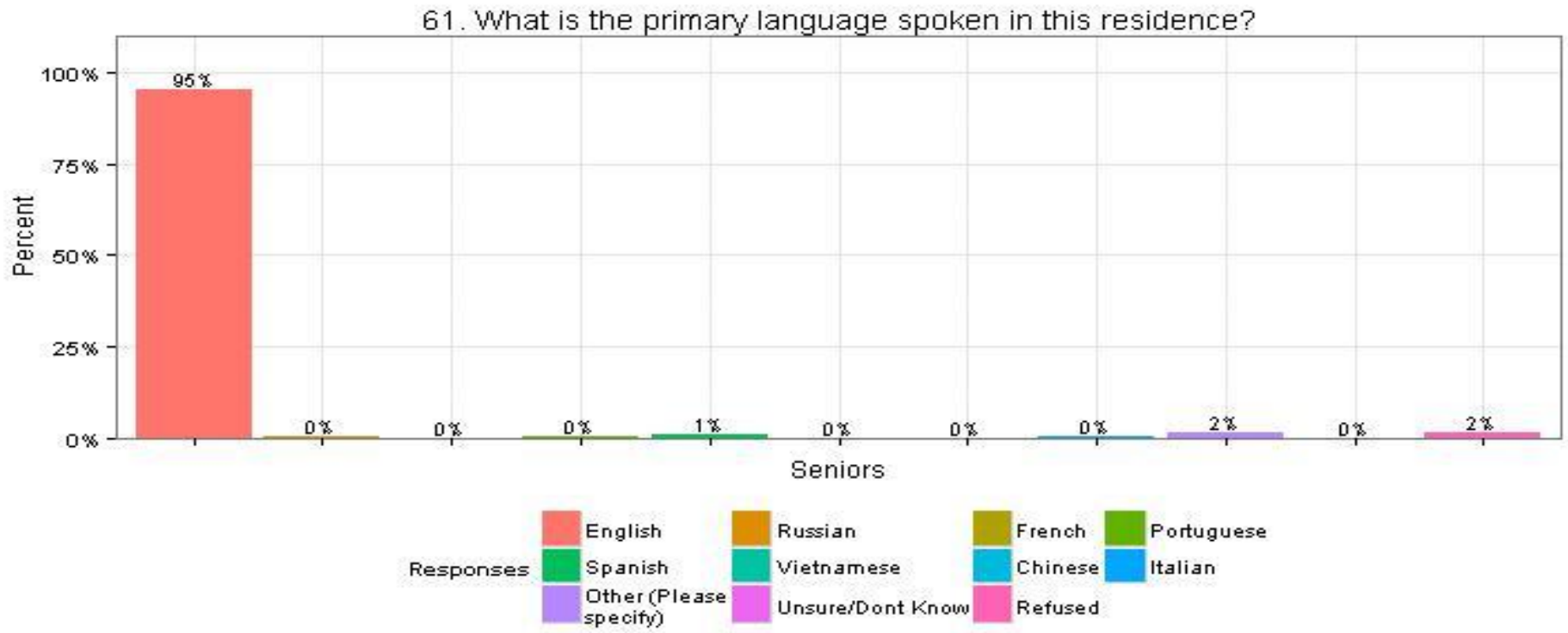


61. What is the primary language spoken in this residence? High Income Respondents

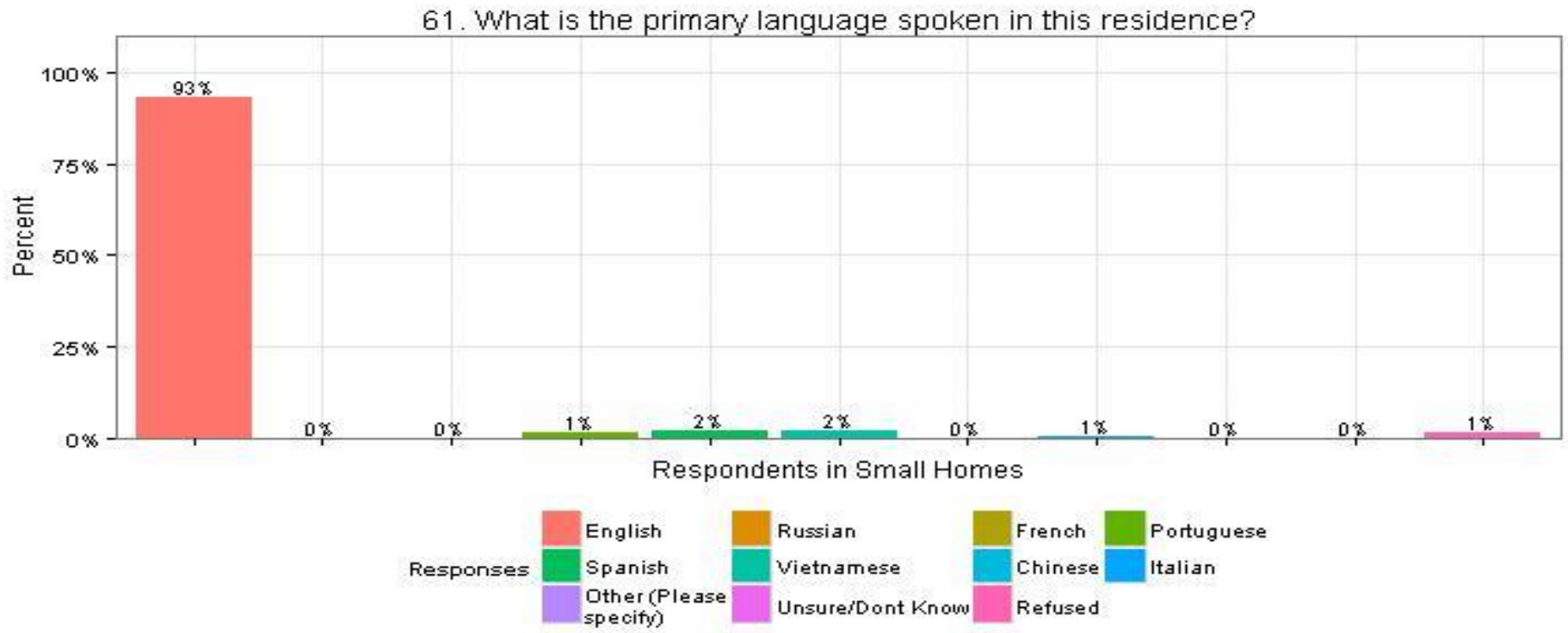


NAVIGANT

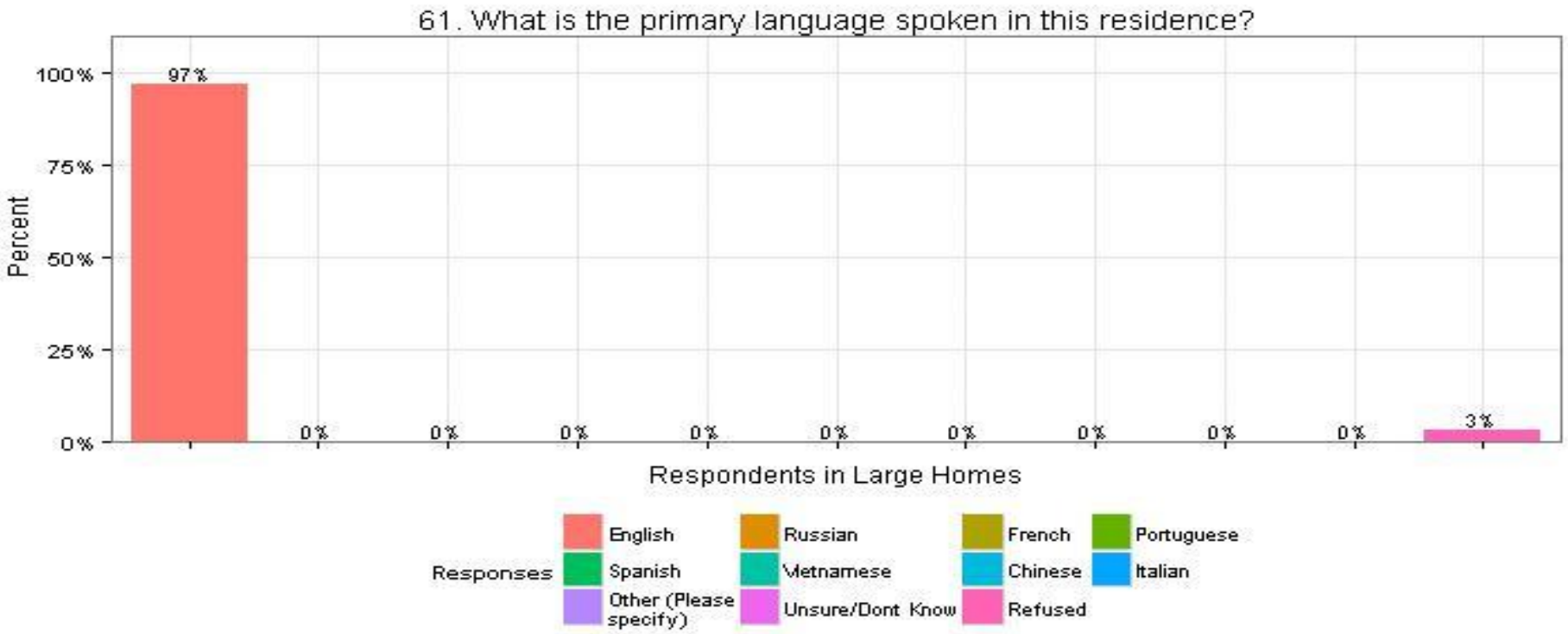
61. What is the primary language spoken in this residence? Seniors



61. What is the primary language spoken in this residence? Respondents in Small Homes



61. What is the primary language spoken in this residence? Respondents in Large Homes



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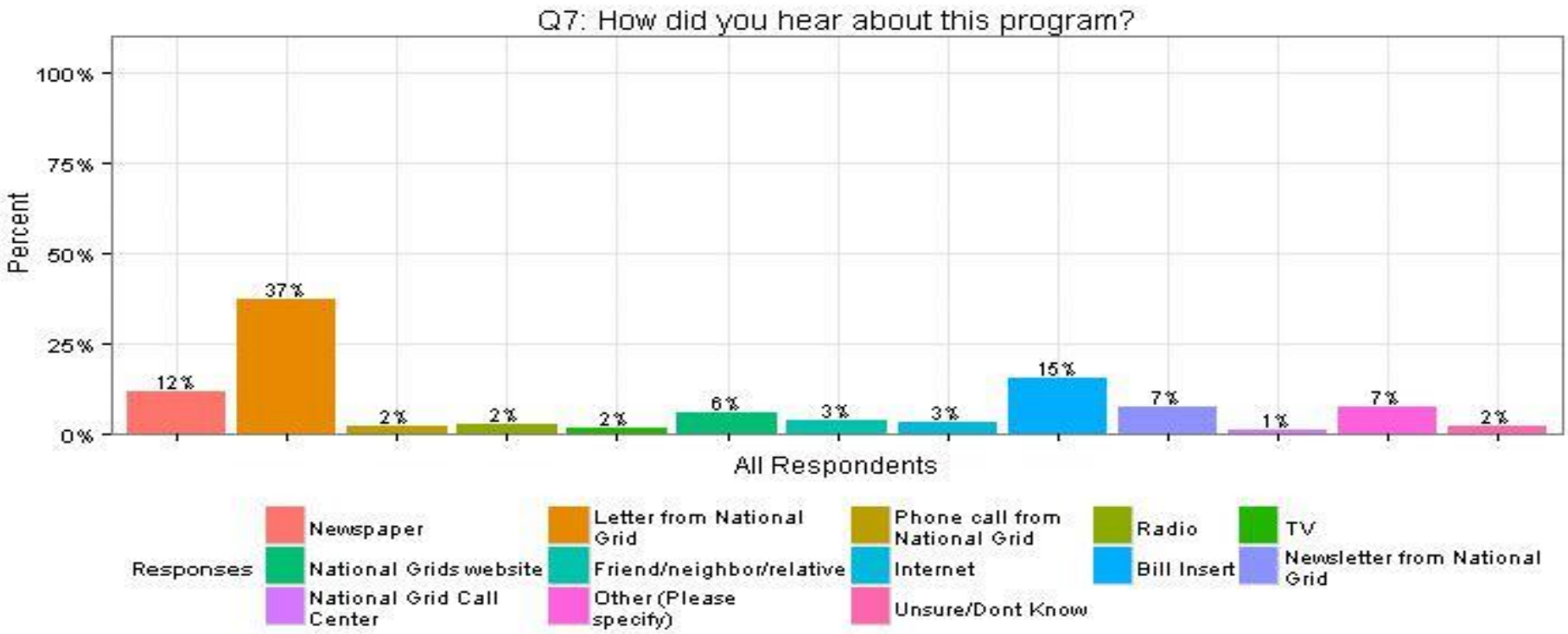
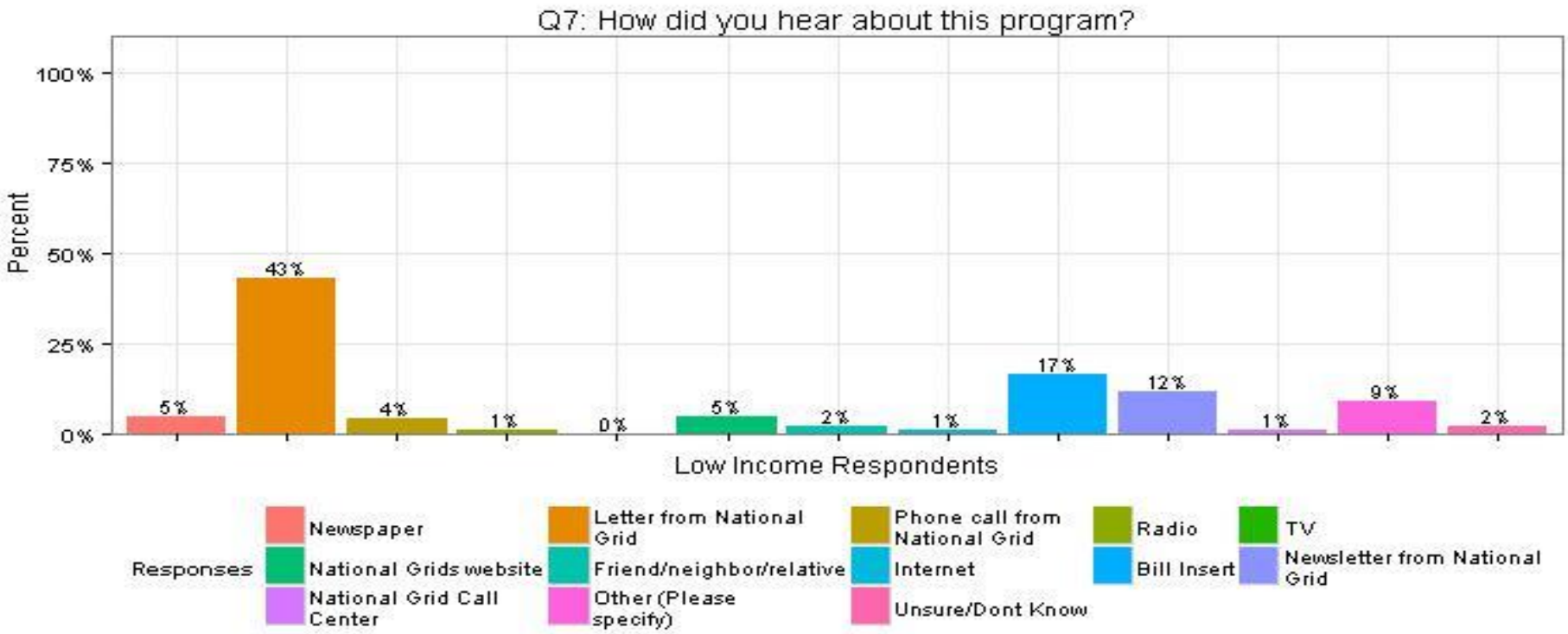
» Mark All That Apply Variables by Demographics

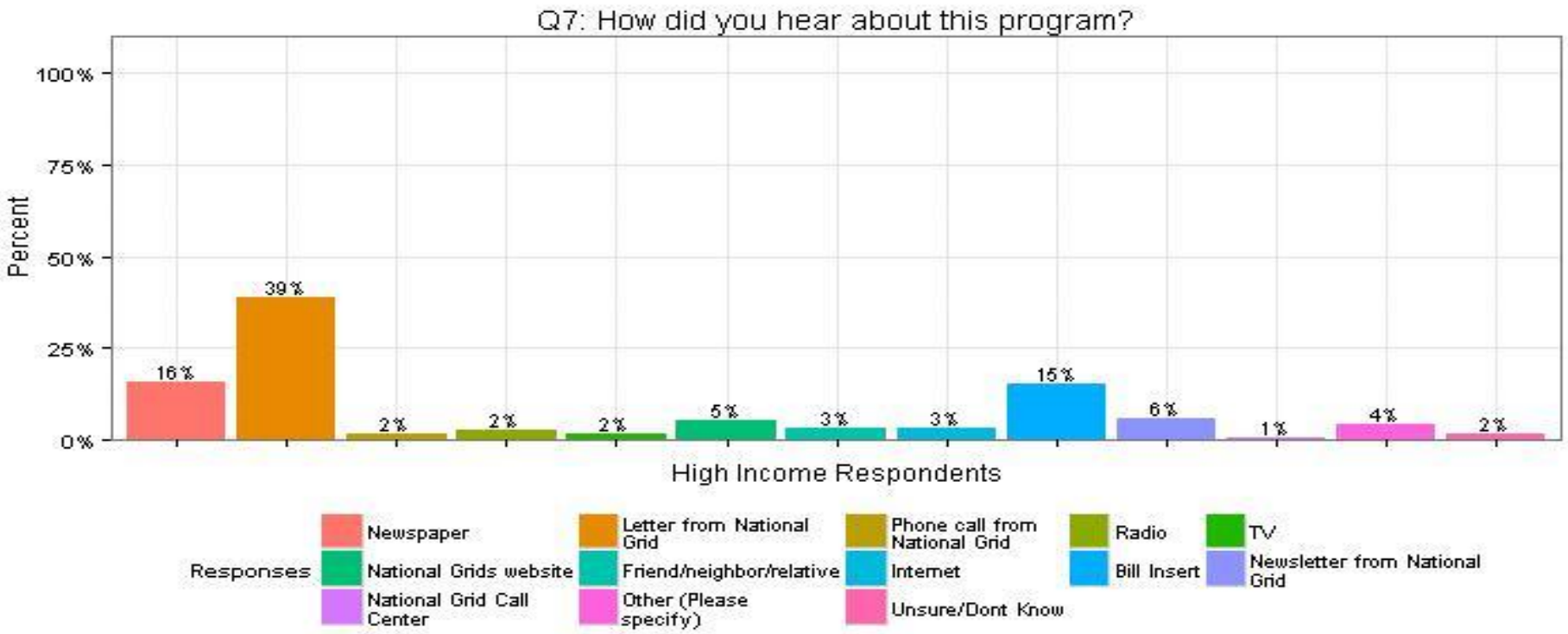
Q7: How did you hear about this program? All Respondents



