



---

# **National Survey of Mobile Home Owners**

---

**An AARP Survey  
Conducted May 21 - June 3, 1999  
Released July 21, 1999**

AARP is the nation's leading organization of people age 50 and older. It serves their needs and interests through information and education, research, advocacy and community services which are provided by a network of local chapters and experienced volunteers throughout the country. The organization also offers members a wide range of special benefits and services, including *Modern Maturity* magazine and the monthly *Bulletin*.

© 1999, AARP  
601 E Street, NW, Washington, DC 20049  
[www.aarp.org](http://www.aarp.org)  
All rights reserved.  
Reprinting permitted with attribution.

This study was conducted by NFO Research, Inc. for AARP. For more information, contact Linda Fisher, AARP Research Group, 202-434-6304.

# Table of Contents

<b>Executive Summary</b> .....	<b>4</b>
<b>Background and Methodology</b> .....	<b>7</b>
<b>Detailed Findings</b> .....	<b>9</b>
<b>Profile of Mobile Home Owners and Their Homes</b> .....	<b>9</b>
<b>Problems Reported with Mobile Homes</b> .....	<b>13</b>
<i>All Problems</i> .....	<b>14</b>
<i>Problems of Most Concern</i> .....	<b>17</b>
<i>Dealing with Problems of Most Concern</i> .....	<b>18</b>
<i>Installation of Mobile Homes</i> .....	<b>25</b>
<b>Conclusions</b> .....	<b>27</b>
<b>Appendices:</b>	
<b>A. Annotated Questionnaire</b> .....	<b>29</b>
<b>B. Methodology</b> .....	<b>46</b>
.	

# Executive Summary

## *Purpose and Method*

From May 21 to June 3, 1999, National Family Opinion Research (NFO), under contract to AARP, conducted a telephone survey of 933 mobile home owners who had purchased new mobile homes within the past eight years. The survey sample was drawn from a nationally representative panel of approximately 35,000 adults whose mobile home is their primary residence.

The purpose of the survey was to document the extent to which home owners have experienced problems with the construction and/or installation of their mobile homes, and to explore how they dealt with and/or resolved these problems. The survey focused on a list of problems derived from regulatory standards in existing legislation. *Note:* The construction and installation problems discussed in this report rely solely on respondents' identification and attribution of problems, and have not been validated by any physical investigation.

A plurality of the mobile homes discussed in this survey were two to four years old (46%). Four in ten were five-to-eight years old, and 14% were less than two years old. Over half (55%) of the home owners paid less than \$35,000 for their home, while 43% paid \$35,000 or more. Older home owners (those 50 or older) were more often in the latter category. Almost all respondents (95%) said that they received a warranty with their purchase. About four in ten had a one-year warranty, while almost as many (36%) had two-to-five year warranties.

## *Key Findings*

### *Problems Reported with Homes*

- Seventy-seven percent of mobile home owners reported at least one problem with the construction, installation, systems, or appliances of their homes. Those who paid under \$35,000 for their homes generally reported more problems than those with more expensive homes.
- The most frequently mentioned problems home owners had with their homes were: interior fit or finish, such as cabinets, etc. (37%); improper fit (or leaks) in doors or windows (35%); and problems with actual construction such as cracks or separation of walls (31%).

- Six in ten (61%) of the problems of greatest concern occurred during the first year of ownership, while another 14% occurred during the second year, and 14% during years three through five.

### ***Installation of Homes***

- Over eight in ten mobile homes (81%) were installed on blocks or piers with anchors or tie-downs. Fifteen percent said they experienced problems with set-up or installation of the home. This type of problem was more frequent in newer and more costly homes. Other problems *resulting from* faulty installation accounted for one-fifth of the problems of most trouble or concern for the home owner.