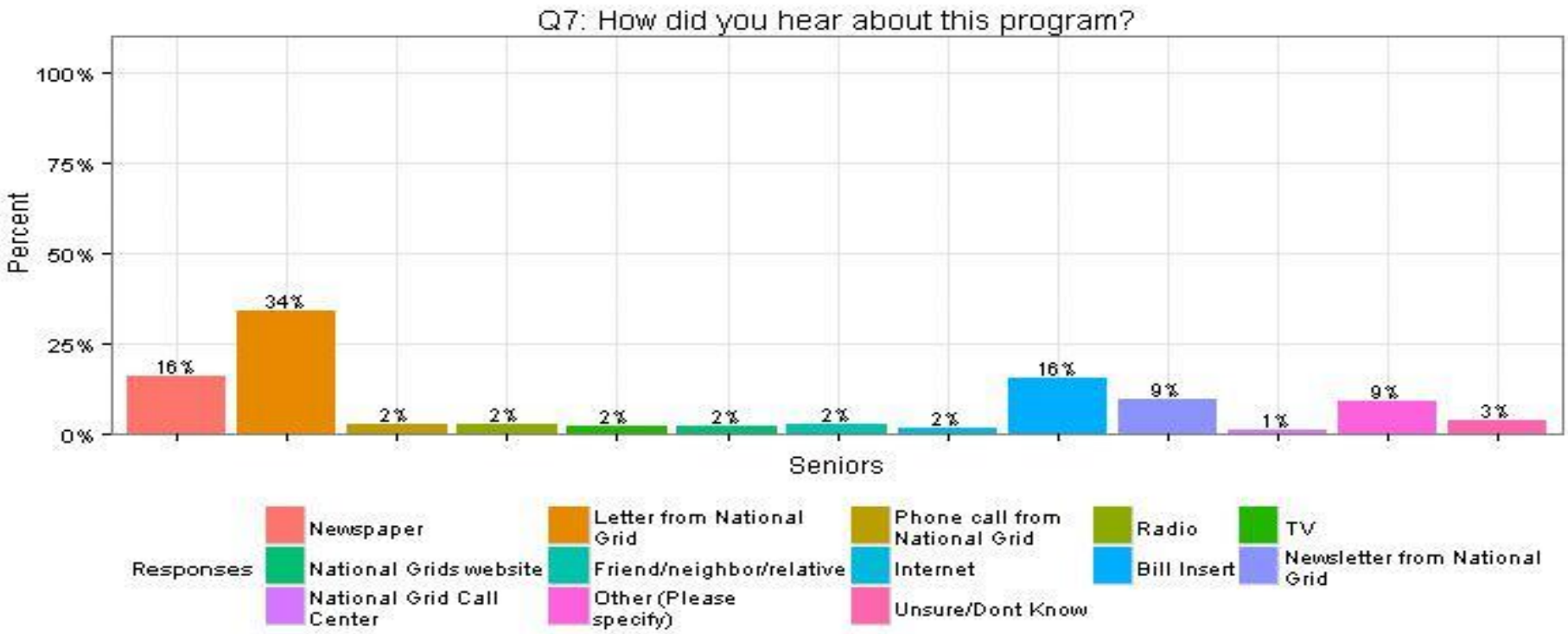
Q7: How did you hear about this program?
Low Income Respondents



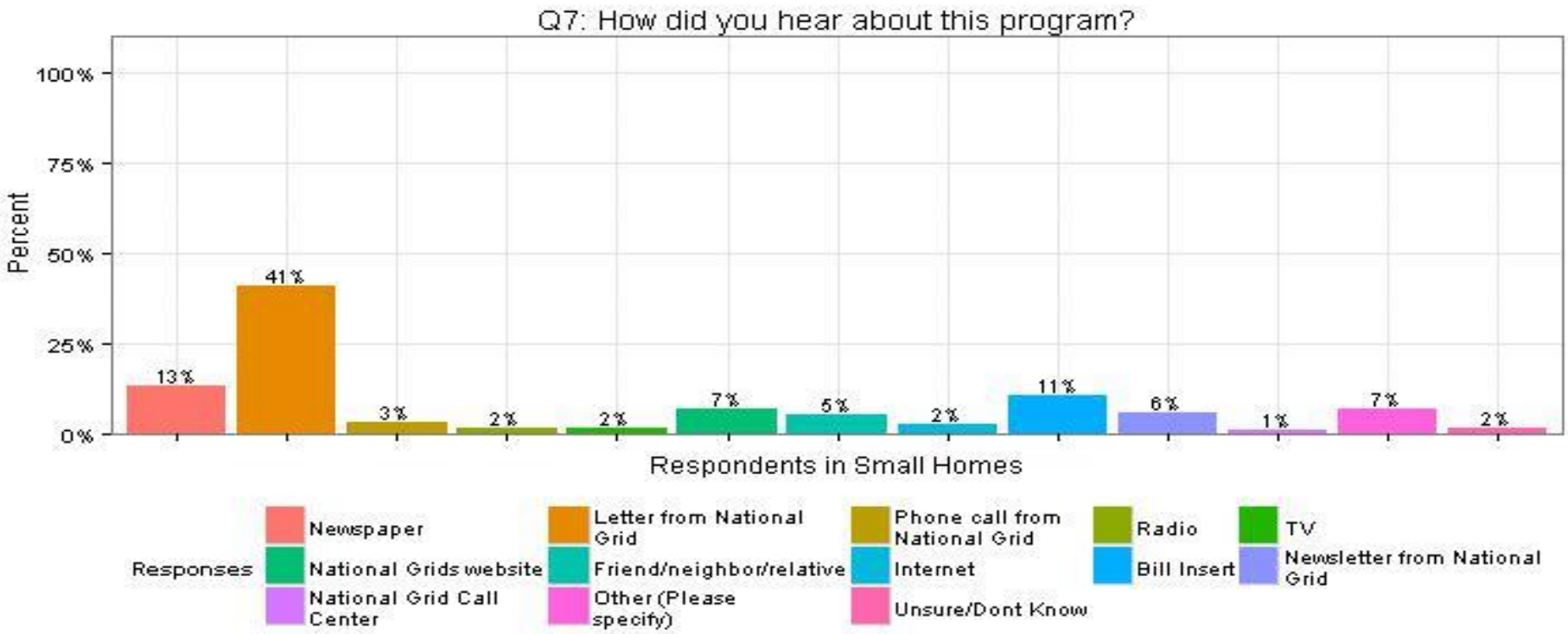
Q7: How did you hear about this program?
High Income Respondents



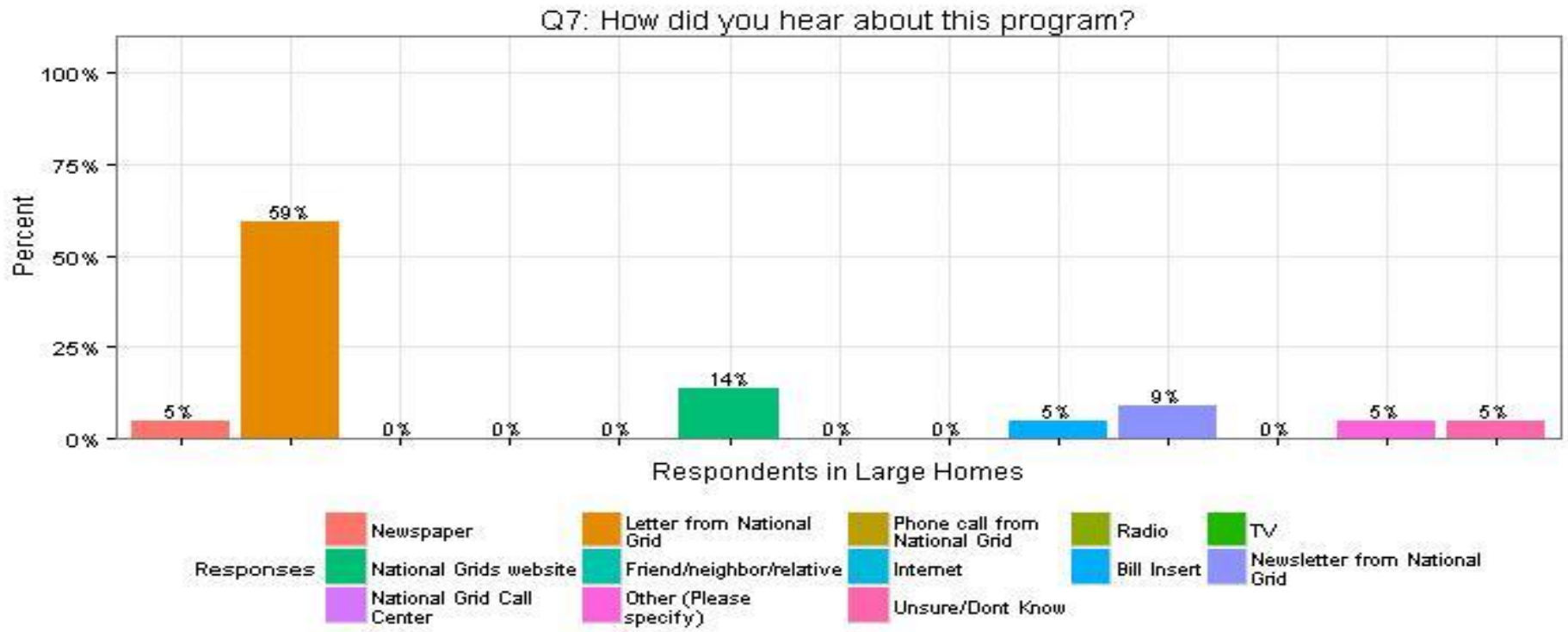
Q7: How did you hear about this program? Seniors



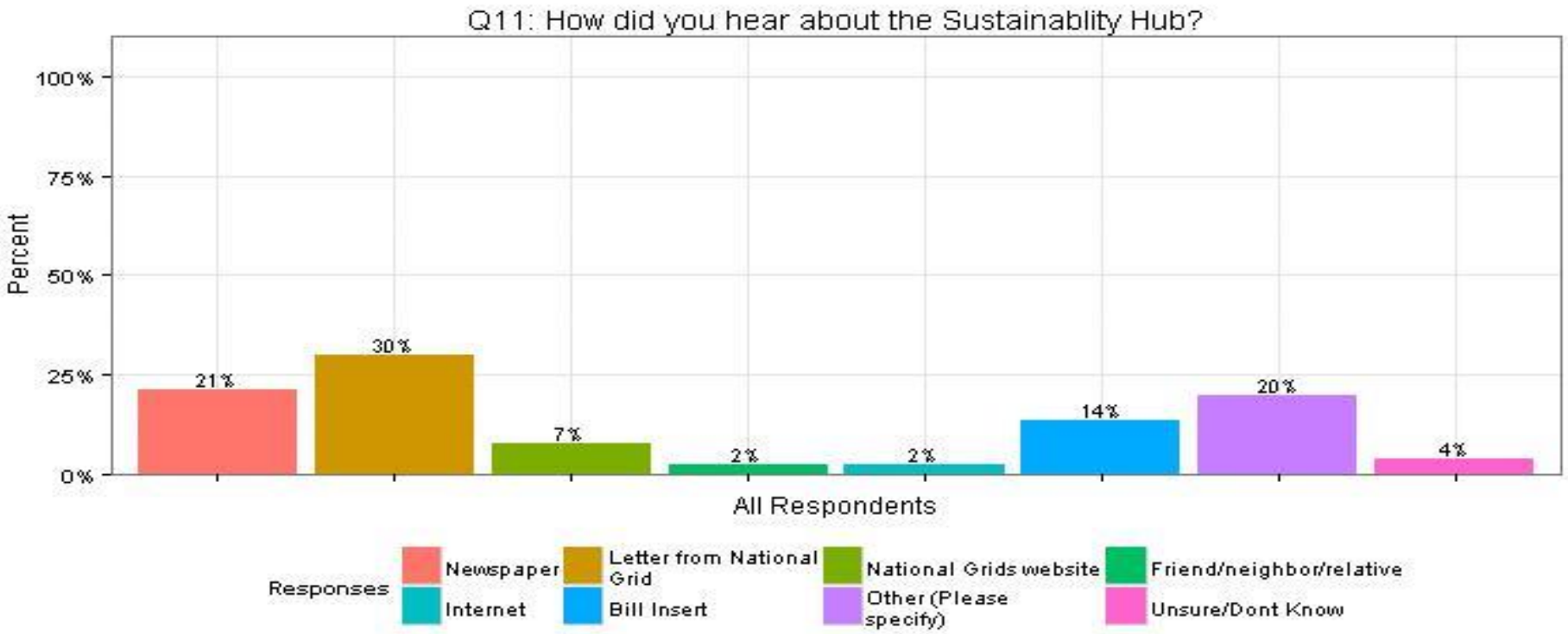
Q7: How did you hear about this program? Respondents in Small Homes



Q7: How did you hear about this program? Respondents in Large Homes



Q11: How did you hear about the Sustainablity Hub? All Respondents



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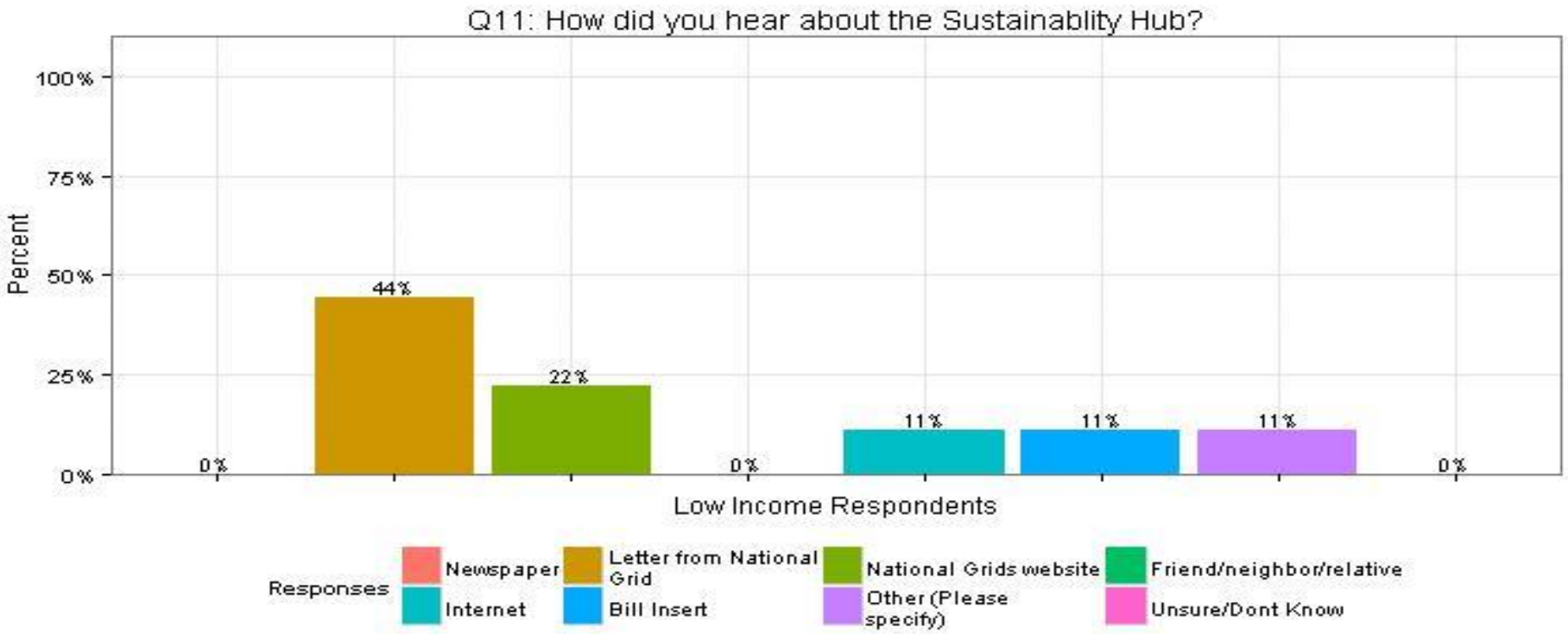
Q11: How did you hear about the Sustainablity Hub? Low Income Respondents



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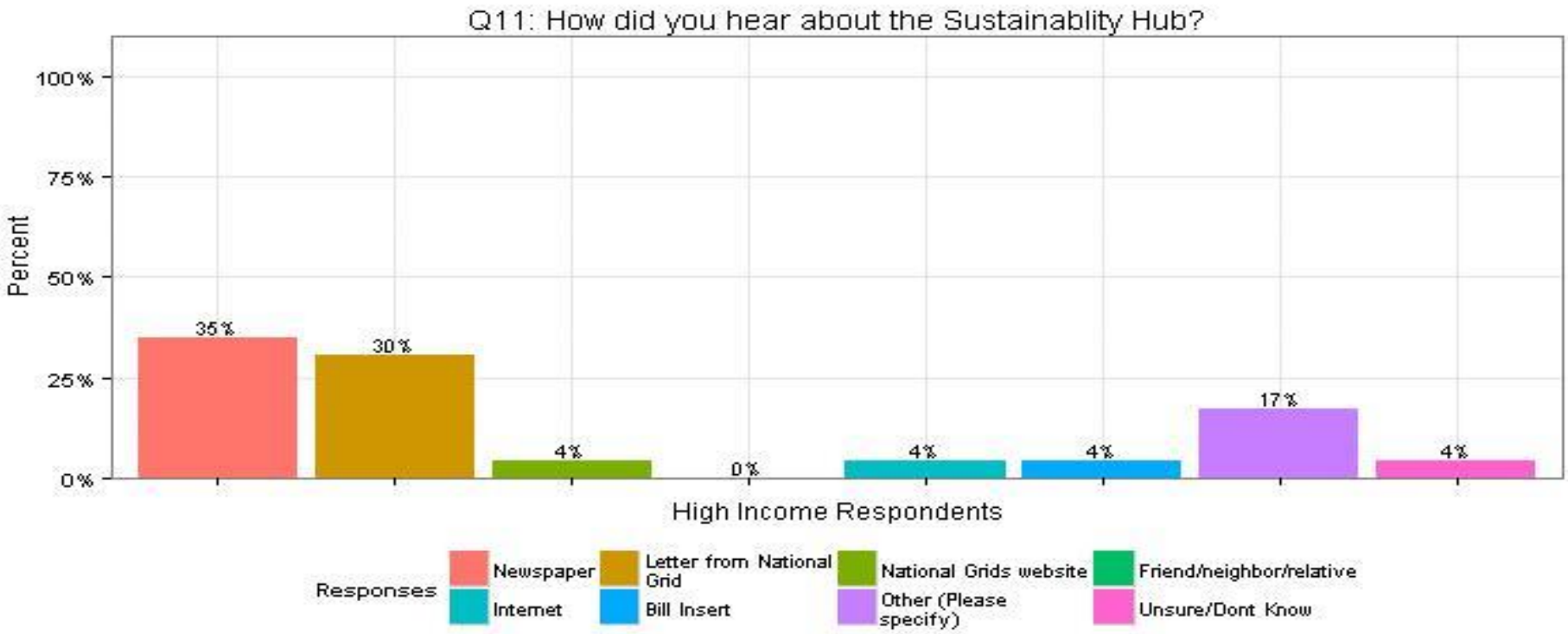
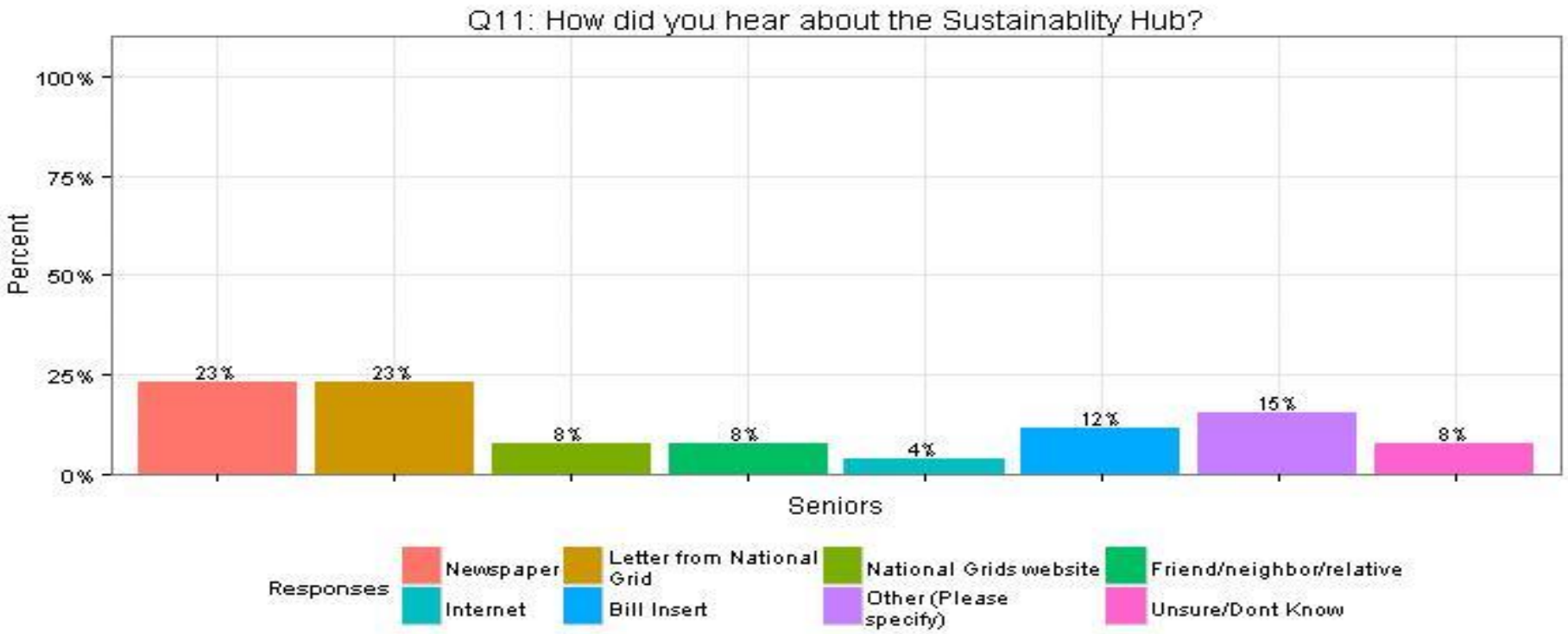
Q11: How did you hear about the Sustainablity Hub? High Income Respondents



Q11: How did you hear about the Sustainablity Hub? Seniors



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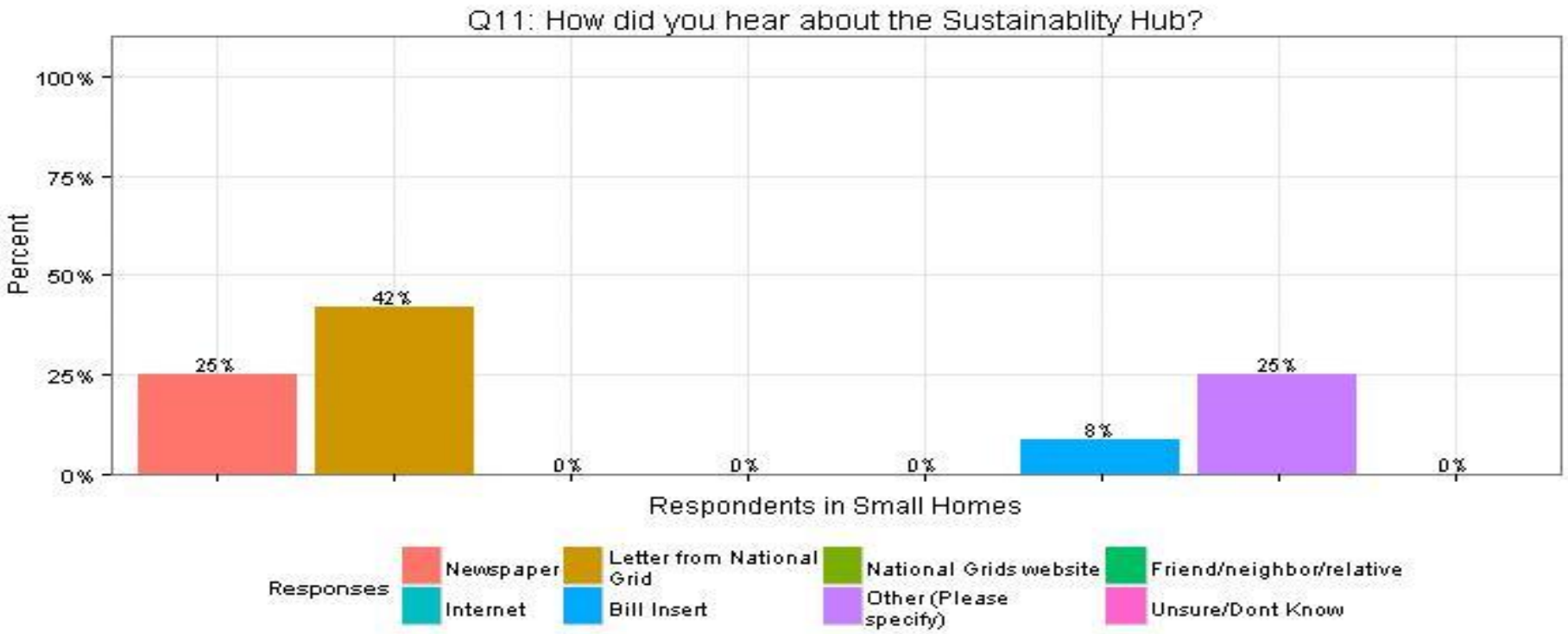
Q11: How did you hear about the Sustainablity Hub? Respondents in Small Homes



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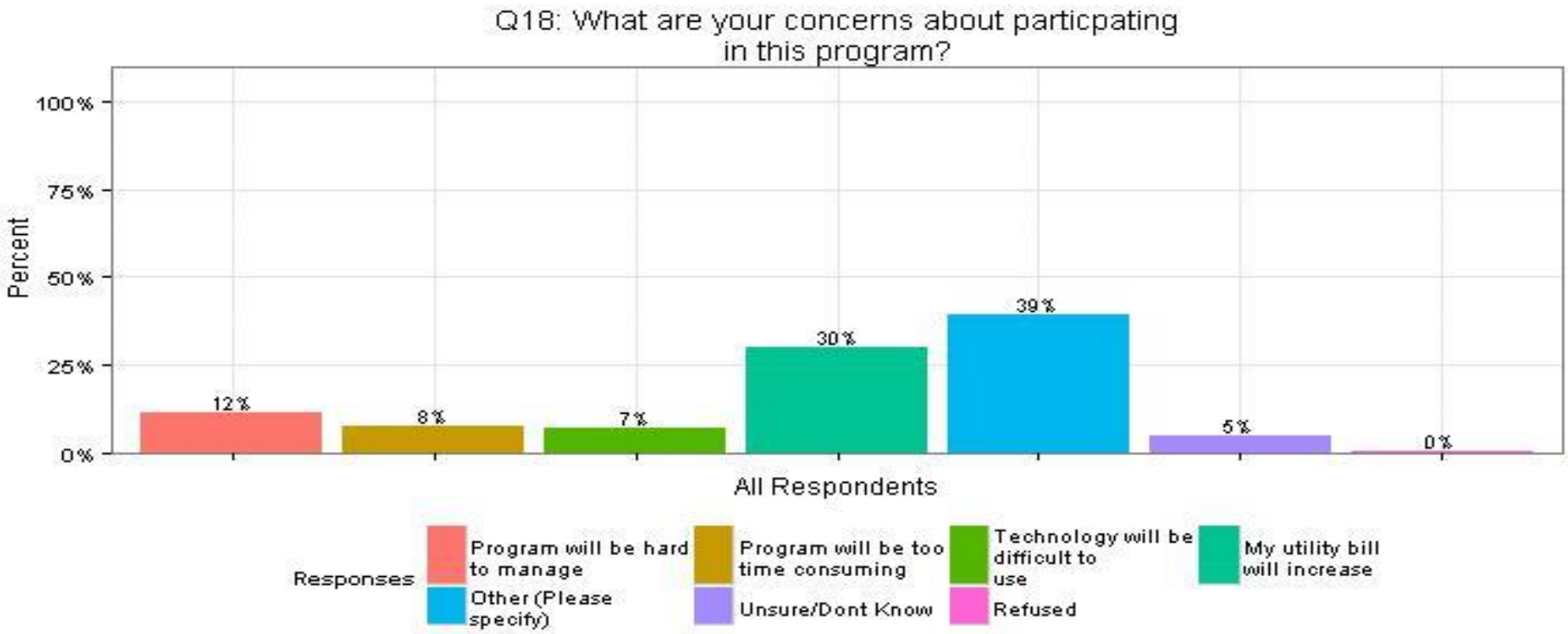
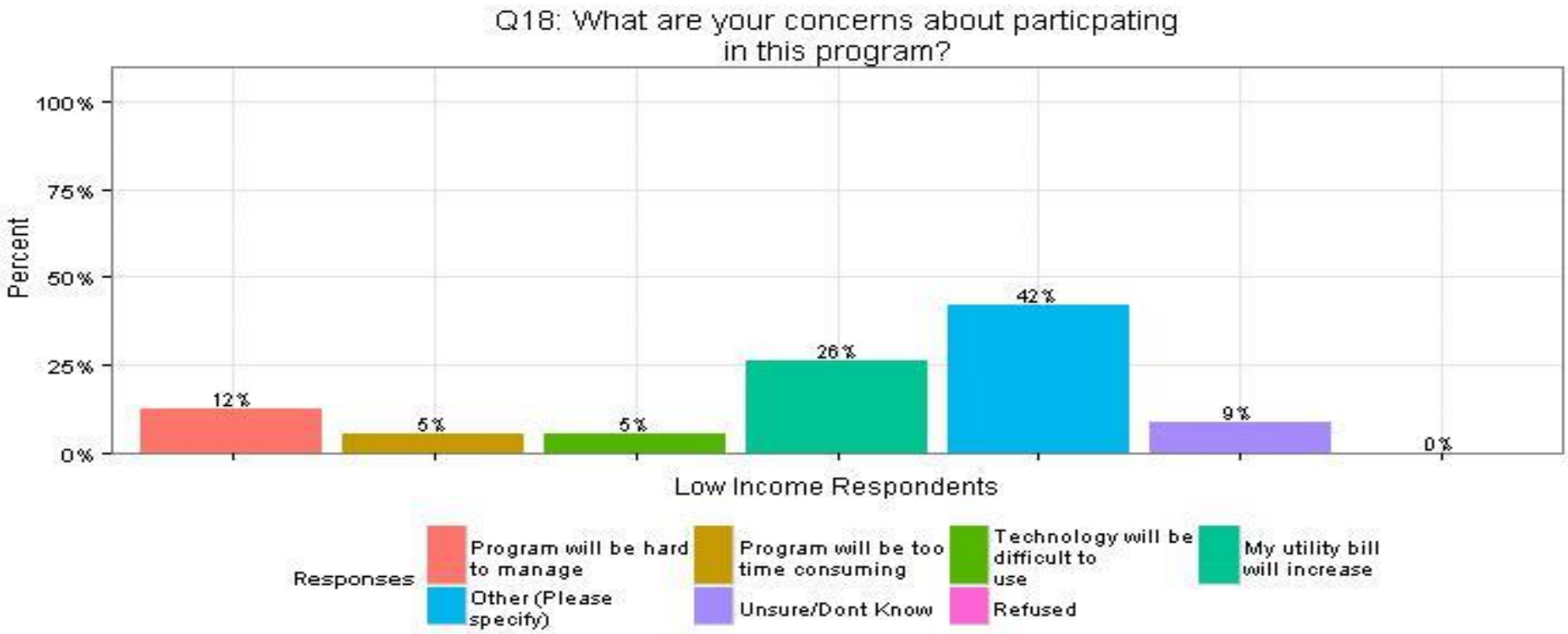
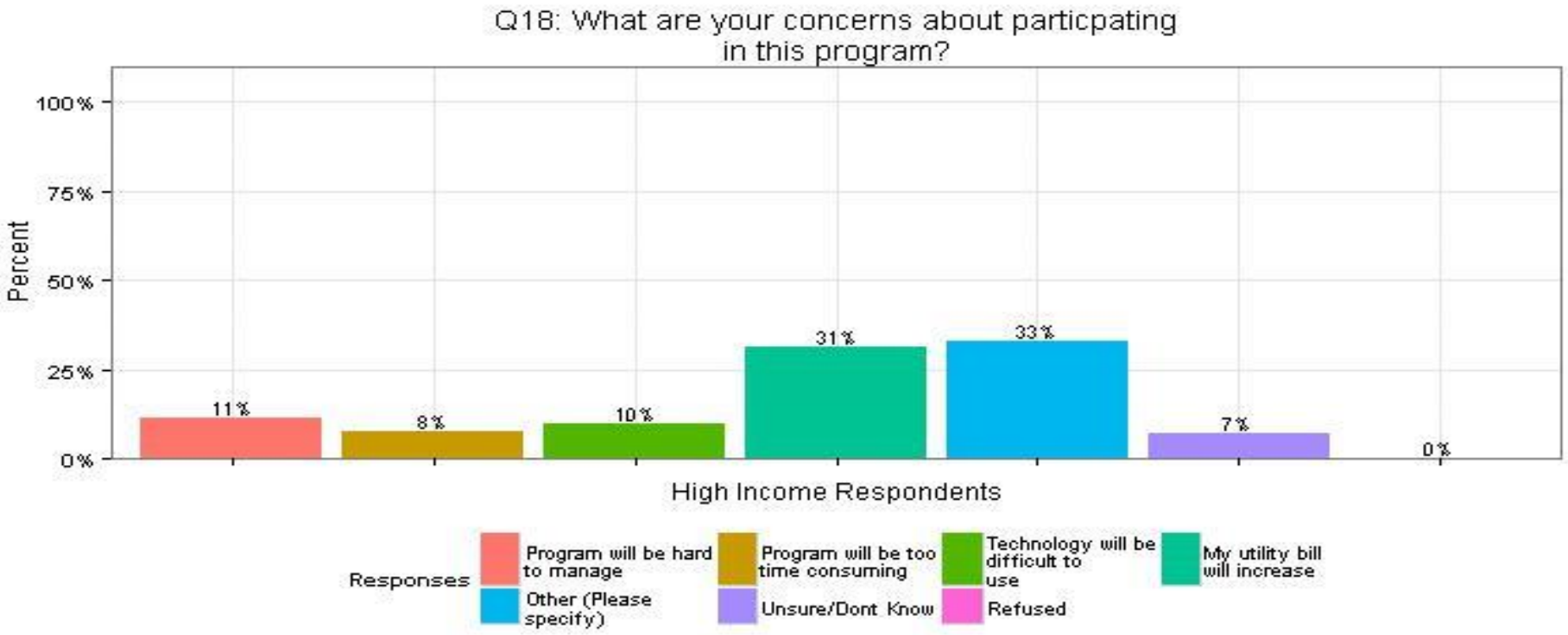
Q18: What are your concerns about particpating in this program? All Respondents



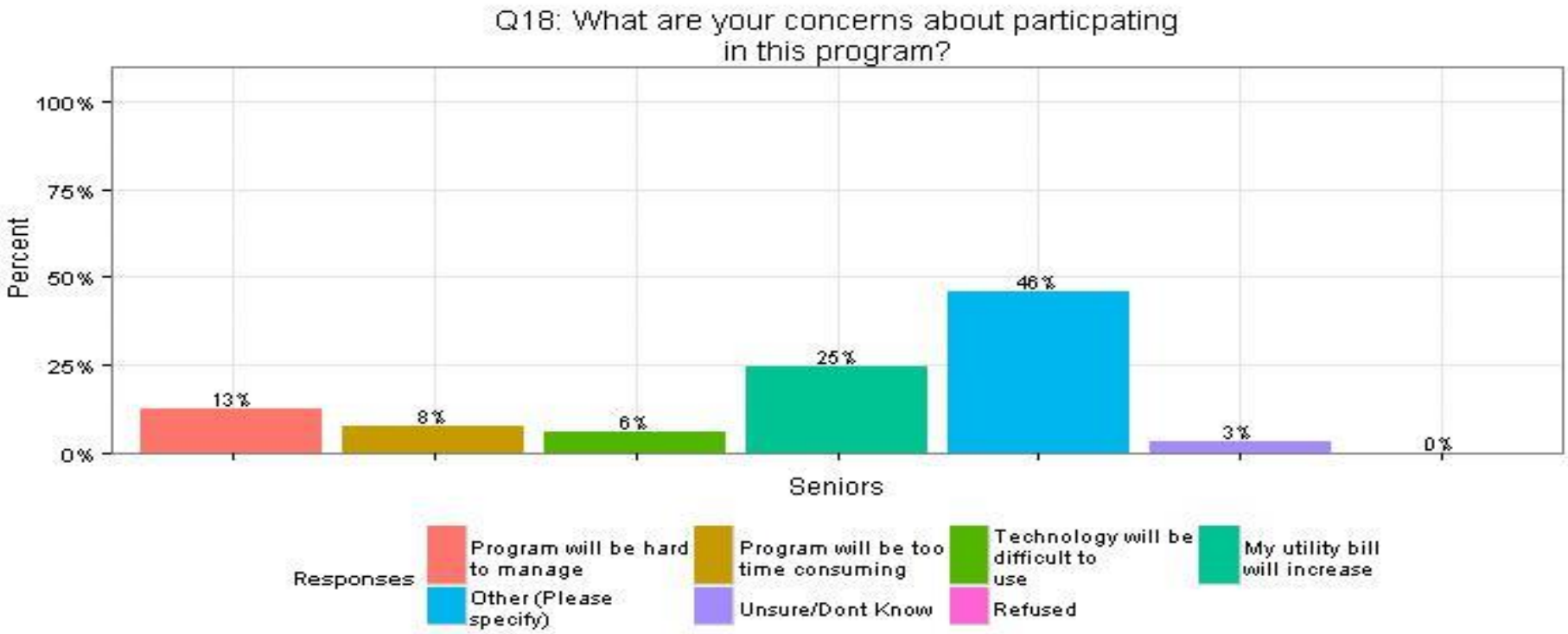
Q18: What are your concerns about particpating in this program?
Low Income Respondents



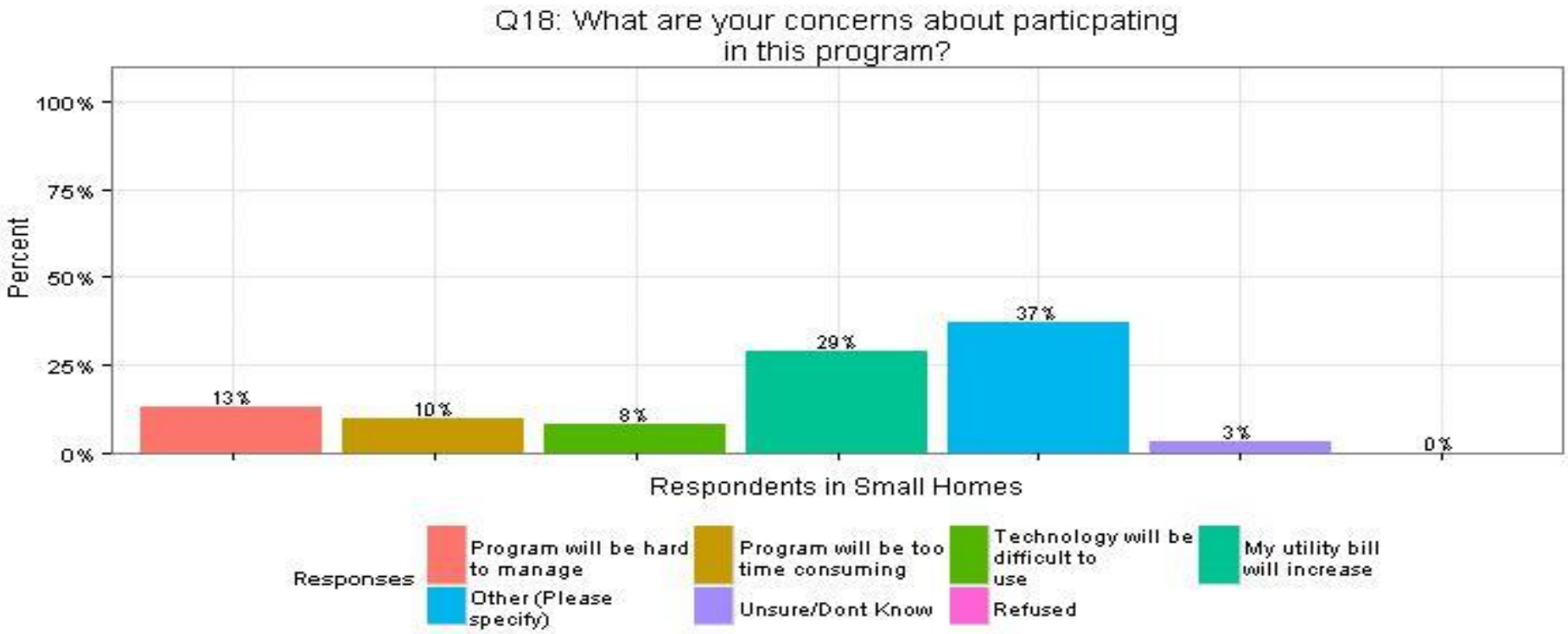
Q18: What are your concerns about particpating in this program?
High Income Respondents