### ***Resolution of Problems***

- About half (54%) of the problems of most concern to home owners entailed out-of-pocket repair costs for home owners averaging \$1,140 per problem. Average out-of-pocket repairs ranged from a low of \$420 to a high of \$2,240, depending on the type of problem.
- In 40% of attempts to use warranties to resolve problems, home owners were unsuccessful.
- For all problems of top concern for home owners, about one-third (35%) were repaired under warranty. For 31% of the problems, the home owner fixed it at his/her expense, and for another 30% of the problems, nothing was done at all (problem still exists).
- The reasons most often given for unsuccessful attempts to use the warranty were that respondents did not get a response to their calls, or the dealer would not honor the warranty (21%), the problem recurred or was not fixed properly the first time (17%), the warranty had expired (17%), or they were told the problems were not covered under warranty (16%).

### ***Satisfaction Levels***

- Home owners' satisfaction with the quality of construction of their homes averages 4.0 (on a five-point scale where '1' is *very dissatisfied* and '5' is *very satisfied*). However, these average ratings vary significantly by whether or not a problem is reported, and by the type of problem reported.

- About half (49%) of the total problems reported had a less than satisfactory outcome in attempts to resolve them. Problems reported by those with only a one-year warranty had less than satisfactory resolutions more often than those of homes with longer warranties.

### ***Implications of the Findings***

National Family Opinion's national research panel allowed the random selection of a large sample of mobile home households from a representative pool of these households to satisfy the requirements of the present survey. From this nationally representative sample of mobile home owners, NFO interviewed those who had purchased homes within the past eight years. This survey is thus a source of unique information about mobile home owners with homes that are the newest and theoretically the best-constructed to date. (See Appendix B).

Mobile home structural or installation problems appear to be pervasive, with only a few of them attributed by owners to simple everyday wear and tear. The owners of mobile homes experienced widespread problems in areas that are subjects of regulatory standards under current legislation. Additionally, although many of the most troublesome problems emerged for home owners in the first year of ownership, while warranty coverage was presumably still in effect, the data suggest that there is a degree of difficulty in invoking warranties, for a variety of reasons. Moreover, those whose structural problems surfaced after warranties had expired had basically no recourse in resolving some very serious structural deficiencies, except to pay for expensive repairs or let the problem go unresolved. In this survey, nearly half of the problems which most concerned respondents entailed out-of-pocket costs for them averaging \$1,140 per problem.

Mobile home owners do not appear to be excessively critical of the structure of their homes. Satisfaction with construction does drop dramatically, however, when a problem appears, and even more when more than one problem is reported. Moreover, there is a core of home owners whose problems were so devastating that they readily admitted being very unhappy with their purchase. These problems tend less often to be problems with the home's systems (like plumbing or heating/cooling), but more often are major problems related to construction or installation, with homes sliding off foundations, or roofs/floors caving in.

Owning a mobile home has long been a way of gaining entree into a housing market that may be otherwise financially restrictive. However, efforts must be made to strike a balance between keeping this housing affordable for consumers while not compromising the quality and safety of the structures themselves.

# Background and Methodology

## *Background*

In the U.S., mobile homes (or manufactured housing) represent more than one-third of single-family homes sold nationwide. Mobile homes provide housing for approximately 7% of the population, as owners or renters.<sup>1</sup> According to U.S. Census data (CPS, 1998), 44% of mobile home owners are age 50 and older. Since the 1960s, a variety of state and federal legislation and regulation has been enacted to insure quality and safety standards for the manufacture and installation of this housing. However, the National Conference of States on Building Codes and Standards (NCSBCS) notes:

“Like any industry and its regulatory system . . . the manufactured home program is not problem free. The consistent production of safe, durable, and affordable manufactured homes requires periodic, systematic reviews and, when needed, reforms to ensure that the obligations shared by government and industry to the public are met.”<sup>2</sup>

From May 21 to June 3, 1999, National Family Opinion Research (NFO), under contract to AARP, conducted a telephone survey of mobile home owners who had purchased mobile homes within the past eight years. The survey sample was drawn from a nationally representative panel of approximately 35,000 adults whose mobile home is their primary residence.