Q18: What are your concerns about particpating in this program?
Seniors



Q18: What are your concerns about particpating in this program? Respondents in Small Homes



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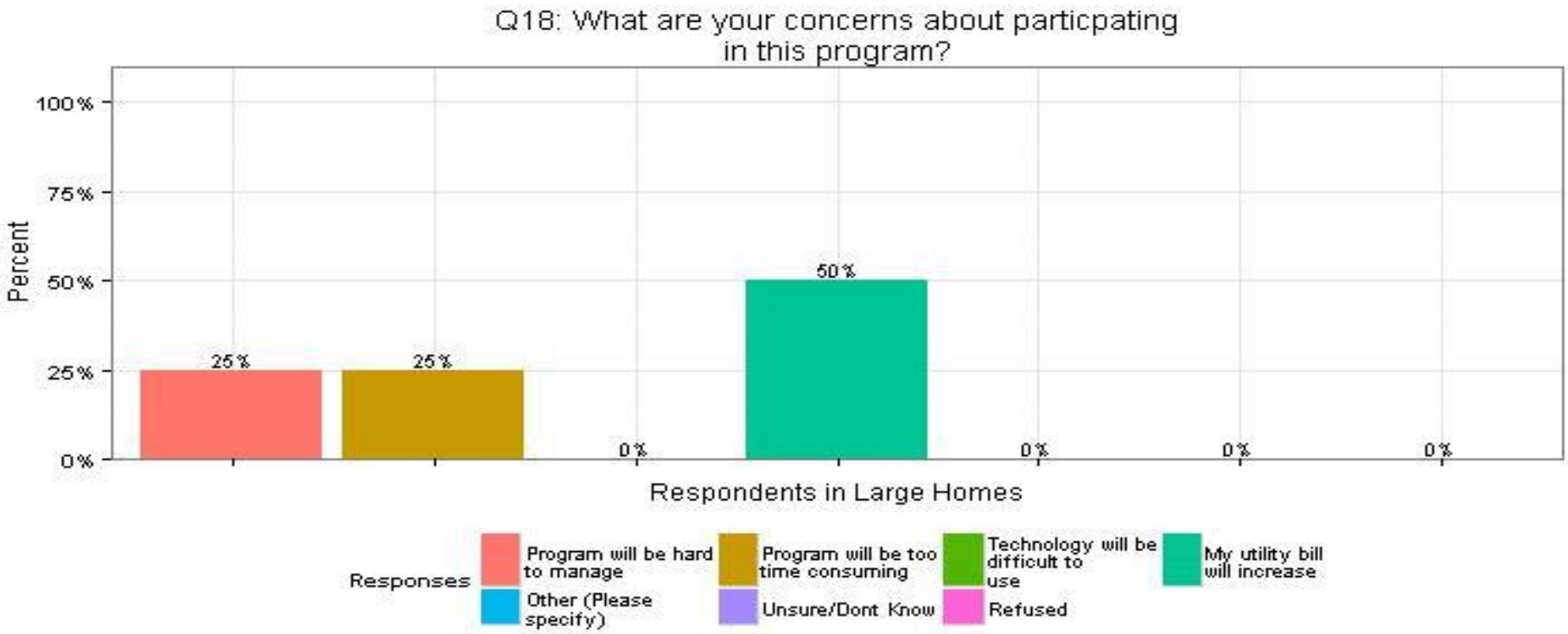
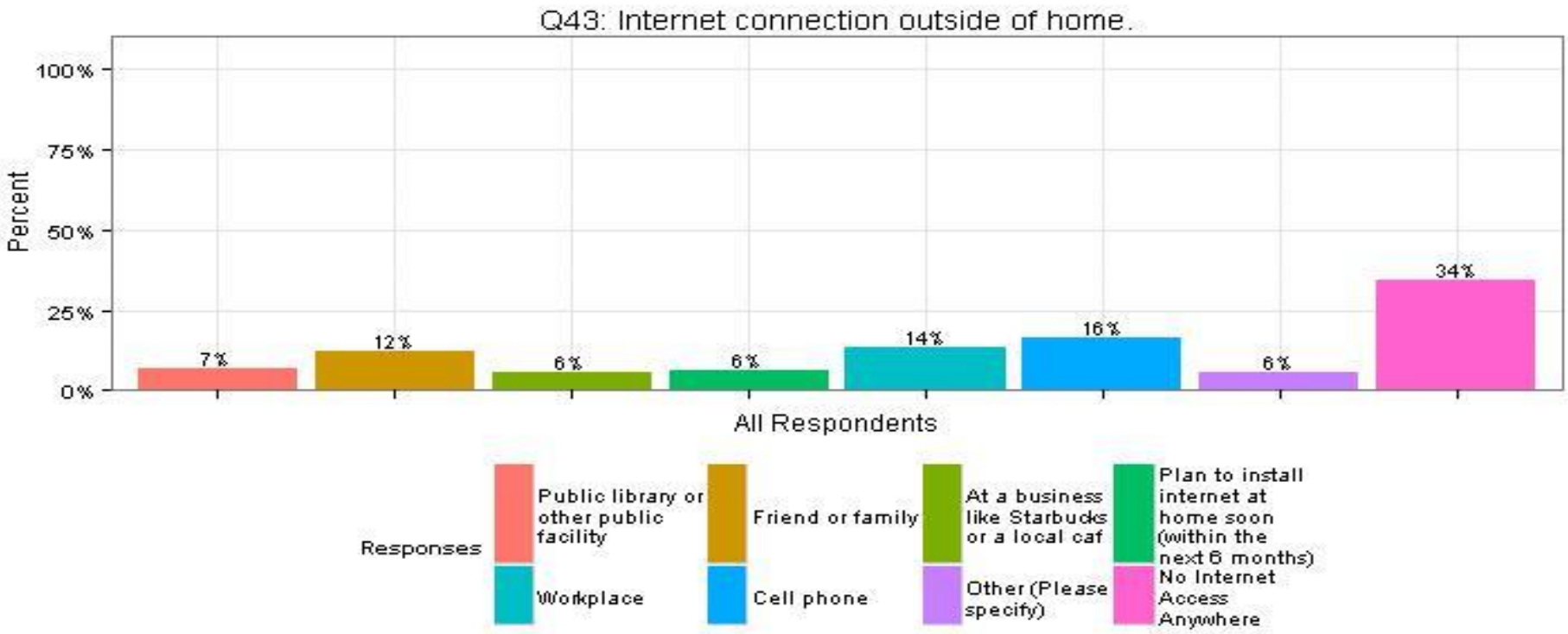
Q18: What are your concerns about particpating in this program? Respondents in Large Homes



Q43: Internet connection outside of home.
All Respondents



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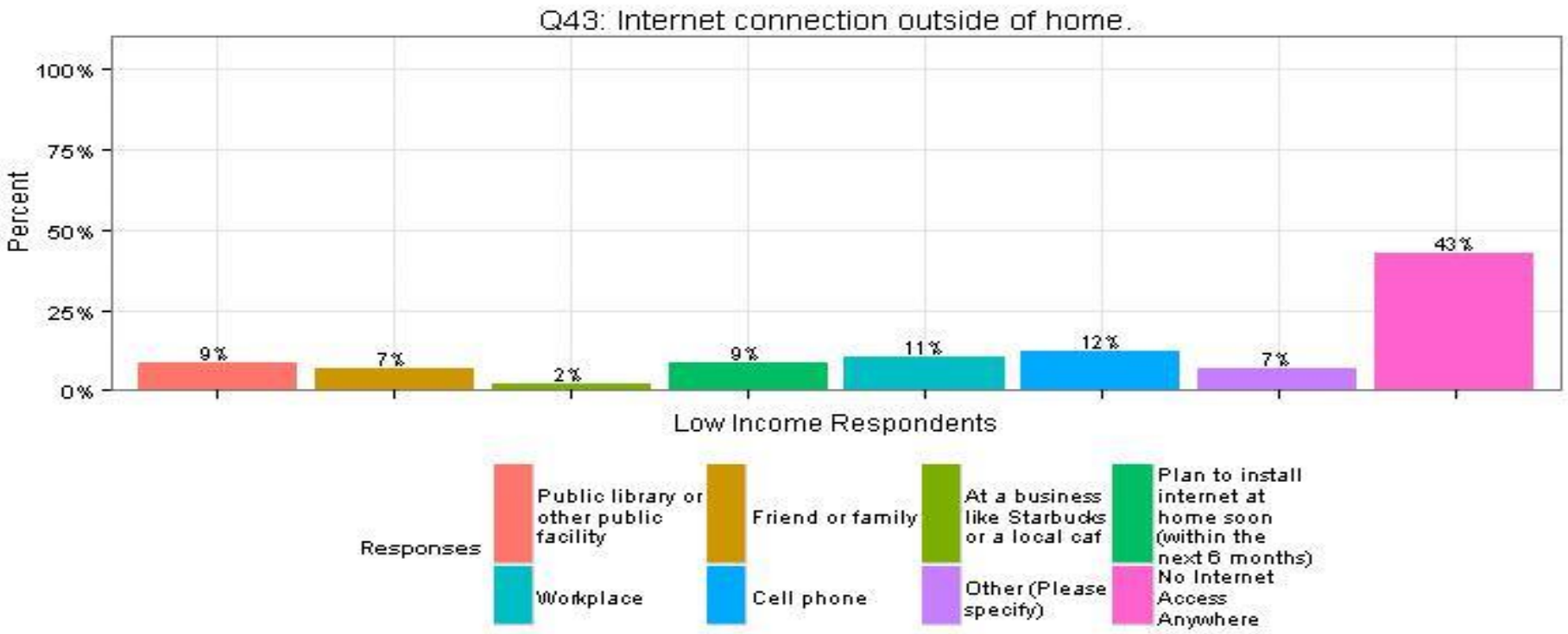
Q43: Internet connection outside of home. Low Income Respondents



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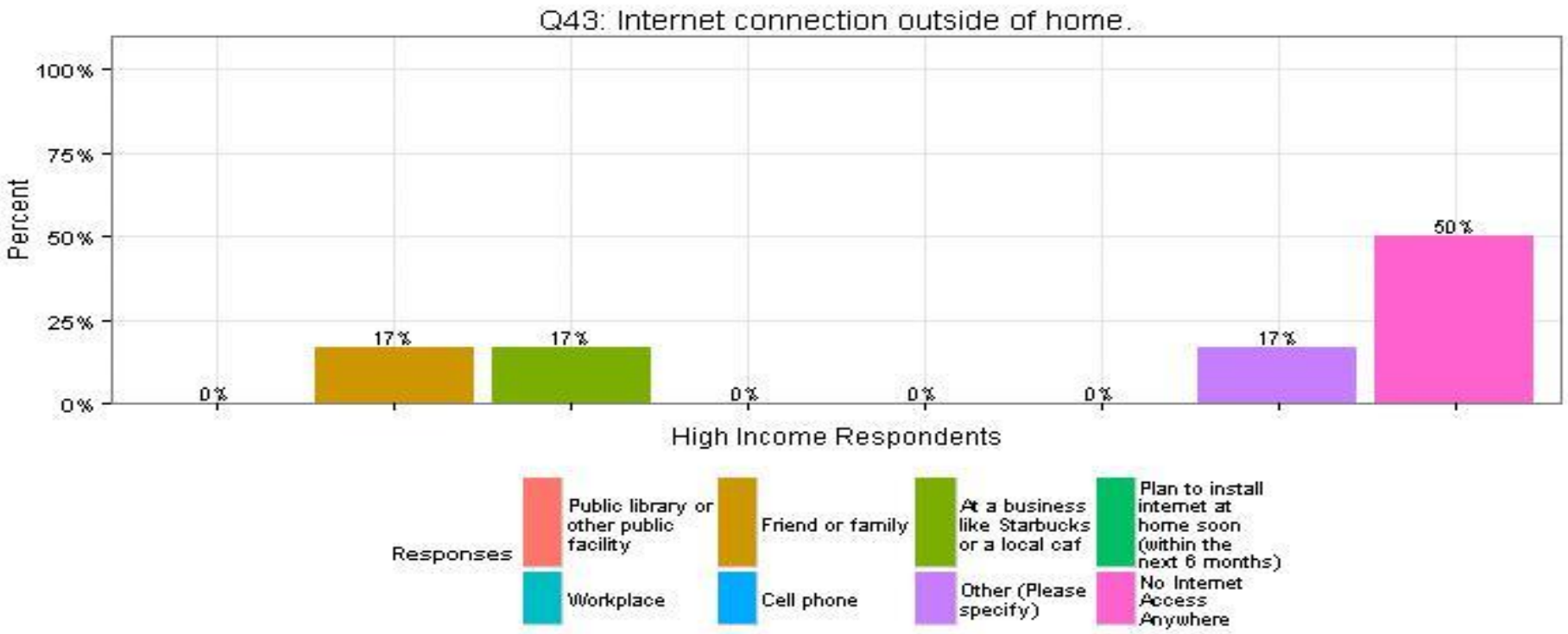
Q43: Internet connection outside of home. High Income Respondents



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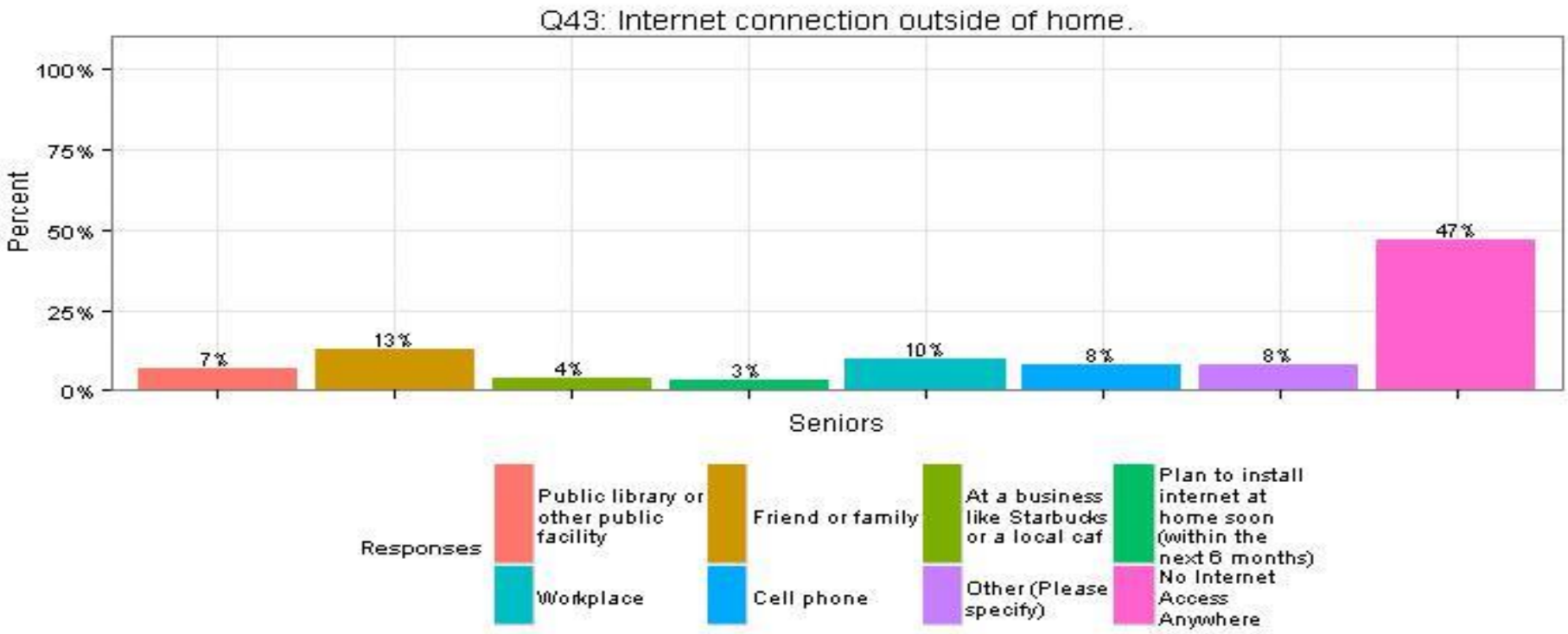
Q43: Internet connection outside of home. Seniors



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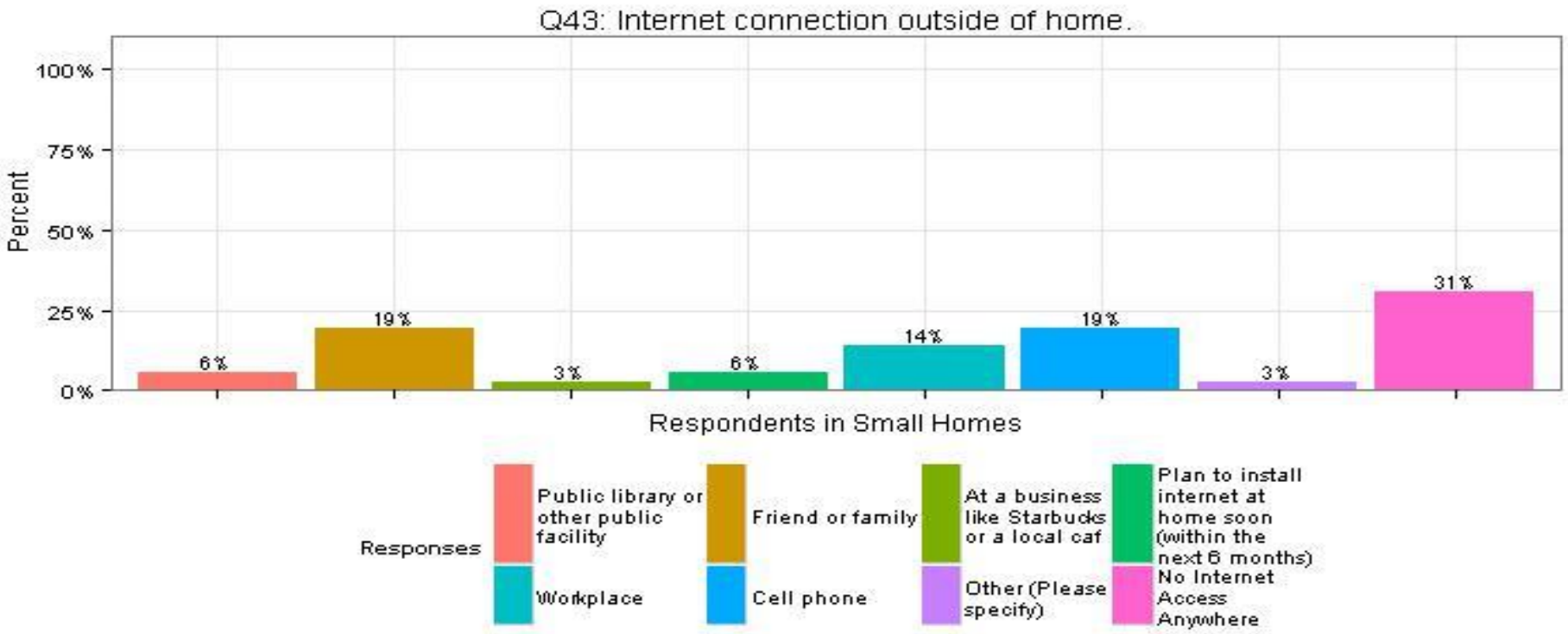
Q43: Internet connection outside of home. Respondents in Small Homes



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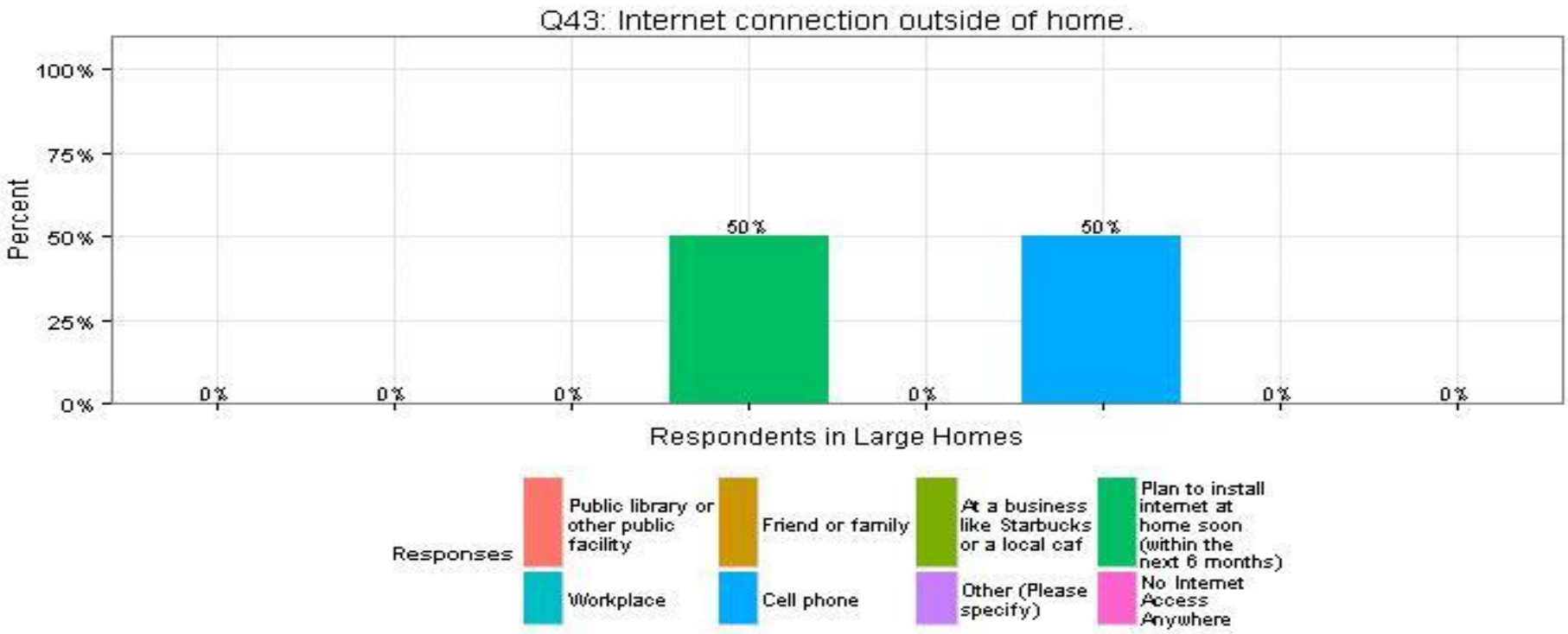
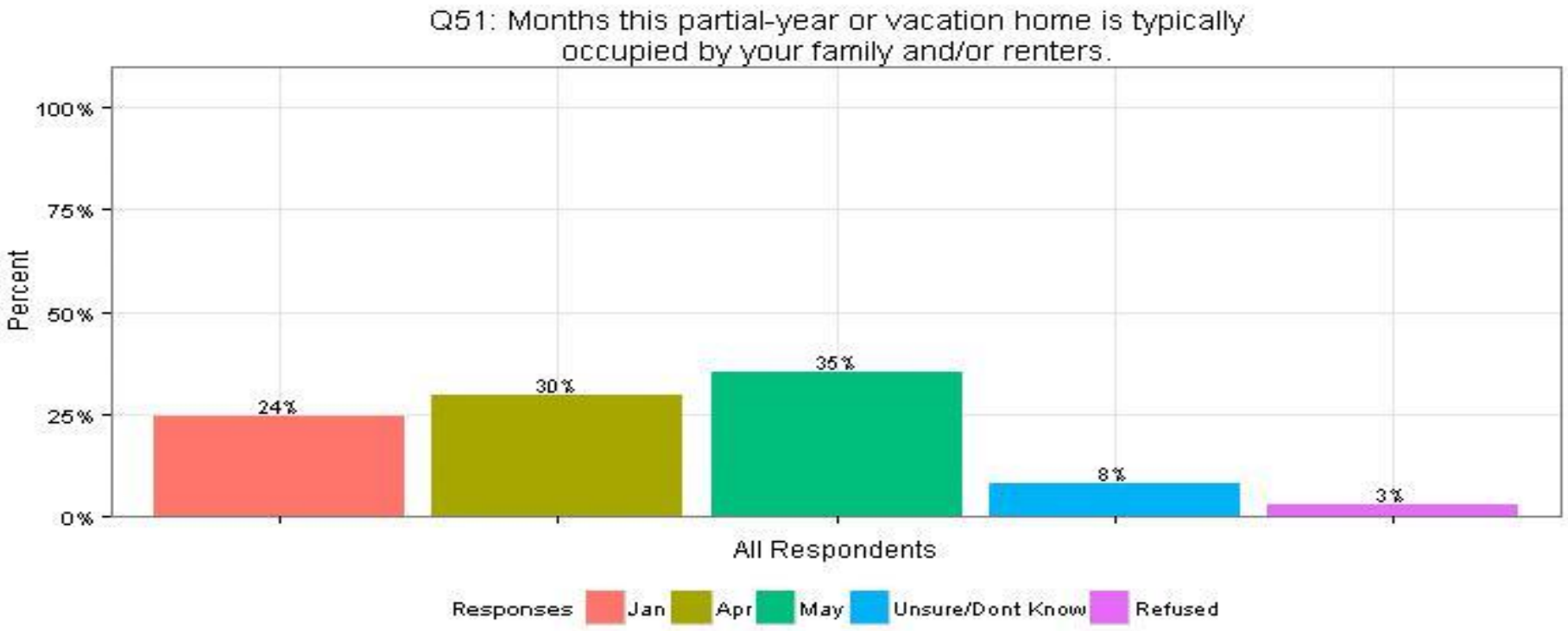
Q43: Internet connection outside of home. Respondents in Large Homes

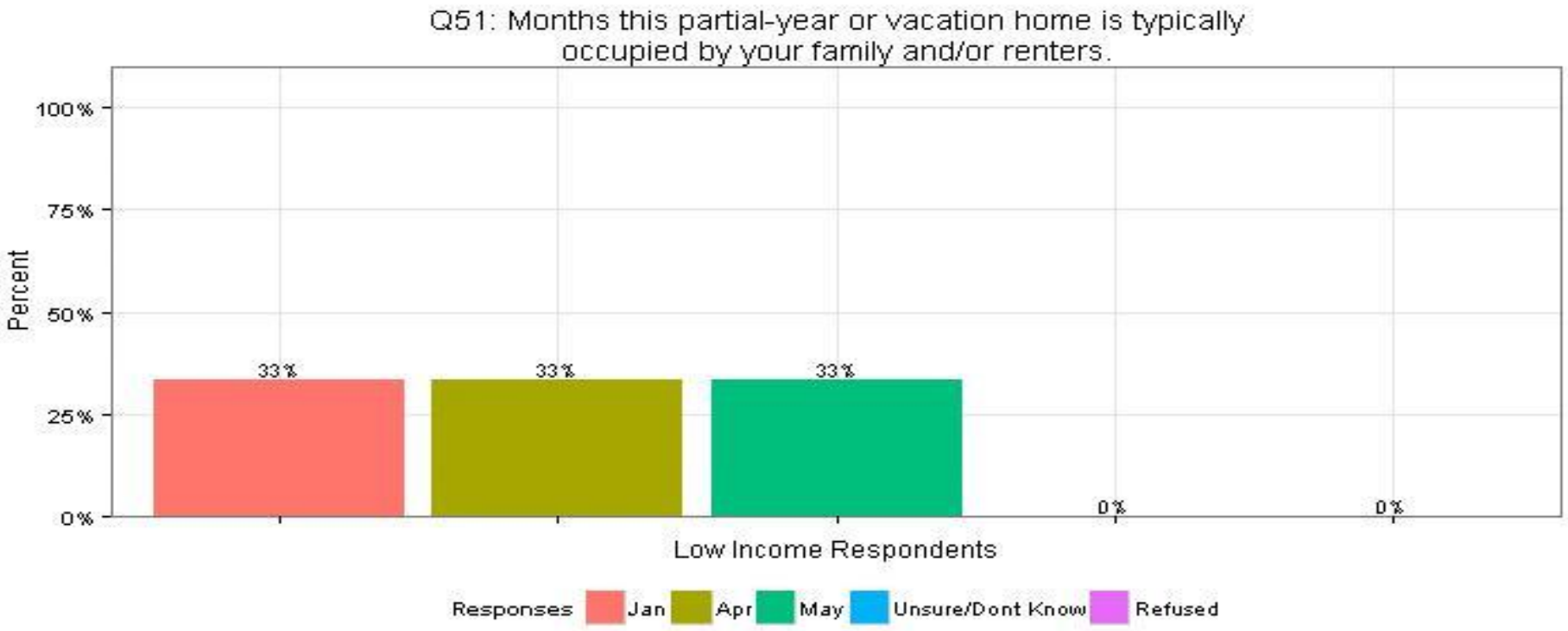


NAVIGANT

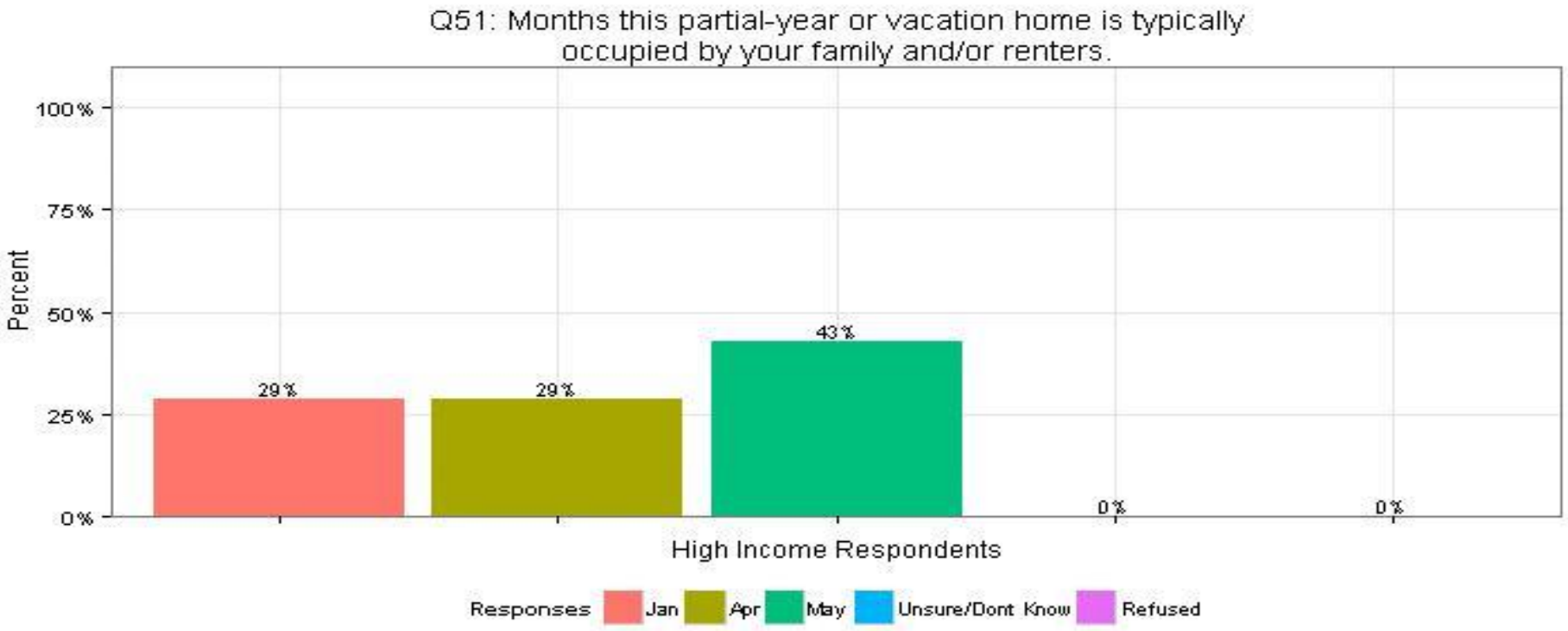
Q51: Months this partial-year or vacation home is typically occupied by your family and/or renters.
All Respondents



Q51: Months this partial-year or vacation home is typically occupied by your family and/or renters.
Low Income Respondents

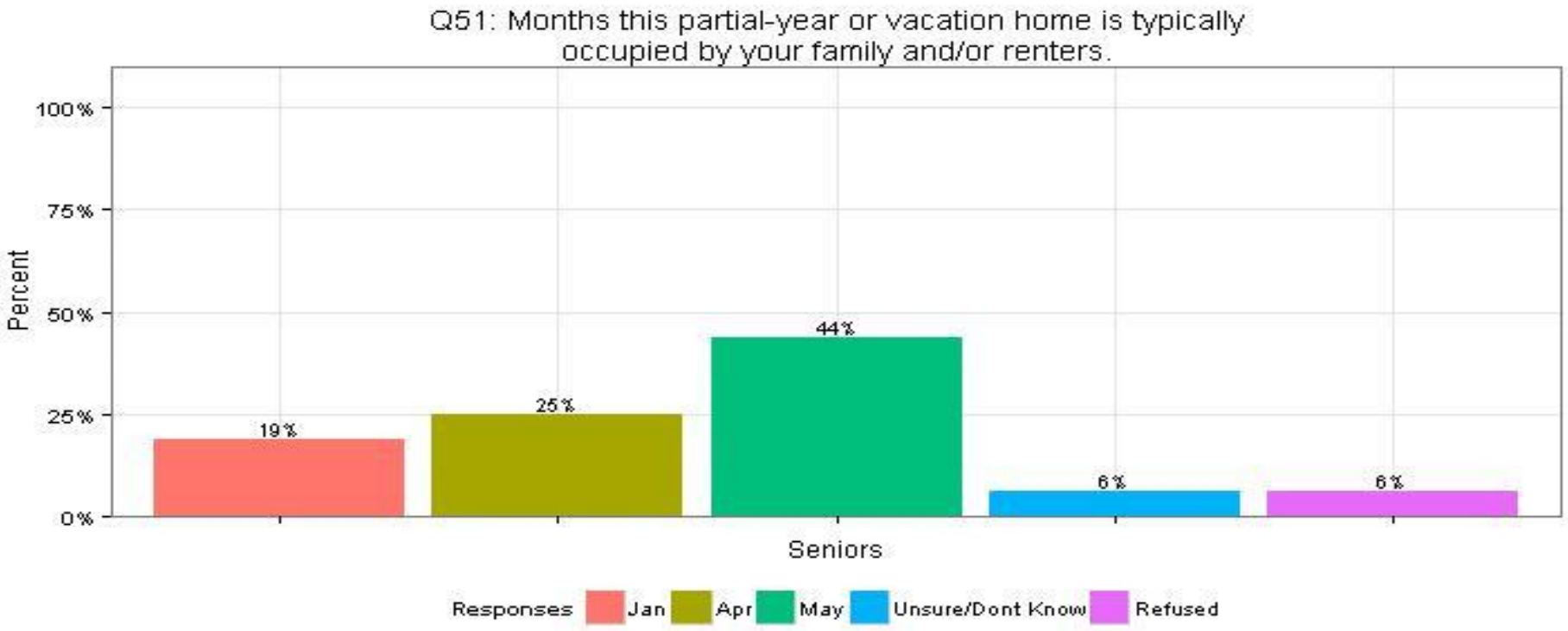


Q51: Months this partial-year or vacation home is typically occupied by your family and/or renters.
High Income Respondents

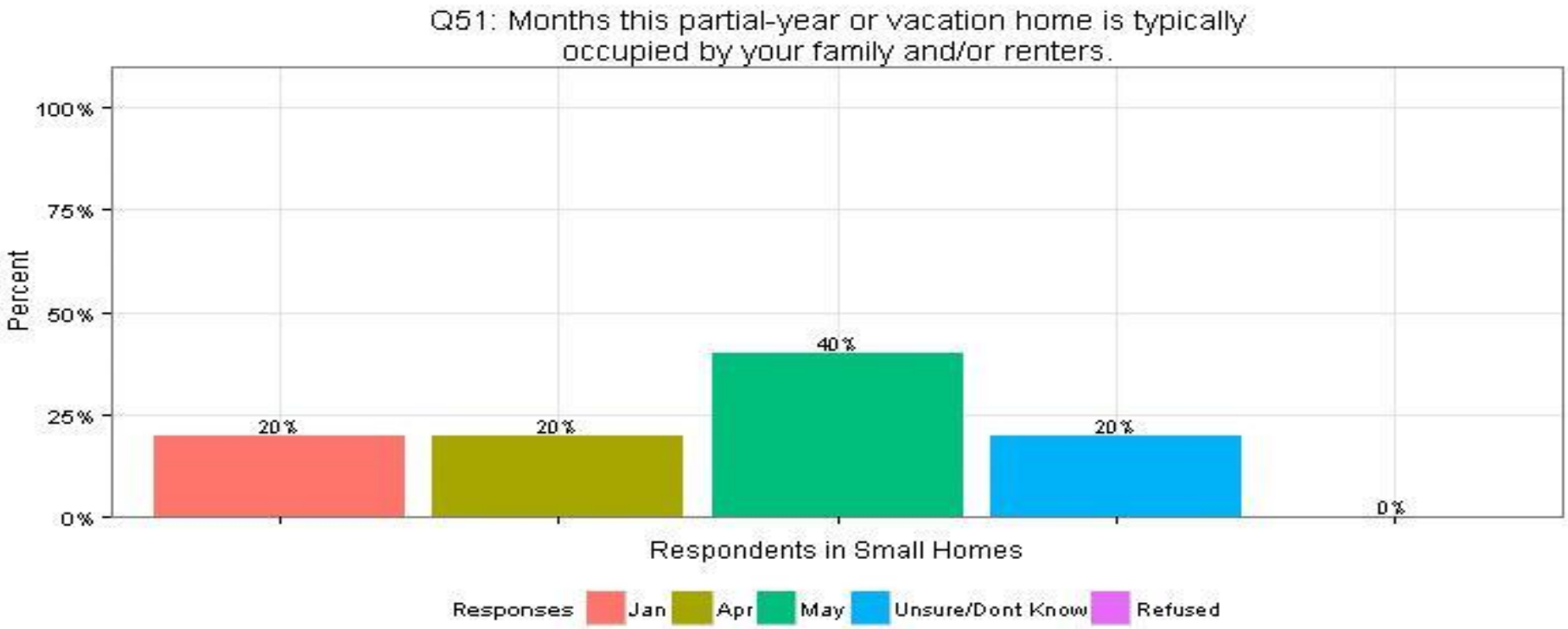


NAVIGANT

Q51: Months this partial-year or vacation home is typically occupied by your family and/or renters.
Seniors

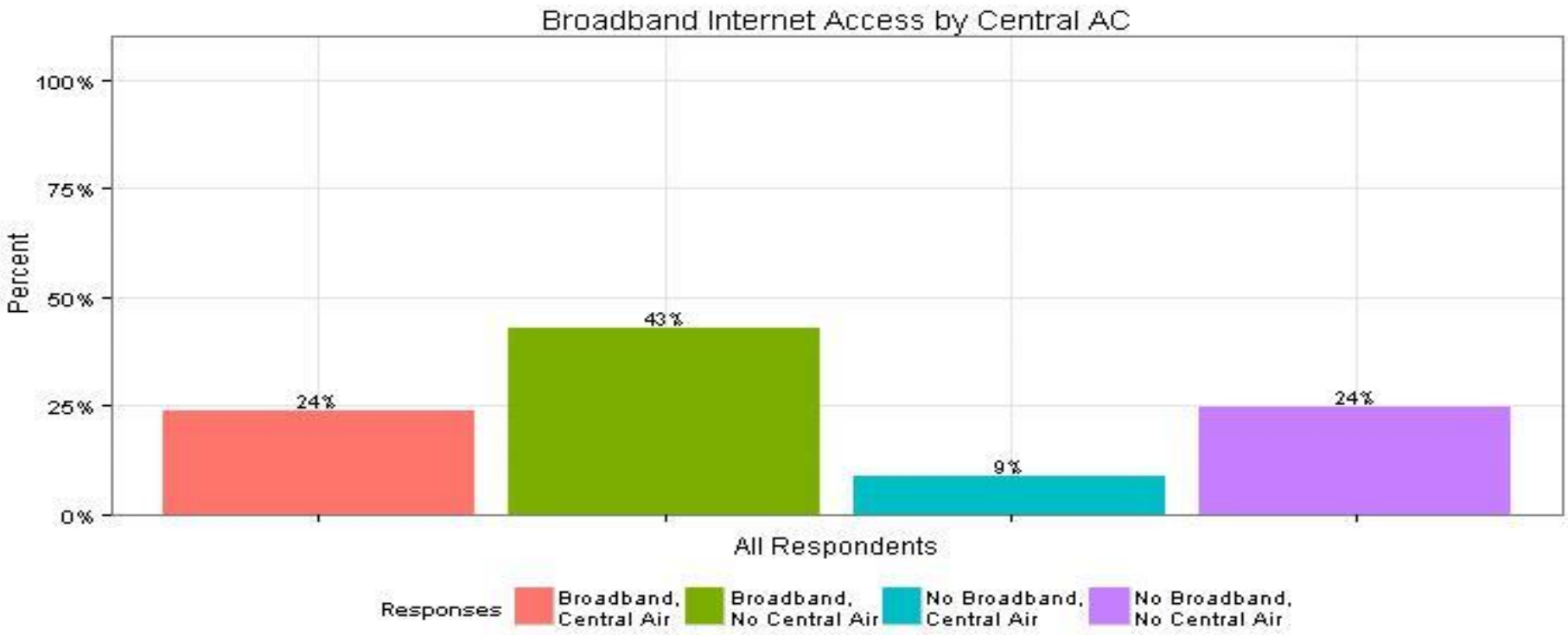


Q51: Months this partial-year or vacation home is typically occupied by your family and/or renters. Respondents in Small Homes