The purpose of the survey was to document the extent to which home owners have experienced problems with the construction and/or installation of their mobile homes, and to explore how they dealt with and/or resolved these problems.<sup>3</sup> The survey focused on a list of problems derived from regulatory standards in existing legislation. *Note:* The construction and installation problems discussed in this report rely solely on respondents' identification and attribution of problems, and have not been validated by any physical investigation.

---

<sup>1</sup> National Conference of States on Building Codes and Standards, Inc. (NCSBCS), “25 Years of Federal-State Partnership to Fulfill the Public Trust, A Review of the States' Role in the Oversight and Regulation of Manufactured Homes,” A Report to the National Governors' Association, July 1999, p. i.

<sup>2</sup> *Ibid.*, NCSBCS, 1999, p. v.

<sup>3</sup> The list of possible problems was derived from Part 3280 of the Federal Manufactured Home Construction and Safety Standards. Federal manufactured home construction and safety standards mean a reasonable standard for construction, design, and performance of a manufactured home which meets the needs of the public, including the need for quality, durability, and safety. [58 FR 55002, October 25, 1993.]

## *Methodology*

A telephone survey of 933 mobile home owners nationwide was conducted between May 21 and June 3 by National Family Opinion (NFO) in Atlanta, Georgia. The sample was drawn from a nationally representative panel of approximately 35,000 adults whose mobile home is their primary residence. The final sample of 933 adults 18 years of age and older was derived by random dialing of the NFO panel households, and computer call-back technique. “Mobile Home” and “manufactured housing” were defined to mean the same thing for purposes of the survey.

The end sample reflects the total universe of households that own a mobile home purchased during the last eight years. Based on a sample of 933 respondents, the survey has a sampling error of plus or minus 3 percent. Percentages in this report may not add to 100 percent due to rounding, non-response, or because of multiple responses to a single question. A copy of the survey instrument can be found in Appendix A. Further details on final sample derivation can be found in Appendix B of this report.



## Detailed Findings

### Profile of Mobile Home Owners and Their Homes

#### *Key Demographics of Mobile Home Owners*

Table 1 provides a demographic profile of the mobile home owners in this survey.

**Table 1. Mobile Home Owner Profile**

<b><i>Household Income:*</i></b>		<b><i>(n=933)</i></b>
Under \$15,000		15%
\$15,000-\$29,999		35%
\$30,000-\$49,999		33%
\$50,000-\$74,999		13%
\$75,000 Or more		5%
<b><i>Regions:</i></b>	<b><i>Survey (n=933)</i></b>	<b><i>(U.S. Census*)</i></b>
Northeast	8%	8%
Southeast	50%	43%
Midwest	9%	12%
Southwest	23%	23%
West	10%	14%
<b><i>Education**</i></b>		
<b><i>Female Head of Household:</i></b>		<b><i>(n=904)</i></b>
High School Or Less		47%
Some College		42%
College Degree		10%
<b><i>Education**</i></b>		
<b><i>Male Head of Household :</i></b>		<b><i>(n=752)</i></b>
High School Or Less		56%
Some College		35%
College Degree		7%

*Source: 1999 AARP National Survey of Mobile Home Owners*

*\*Derived from state-by-state figures on mobile homes, 1998 Current Population Survey, March Supplement.*

*\*\*Comparative income statistics for all U.S. households (U.S. Census, 1997) are: Under \$15,000: 19%; \$15,000 to \$49,999: 44%; \$50,000+: 37%. Comparative household education data (both sexes): High School or less: 52%; Some college: 24%; College or graduate degree: 24%.*

**Income.** Half of all respondents reported incomes under \$30,000 (15% under \$15,000). Fewer than two in ten (18%) earn more than \$50,000, while one-third (33%) reported incomes between \$30,000 and \$50,000. Compared to the U.S. population as a whole, these homeowners are far less likely to be in the \$50,000+ income category (18% vs. 37%).