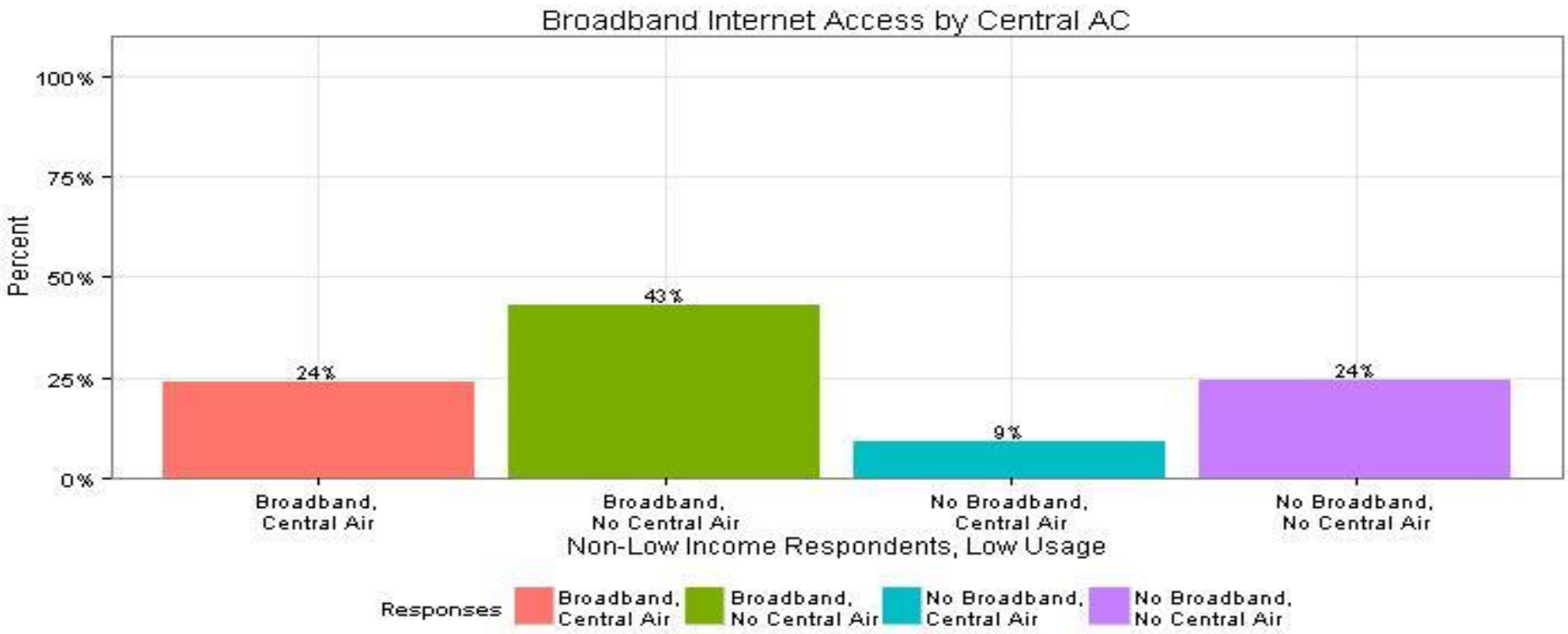


» Broadband Internet Access by Central AC by Demographics

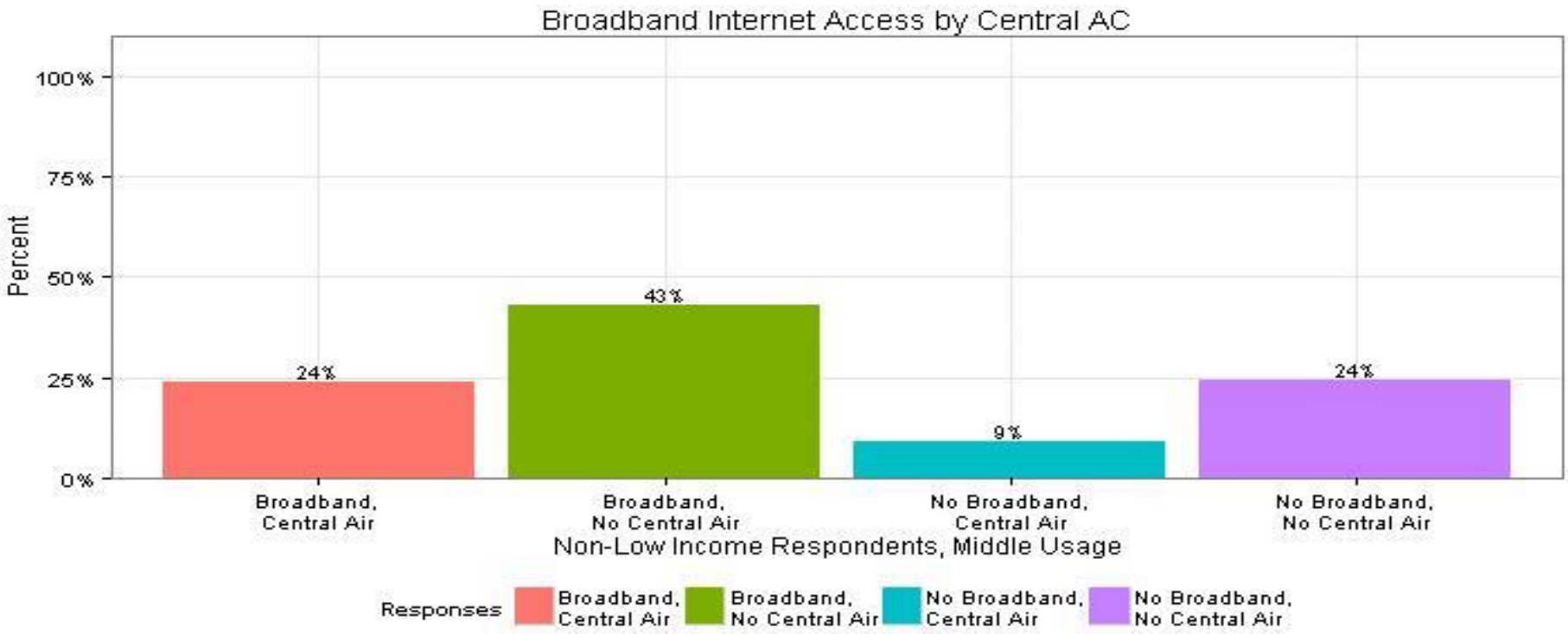
Broadband Internet Access by Central AC
All Respondents



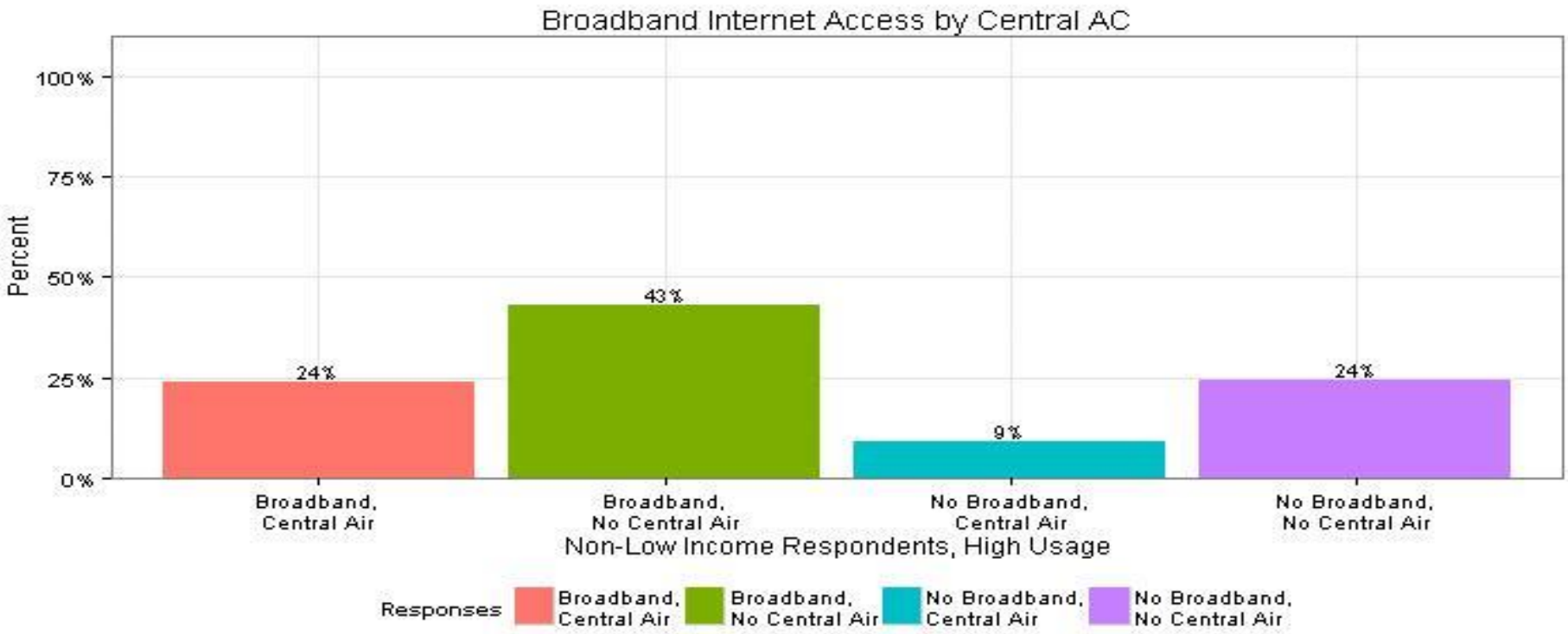
Broadband Internet Access by Central AC
Non-Low Income Respondents, Low Usage



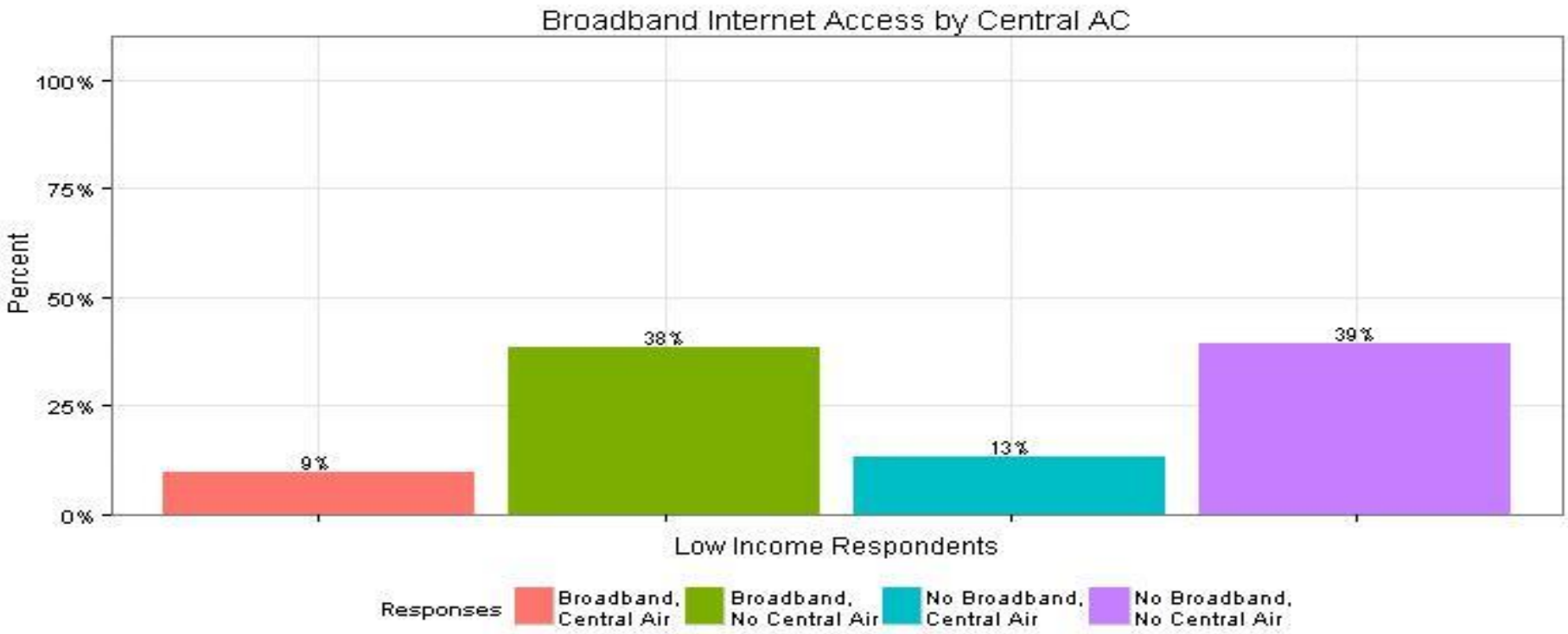
Broadband Internet Access by Central AC
Non-Low Income Respondents, Middle Usage



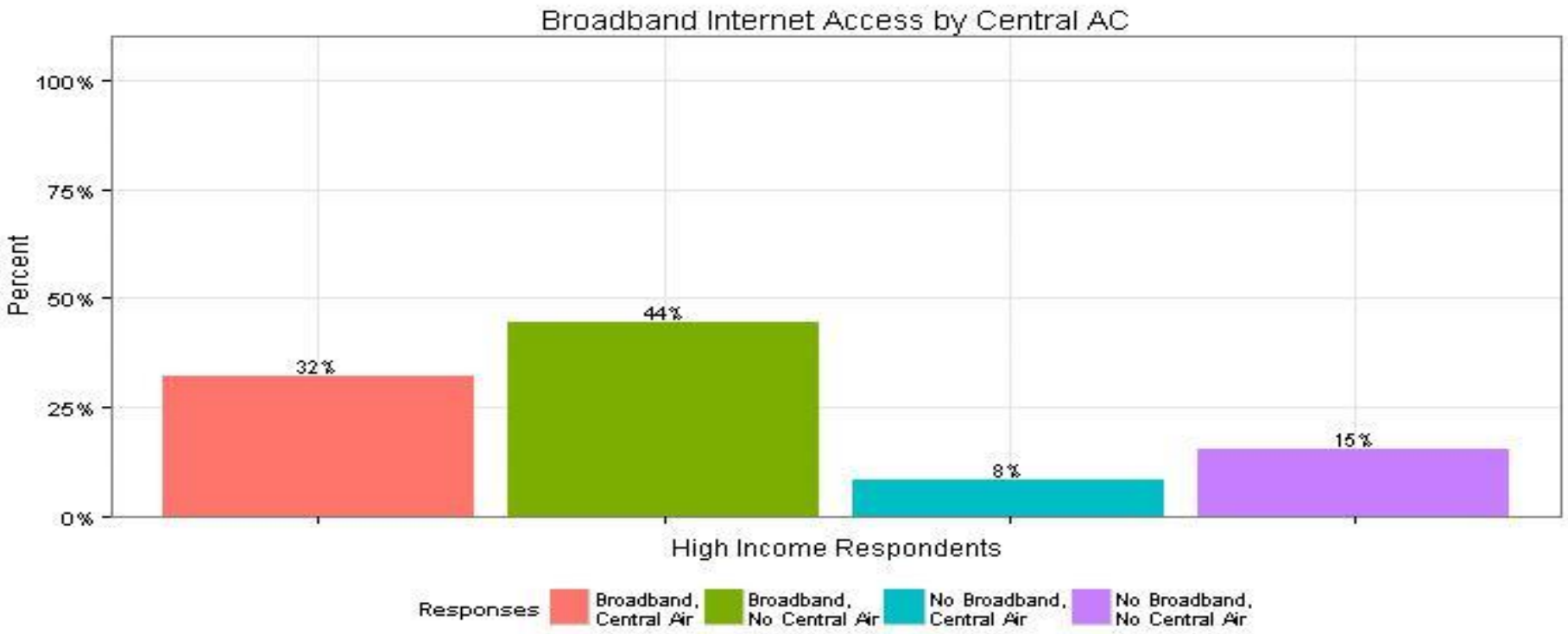
Broadband Internet Access by Central AC
Non-Low Income Respondents, High Usage



Broadband Internet Access by Central AC
Low Income Respondents



Broadband Internet Access by Central AC
High Income Respondents



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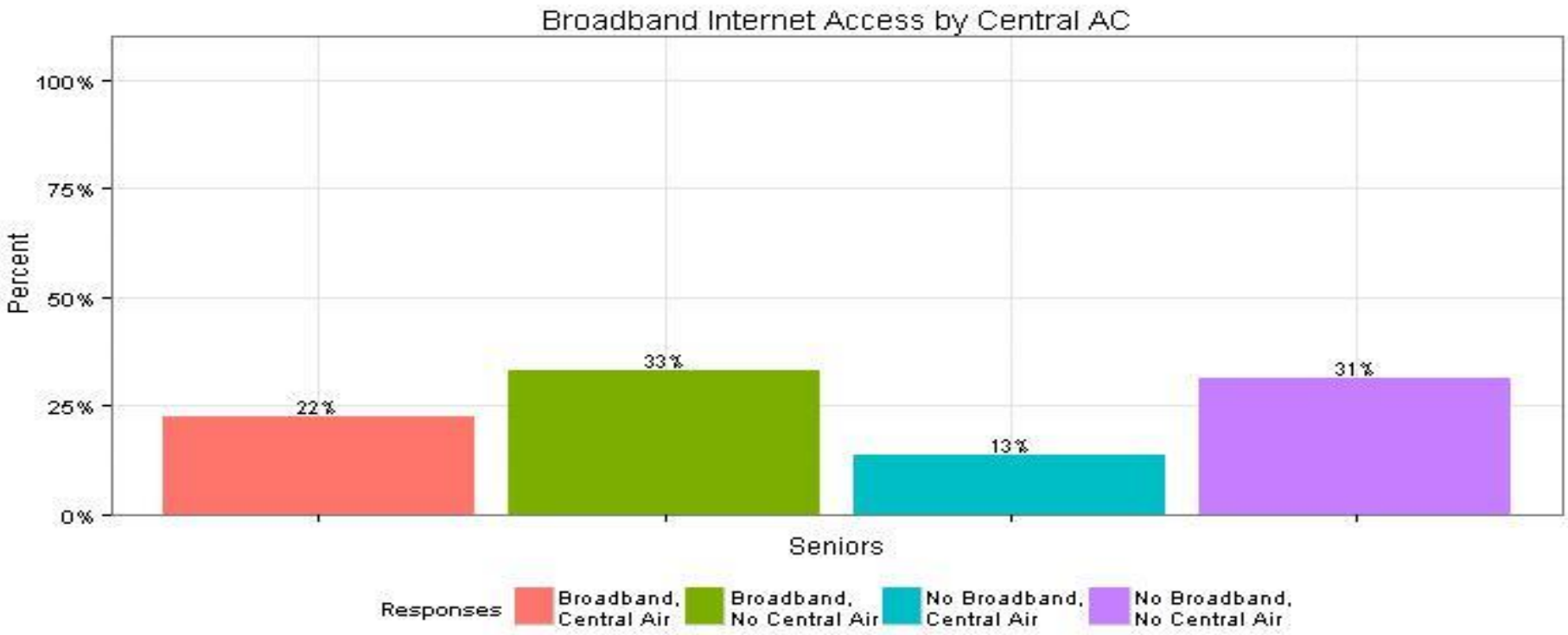
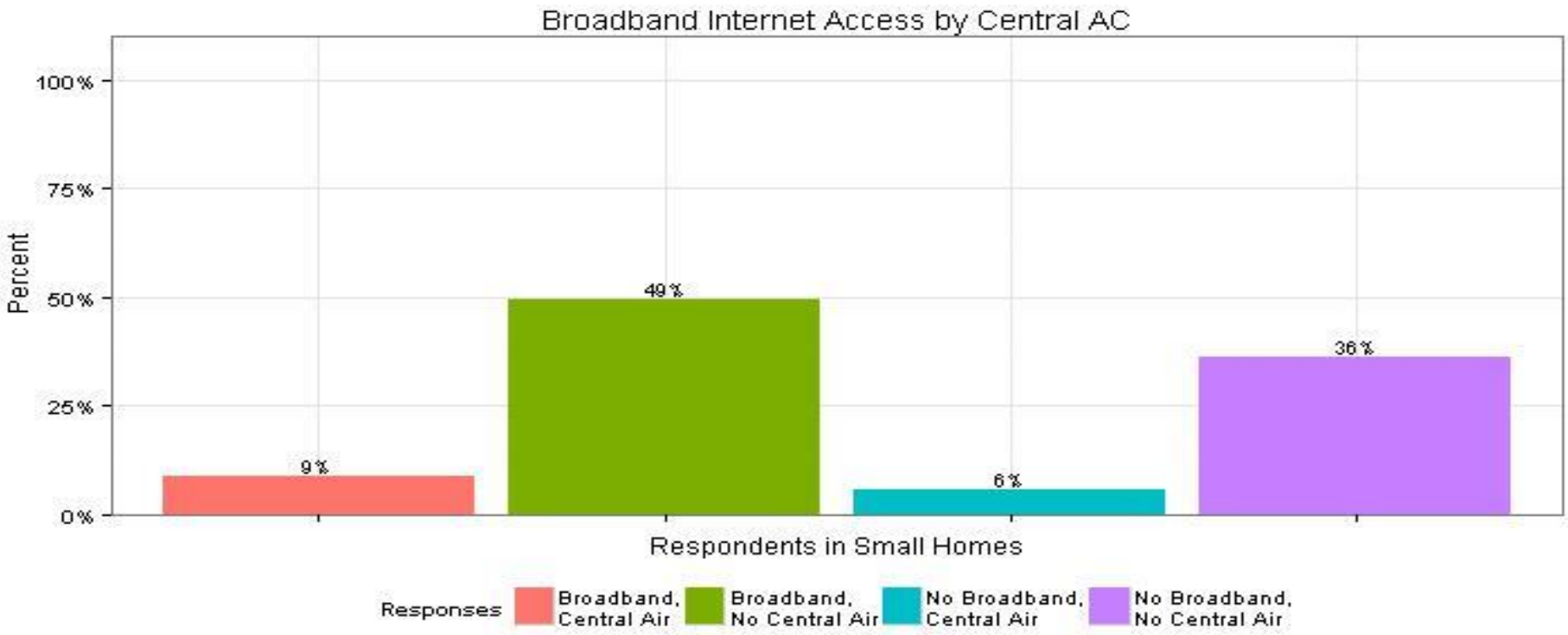
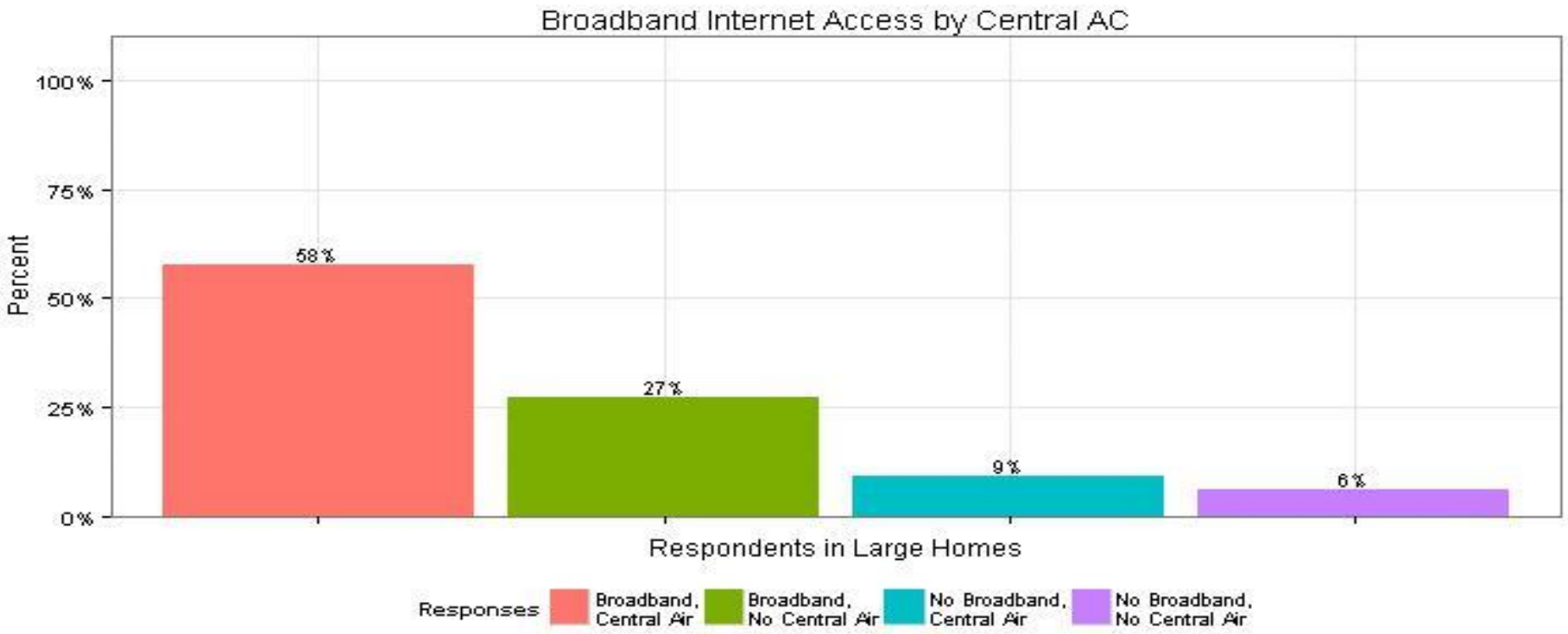
Broadband Internet Access by Central AC Seniors



Broadband Internet Access by Central AC Respondents in Small Homes



Broadband Internet Access by Central AC Respondents in Large Homes



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Boulder, CO 80302

303.728.2500 phone

NAVIGANT

Memorandum

To: **Marie Abdou, National Grid**

From: **Ken Seiden, Robin Maslowski, Mike Sherman, Brian Eakin, Melissa Chan**

Date: **April 25, 2014**

Re: **Smart Energy Solutions Pre-Pilot Survey Findings - Revised**

Attachments: **Pre-Pilot Survey Deck 20140425 - REVISED.pptx**

The purpose of this memorandum is to discuss the findings of the Smart Energy Solutions Pre-Pilot Survey and highlight implications for future pilot-related process evaluation activities. The remainder of this memorandum is organized as follows:

1. **Background:** Describes the population surveyed and the types of questions included in the survey instrument.
2. **Pre-Pilot Survey Findings:** Provides a summary of key findings from the survey.
3. **Pre-Pilot Survey Response Rates:** Provides a breakdown of the survey response rates.

A complete set of results for the Pre-Pilot survey, including breakouts by key demographic segments, can be found in an attached PowerPoint file that accompanies this memorandum, along with a separate PowerPoint deck summarizing additional findings.

Background

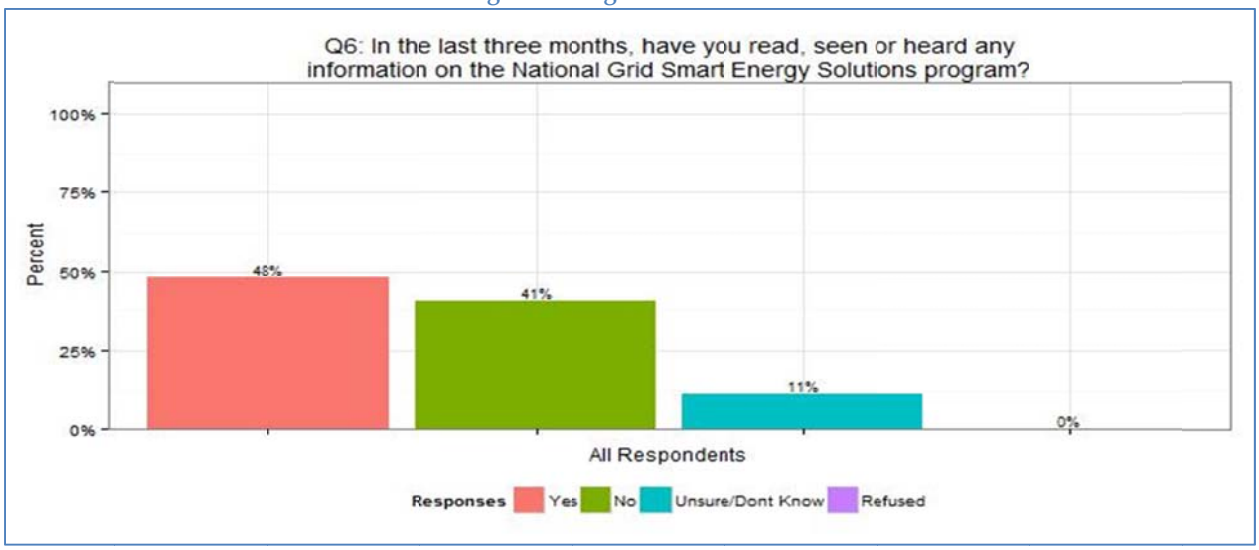
The Smart Energy Solutions Pre-Pilot survey was fielded to potential participants in the pilot from January 9, 2014 to February 12, 2014. The survey was available online along with in-bound and out-bound phone calls to a total population of 12,823 residential customers. A total of 1,470 residential customers completed the survey or approximately 11.5% of the eligible population. The survey contained questions about a wide range of topics including demographic information, pilot awareness and attitude, end-use appliance information, and energy usage habits. The survey was built upon the pre-pilot survey developed by the evaluation Collaborative under the Common Evaluation Framework for Smart Grid pilots under the MA Green Communities Act Section 85. With National Grid and DPU approval, some modifications were made to the survey to accommodate the Smart Energy Solutions Pilot.

Pre-Pilot Survey Findings

This section summarizes key highlights from the pre-pilot survey. As noted above, the more complete results can be found in the attached PowerPoint.

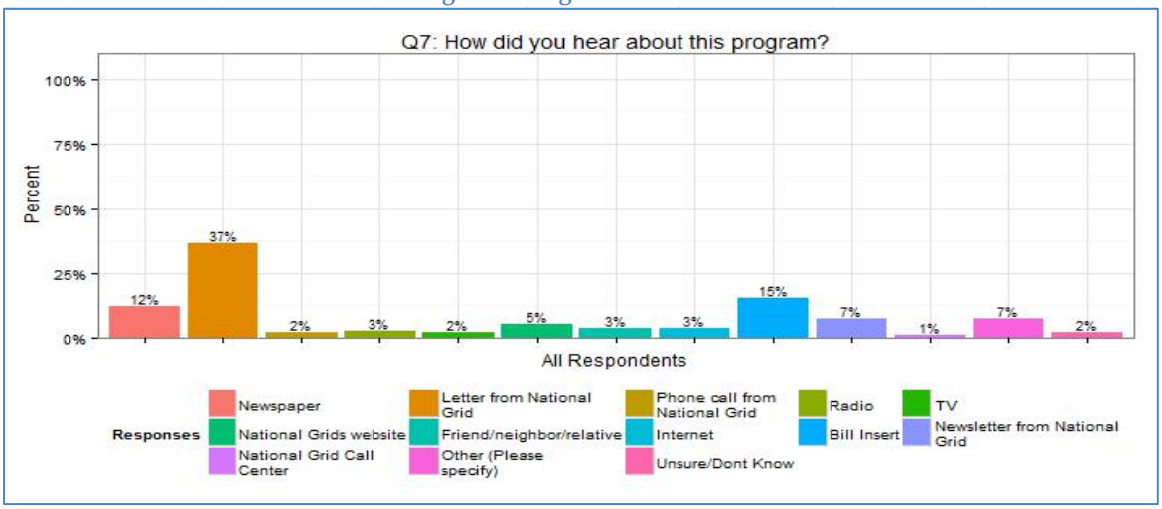
At the time of the survey, almost 50% of customers surveyed had read, seen, or heard information about the Smart Energy Solutions program within the last three months, as shown in Figure 1 below.

Figure 1: Program Awareness



The most common way that customers had heard about the pilot was from a National Grid communication (Letter or Bill Insert) (see Figure 2).

Figure 2: Program Awareness

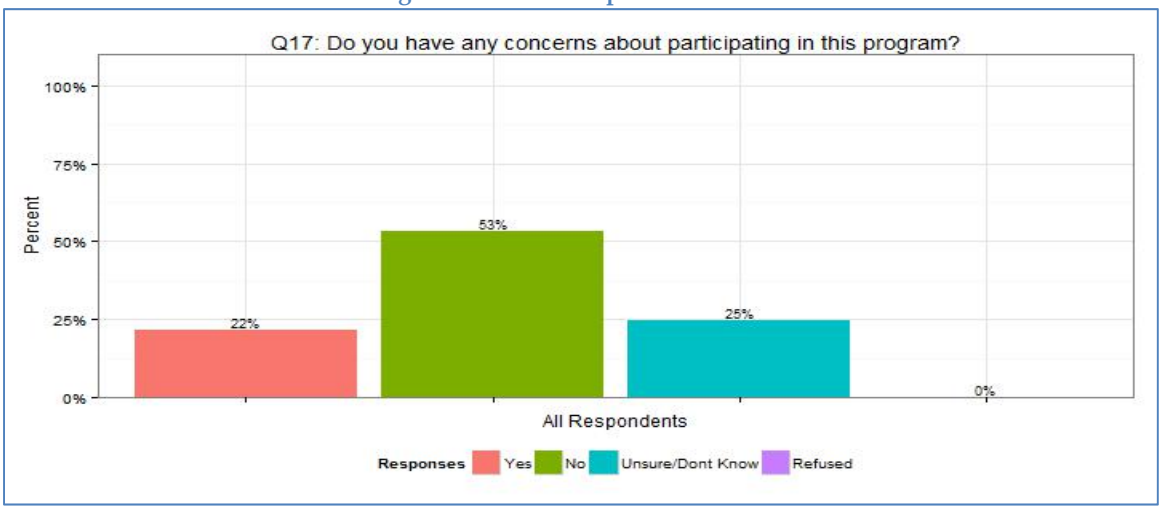


Within the customers' verbatim responses, many of the respondents made a common request for more information about the pilot. Also drawn from the verbatim responses, many respondents to the survey,

across all demographic segments, expressed an interest in participating in the pilot if it could provide them with a way to better manage their energy usage and decrease their monthly energy bill.

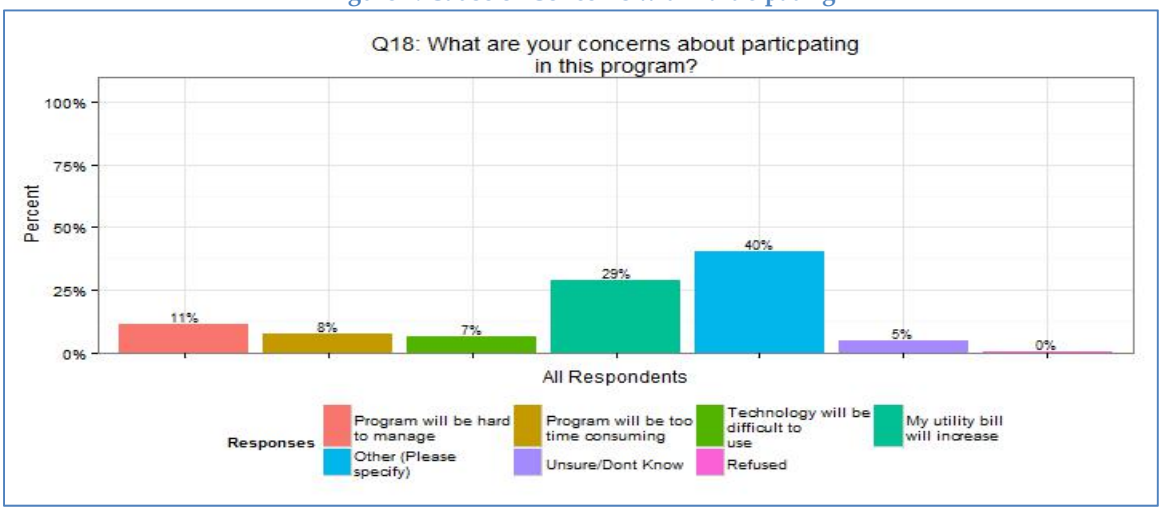
As shown in Figure 3, the majority of customers did not have any concerns about participating in the pilot.

Figure 3: Pilot Participation Concerns



Of the customers that did have concerns, the most common concern was with their bill increasing, as shown in in Figure 4. Verbatim responses showed a similar pattern and are represented in the "Other" category.

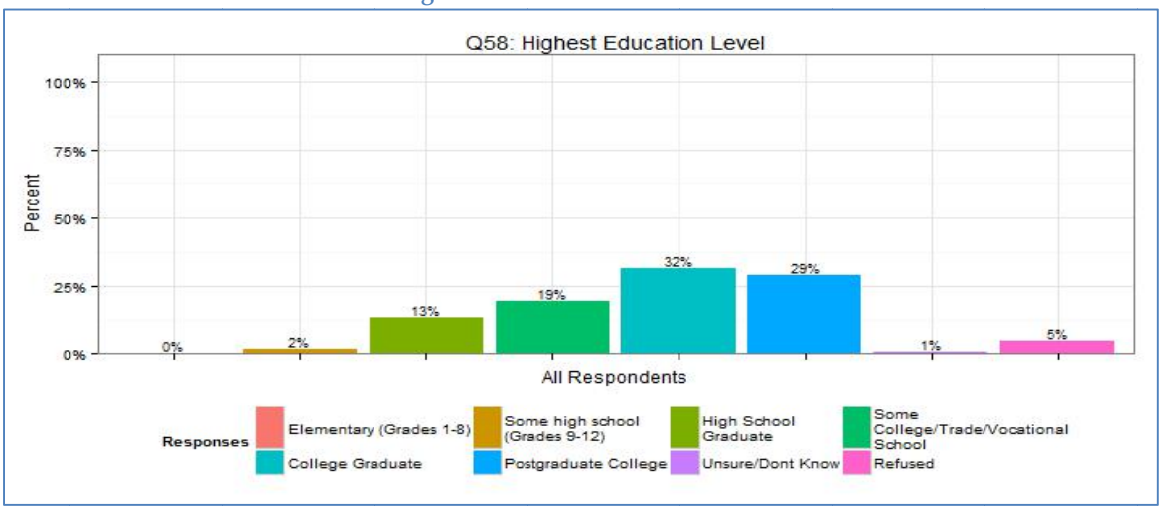
Figure 4: Cause of Concerns with Participating



The survey results also indicate a high level of educational attainment among survey respondents. As shown in Figure 5, over 60% of the respondents have graduated from college and nearly 30% have a postgraduate education. Furthermore, the responses to educational attainment were examined across other demographic segments (income level, electricity usage level, age, home size) and no statistically

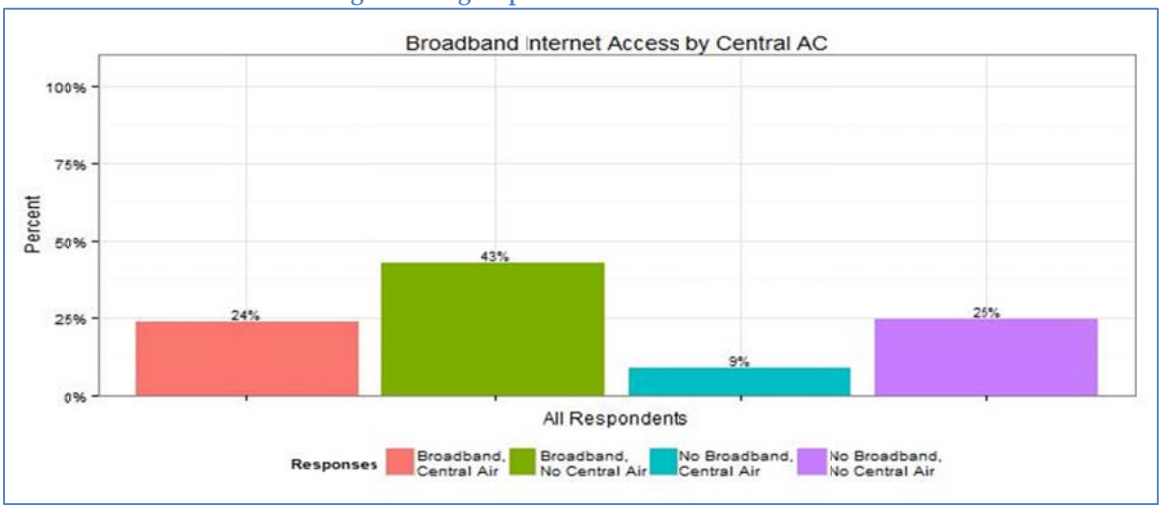
significant difference in the proportion of respondents with at least a college education was found. These are important characteristics to consider when comparing the results of the pre-pilot survey to other groups of customers participating in the pilot. Similarly, this may be an important consideration when extrapolating the overall pilot results to a larger population.

Figure 5: Educational Attainment



The majority of respondents (89%) have an internet connection in their home, with 75% of those respondents with internet having access to high speed internet.[1] Overall, approximately one-quarter of the respondents have both high-speed internet access and pay for central air conditioning (see Figure 6).

Figure 6: High-Speed Internet and Central AC



[1] As opposed to DSL, telephone modem, etc. For the purposes of this analysis, "high speed internet" is assumed to be broadband.

Pre-Pilot Survey Response Rates

The overall response rate of to the Pre-Pilot survey was approximately 11%. However, some of the contact information for residential customers was not valid and they were not able to be contacted regarding the survey. After adjusting for invalid addresses and phone numbers, the total response rate was approximately 12%. As shown in Table 1, the response rate across each segment of respondents was consistently between 9% and 14%.

Table 1: Pre-Pilot Survey Response Rates

Demographic Segment	Completed Surveys	Population	Response Rate
Low Income	170	1,756	10%
Medium Income	856	8,565	10%
High Income	347	2,502	14%
All Income	1373	12,823	11%
Low Usage	257	2,799	9%
Medium Usage	869	7,828	11%
High Usage	247	2,196	11%
All Usage	1373	12,823	11%
Senior	422	3,353	13%
Small Home	160	1,377	12%
Large Home	33	337	10%
Note: Survey populations do not account for customers with bad contact information. The total response rate is approximately 12% when bad contact information is removed from the sample.			

Response rates between 9% and 14% are acceptable for analyzing survey responses of the largest segments at an aggregate level, but the ability to achieve statistical significance rapidly diminishes as the responses are divided into sub-segments using additional demographic characteristics. The same situation will be true for rate and technology sub-segments unless a much higher response rate is achieved.

For the Large Home segment, the overall population from National's Grid demographic data is just 337 customers. This count is so small that we will not be able to attain statistically significant survey results at any level of disaggregation unless the response rate increases to approximately one-half of the Large Home segment's population, and even higher amounts for individual sub-segments within the Large Home category. This is a consequence of both the small population size itself and the sample properties of small populations. However, we are not concerned about this given the known overlap between high-usage homes and large homes. It will certainly be reasonable for National Grid to ascribe both impact and process evaluation finding from high-usage homes to customers with large square footage. Moreover, the large usage category will ultimately be a more accurate characteristic for future Smart Grid program targeting across the service territory.

NAVIGANT

Smart Energy Solutions Pilot

Post Installation Survey

Prepared for:
National Grid

nationalgrid

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Post Installation Survey

To be provided by National Grid:

1. Name
2. Property address
3. Pseudo Account Number or sequence number
4. Email address (If Available)
5. Phone number

SET UP AS ONLINE SURVEY
Thank you for taking part in the Smart Energy Solutions post-installation survey. Recently, a representative of National Grid visited your home to install a digital picture frame display that shows information about your electric use. Depending upon the technology package you chose from National Grid and the characteristics of your home, you may have also received other devices, such as a smart thermostat, a smart plug, or a load control device. We're asking for a few minutes of your time to tell us about your experience with the installation and to hear your suggestions on how we might improve the process.

ALTERNATE PHONE INTRO: Hello, this is (SURVEYOR NAME) from Bellomy Research calling on behalf of National Grid's Smart Energy Solutions Pilot. This is not a sales call or a call about a bill. We are calling participants in National Grid's Smart Energy Solutions Pilot program to ask you about the installation of specialized equipment recently installed in your home by National Grid. The specialized equipment consists of a digital picture frame display. Depending upon the technology package you chose from National Grid and the characteristics of your home, you may have also received other devices, such as a smart thermostat, a smart plug, or a load control device.

Your feedback about the installation is very important to National Grid. Your answers will not be reported individually. Instead we will report the responses of the whole group of customers who participate in this survey. The survey will take just a few minutes of your time.

(ANY CUSTOMER ASKING ANY DETAILED QUESTIONS ABOUT THE SURVEY SHOULD BE REFERRED TO THE NATIONAL GRID CALL CENTER AT XXX-XXX-XXXX.)

May I speak with [CONTACT_NAME] or another adult in your household (IF NOT AVAILABLE, ARRANGE A CALL BACK OR THANK AND TERMINATE)
(IF ANOTHER PERSON COMES TO THE PHONE, REPEAT INTRO TO HIM/HER)

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1. To start, were you present during the equipment installation on [DATE FROM NGRID RECORDS]?

    1. Yes
    2. No
    98. Refused
    99. Unsure/Don't Know

IF Q1=2, 99, ASK 1a.

1a. Is there another adult in the household who was present during the installation? If so, we would like to speak to that household member to get their first hand impressions of the installation. (IF ANOTHER PERSON COMES ON LINE, REPEAT THE INTRODUCTION. IF THE ANSWER IS STILL NO, THANK AND TERMINATE)

[**NOTE:** THERE ARE 5 SUMMARY QUESTIONS BELOW TO BE ANSWERED FOR DIRECT FEEDBACK TO THE INSTALLATION CONTRACTOR. MORE DETAILED QUESTIONS FOLLOW THAT SET].

To begin with, I'm going to ask you 5 brief questions about the installation process and then will go into further detail about the installation.

2. Did the technician arrive during your scheduled appointment window?
    a. No=Low,
    b. Yes=High
3. How would you rate the technician professionalism?
    a. Low=1,
    b. Average=2,
    c. High=3
4. What level of training did the technician provide?
    a. Low=1,
    b. Average=2,
    c. High=3
5. Did the technician leave installation material and ask if you had any questions before leaving?
    a. No=Low,
    b. Yes=High
6. What is your overall satisfaction rating for the installation?
    a. Low=1,
    b. Average=2,
    c. High=3

NAVIGANT

Thank you. That was very helpful. Now We would like to take a few more minutes to ask about those parts of the installation in more detail. Let's start with the scheduling process for the installation.

7. When you were contacted about the installation, how long did it take to schedule the installation, online or on the phone?

    1. A few minutes
    2. More than 10 minutes
    3. _____ Other
    98. Refused
    99. Unsure/Don't Know

8. Were the times available convenient for you?

    1. Very convenient
    2. Somewhat convenient
    3. Somewhat inconvenient
    4. Very inconvenient
    98. Refused
    99. Unsure/Don't Know

9. Did the installer appear on the agreed day and time?

    1. Yes
    2. No
    98. Refused
    99. Unsure/Don't Know

IF Q9="No" ASK Q10, OTHERWISE ASK Q11

10. If the installer did <u>not</u> appear at the day and time you expected, did the installer contact you? (PROMPT IF NEEDED)

    1. Installer contacted me and explained he was late
    2. Installer contacted me and said he had to cancel – rescheduled
    3. Installer contacted me and said he had to cancel – could not reschedule on that call
    4. Installer did not contact me
    5. I was not home
    98. Refused
    99. Unsure/Don't Know

NAVIGANT

11. If the installation was not performed on the scheduled day when was the visit rescheduled?

    1. Within a day
    2. Within a week
    3. Longer _____ (# days or weeks)
    98. Refused
    99. Unsure/Don't Know

Now I'd like to speak with you about the equipment National Grid installed in your home for the Energy Solutions pilot. We're not talking about the smart meter that was installed in your home in 2013.

12. According to our records the equipment installed in your home included [FROM DATABASE: <MEASURE 1>, <MEASURE 2>,<MEASURE 3>, <MEASURE 4>]. Was the equipment National Grid installed in your home the equipment you expected to receive?

    1. Yes (GO TO Q13)
    2. No (Go to Q12a THEN Q12b)
    98. Refused
    99. Unsure/Don't Know (GO TO Q13)

12a. What was different? (TAKE ALL)

    1. Expected a Smart Thermostat and it was not installed
    2. Expected a digital picture display and it was not installed
    3. Expected Load Control Device
    4. Expected a Smart Plug
    5. Other
    98. Refused
    99. Unsure/Don't Know

12b. What explanation did you get for the difference? (DON'T READ)

    1. They had installed all of that type of equipment in other homes and had no more
    2. There was a problem with my home that prevented installing the equipment
    3. There was a problem with the equipment.
    4. I don't have broadband internet
    5. Other
    98. Refused
    99. Unsure/Don't Know

NAVIGANT

13. Did the installer explain to you how the equipment worked?

    1. Yes, verbal explanation only
    2. Yes, verbal explanation and hands on demonstration
    3 No, there was no explanation or demonstration
    4. Other
    98. Refused
    99. Unsure/Don't Know

14. Were the explanations sufficiently clear that you could operate *all* of the installed equipment?

    1. They were very clear (GO TO Q17)
    2. They were somewhat clear
    3. They were unclear
    98. Refused
    99. Unsure/Don't Know

15. What aspects of the equipment's operation were not clearly explained? (TAKE ALL)

    1. Digital picture frame display
    2. Smart Thermostat
    3. Load Control Devices for your major appliances, like water heater or pool pumps
    4. Smart Plugs for room air conditioning or other smaller appliances
    5. Smart Energy Solutions Web Portal
    6. Smartphone app to monitor your electricity use
    7. Other
    98. Refused
    99. Unsure/Don't Know

16. Can you recall and describe what was unclear to you? (OPEN ENDED)

    1. Open: _____
    98. Refused
    99. Unsure/Don't Know

17. Did you ask any questions that the installer could not answer?

    1. Yes
    2. No
    98. Refused
    99. Unsure/Don't Know

IF Q17 = YES, ASK Q18, ELSE GO TO Q21

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18. What were the questions? –

    1. Open: _____
    98. Refused
    99. Unsure/Don't Know

19. Did the installer direct you to a call number, web site, or instruction manual where you could obtain answers?

    1. Yes
    2. No
    98. Refused
    99. Unsure/Don't Know

20. Have you since obtained the answers you needed? (PROMPT IF NEEDED)

    1. Yes
    2. No, but they are not important
    3. No, but I would still like an answer
    98. Refused
    99. Unsure/Don't Know

21. What instructional or educational materials were provided to you at the time of the installation? (TAKE ALL)

    1. Brochure
    2. Tips for using appliances when it's cheapest and avoiding expensive time periods
    3. Instruction sheet(s) about the equipment
    4. References to websites with detailed information
    5. Other: _____
    6. Nothing
    98. Refused
    99. Unsure/Don't Know

22. Have you reviewed these materials?

    1. Reviewed them thoroughly
    2. Reviewed briefly since the installation
    3. Reviewed them only at the time of the installation
    4. Have not reviewed them at all
    98. Refused
    99. Unsure/Don't Know

Now I'd like to know about the installer.

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23. Did installer identify himself or herself as working on behalf of National Grid.

    1. Yes
    2. No
    98. Refused
    99. Unsure/Don't Know

24. Did the installer show you identification?

    1. Yes
    2. No
    98. Refused
    99. Unsure/Don't Know

25. Was the installer dressed appropriately?

    1. Yes
    2. No
    98. Refused
    99. Unsure/Don't Know

26. Was the installer polite and respectful?

    1. Yes
    2. No
    98. Refused
    99. Unsure/Don't Know

27. Did the installer conduct himself or herself in a professional manner?

    1. Yes
    2. No
    98. Refused
    99. Unsure/Don't Know

28. Were there any language or other communication difficulties?

    1. Yes
    2. No
    98. Refused
    99. Unsure/Don't Know

The last few questions are focused on your satisfaction with the installation and with Smart Solutions Pilot so far.

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29. On a scale of 1-10, where 1 is completely unsatisfied and 10 is completely satisfied, how satisfied are you with:

    1. Keeping to the scheduled appointment time
    2. Time it took to complete the installation
    3. Quality of the installation
    4. Explanations about how the equipment worked
    5. Installer's professionalism and courtesy
    6. Cleanliness of the site after the work was completed
    7 Usefulness of the informational materials left behind
    8. Resolution of any installation or other problems
    9. Directions for getting help with the equipment or other questions about the pilot program
    10. Overall satisfaction with the installation process
    98. Refused
    99. Unsure/Don't Know

30. Do you have any other comments on the installation process or the Energy Solutions Program as you've experienced it so far? We are particularly interested in things you think National Grid could do to improve the pilot program experience for customers like yourself.

    1. Open: _____
    98. Refused
    99. Unsure/Don't Know

31. Your individual answers to this survey are confidential. However, because we are trying to ensure the highest quality installation work and customer satisfaction, we would like to be able to contact some customers directly for further discussion about the installation process. If you provide permission, we may contact you on another occasion about the installation.

    May we have your permission to contact you again about this installation?

    1. Yes
    2. No

32. (IF YES), can you provide us with the best contact information for you?

    a. Name:
    b. Address:
    c. Preferred telephone Number:
    d. Preferred time of day for phone contact:
    e. Email:
    f. REFUSED

(IF NO) Thank you very much for taking the time to answer these questions.

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Demographics

Now we would like to turn to several questions about your household. (IF RESPONDENT SAYS THEY HAVE BEEN ASKED THOSE QUESTIONS VERY RECENTLY, THANK AND GO TO THE SURVEY CLOSE.

32. Which one of these options best describes this residence? *Please select one only.*
    1. Single-family detached house
    2. Townhouse, duplex, or row house (shares common wall with neighboring unit from basement to roof)
    3. Apartment (either rent or own) (2-4 units)
    4. Apartment (either rent or own) (5 or more units)
    5. Mobile home or trailer ("manufactured home")
    6. Other (PLEASE SPECIFY)
    98. Unsure/Don't Know
    99. Refused

33. Which one of these options best describes this residence? *Please select one only.*
    1. This is my permanent year-round residence
    2. This is my partial-year or seasonal residence
    3. This is my vacation home and generally used only by my family
    4. This is a vacation rental home
    5. Other (PLEASE SPECIFY)
    98. Unsure/Don't Know
    99. Refused

34. Which one of these options best describes the exterior of this residence? *Please select one only.*
    1. Wood
    2. Cement
    3. Aluminum siding
    4. Stucco
    5. Brick
    6. Other (PLEASE SPECIFY)
    7. Vinyl / Vinyl siding
    98. (DO NOT READ) Unsure/Don't Know
    99. (DO NOT READ) Refused

[IF Q34 = 2, 3, OR 4 CONTINUE, OTHERWISE SKIP TO Q36.]

35. Please indicate the months this partial-year or vacation home is typically occupied by your family and/or renters. *Please select all that apply.*
    1. Jan

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2. Feb
3. Mar
4. Apr
5. May
6. Jun
7. Jul
8. Aug
9. Sep
10. Oct
11. Nov
12. Dec
98. Unsure/Don't Know
99. Refused

36. How many square feet of living space are there in this residence, including bathrooms, foyers, and hallways? Please exclude unheated rooms and garages. If you live in an apartment building, please answer for the living space considered "your home." *Please select one only.*

1. Less than 500
2. 500-999
3. 1,000 – 1,499
4. 1,500 – 1,999
5. 2,000 – 2,499
6. 2,500 – 2,999
7. 3,000 – 3,499
8. 3,500 – 3,999
9. 4,000 – 4,999
10. Greater than 5,000
98. Unsure/Don't Know
99. Refused

37. How many rooms are in this residence? Please exclude bathrooms, halls, pantries, unheated rooms, and garages. *Please use "98" for Unsure/Don't know and "99" if Refused.*

1. _____ **[ENTER # OF ROOMS]**

38. Approximately what year was this residence built? *Please use "9998" for Unsure/Don't know and "9999" if Refused.*

1. _____ **[ENTER YEAR]**
98. Unsure/Don't Know
99. Refused

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**38_CODE. [PROGRAMMER: PLEASE AUTO PUNCH Q38_CODE WITH THE FOLLOWING CODES BASED ON
THE ANSWER AT Q38.]**

1. Before 1930
2. 1930-1939
3. 1940-1949
4. 1950-1959
5. 1960-1969
6. 1970-1979
7. 1980-1989
8. 1990-1999
9. 2000-2002
10. 2003-2004
11. 2005-2006
12. 2007 or after
98. Unsure/Don't Know
99. Refused

[IF Q38 = 1 CONTINUE, OTHERWISE SKIP TO Q40.]

39. How long has this been your permanent, year-round residence? *Please select one only.*
    1. Less than 1 year
    2. 1-3 years
    3. 4-10 years
    4. 11-20 years
    5. Over 20 years
    98. Unsure/Don't Know
    99. Refused

40. What age is the head of household? If two share this role, please use the average. *Please select one only.*
    1. Under 30 years
    2. 30-39 years
    3. 40-49 years
    4. 50-59 years
    5. 60 years and older
    98. Unsure/Don't Know
    99. Refused

41. Please select the range that best describes this household's gross income for 2013 (before adjustments for taxes and credits). Please include all sources of income such as salaries, wages, rent, interest, dividends, pensions, and social security.

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1. Less than $10,000
2. $10,000 - $17,999
3. $18,000 - $29,999
4. $30,000 - $49,999
5. $50,000 - $74,999
6. $75,000 - $99,999
7. $100,000 - $149,999
8. More than $150,000
98. Unsure/Don't Know
99. Refused

42. What is the highest level of education completed by any head of household in this residence?

1. Elementary (Grades 1-8)
2. Some high school (Grades 9-12)
3. High School Graduate
4. Some College/Trade/Vocational School
5. College Graduate
6. Postgraduate College
98. Unsure/Don't Know
99. Refused

43. For each of the following age groups, how many people, including you, usually live in this residence?

Please exclude anybody away for more than half the year.

1. _____ **[ENTER #]** Infant (less than 1 year old)
2. _____ **[ENTER #]** 1-6 years old
3. _____ **[ENTER #]** 7-18 years old
4. _____ **[ENTER #]** 19-24 years old
5. _____ **[ENTER #]** 25-34 years old
6. _____ **[ENTER #]** 35-44 years old
7. _____ **[ENTER #]** 45-54 years old
8. _____ **[ENTER #]** 55-59 years old
9. _____ **[ENTER #]** 60-64 years old
10. _____ **[ENTER #]** 65-70 years old
11. _____ **[ENTER #]** 70 years old and older
98. Unsure/Don't Know
99. Refused

44. Does anybody in this residence require electricity to operate critical medical equipment, such as breathing machines, kidney or dialysis pumps, or other medically prescribed devices?

1. Yes
2. No
98. Unsure/Don't Know

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99. Refused

45. What is the primary language spoken in this residence?
[ALPHABETIZE LIST]
1. English **[FIXED]**
2. Russian
3. French
4. Portuguese
5. Spanish
6. Vietnamese
7. Chinese
8. Italian
9. Other (PLEASE SPECIFY) **[FIXED]**
98. Unsure/Don't Know **[FIXED]**
99. Refused **[FIXED]**

This ends the questions about installation of Smart Energy Solutions equipment in your home. Thank you for completing the survey for us and providing your observations and insights about this part of the program.