**Education.** Among adult male household heads in the sample, 56% have a high school degree or less, 42% have some college or an Associates' degree, and 7% have four-year college or graduate degrees. Among adult female household heads, 47% have high school education or less, 42% have some college or an Associates' degree, and 10% have four-year college or graduate degrees. In comparison to the U.S. population as a whole, these respondents are far less likely to have a college or professional degree (7% to 10% in this sample of mobile home owners, compared to 24% nationally).

**Age.** About one-third (31%) of respondents are 50 years of age or older (12% age 65 and older and 19% age 50-64), while slightly over two-thirds (69%) are under age 50.

**Household Composition.** Three-quarters of respondent households are married couple households, 15% are single-person households (no children), 9% are male (no wife) or female (no husband) with child or other relative, and 2% were non-relatives living together. Older households (50+) are more often females living alone compared to households under age 50 (27% vs. 5%), and these females living alone have disproportionately lower income (64% have incomes under \$25,000, compared to only 19% of husband/wife households).

**Geographic Region.**<sup>4</sup> Half of the mobile home households in this survey are located in the Southeast Region (50%), and about another one-quarter are located in the Southwest Region (23%). Nine percent are in the Midwest, 10% in the West, and 8% in the Northeast.

---

<sup>4</sup> The region break-outs referred to in the report represent AARP regions: **Northeast:** Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; **Southeast:** Alabama, D.C., Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, Virginia, Virgin Islands, and West Virginia; **Midwest:** Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, North Dakota, Nebraska, South Dakota, Wisconsin; **Southwest:** Arizona, Arkansas, Colorado, Kansas, Louisiana, Missouri, New Mexico, Oklahoma, Texas, Utah; **West:** Alaska, California, Guam, Hawaii, Idaho, Montana, Nevada, Oregon, Washington, Wyoming.

## *Characteristics of Mobile Homes*

Table 2 shows some particulars of the mobile homes discussed in the survey. About 14% of them were less than two years old at the time of the survey, while 46% were two to four years old, and 40% were five to eight years old.

About one-quarter of home owners (24%) paid a price of under \$25,000 for their homes. Thirty-one percent paid from \$25,000 to under \$35,000; 18% paid from \$35,000 to under \$45,000; and another one-quarter paid \$45,000 or more. Homes in the West region were the most likely to have cost \$45,000 or more (60%), while homes in the Southeast were most likely to have cost the least (31% under \$25,000). More older home owners paid over \$35,000 for their homes than younger (50% vs. 40%). Almost all (95%) reported that set-up or installation of the home was included in the purchase price.

About nine in ten of those interviewed (89%) said they received a consumer information manual/package at the time of purchase from the manufacturer on the installation and operation of the mobile home, although those who purchased homes under \$25,000 more often did *not* receive such information (10% vs. 5% of

<b><i>Mobile Home Type:</i></b>	<b>(n=933)</b>	<b><i>Age Of Mobile Home:</i></b>	<b>(n=933)</b>
Single Wide	50%	1999-1998	14%
Double Wide	50%	1997-1995	46%
		1994-1991	40%
<b><i>Mobile Home Location:</i></b>	<b>(n=933)</b>	<b><i>Cost Of Mobile Home:</i></b>	<b>(n=933)</b>
On A Private Lot	69%	Less Than \$25,000	24%
On A Rental Space	31%	\$25,000-\$34,999	31%
<b><i>Warranty Coverage:</i></b>	<b>(n=933)</b>	\$35,000-\$44,999	18%
Yes	95%	\$45,000 Or More	25%
<b><i>Warranty Length:</i></b>	<b>(n=886)</b>	<b><i>Setup Included In Cost:</i></b>	<b>(n=933)</b>
1 Year	39%	Yes	95%
2-5 Years	36%	<b><i>Consumer Info Received:</i></b>	<b>(n=933)</b>
6 or More Years	11%	Yes	89%
DK/Refused	15%		
<b><i>Mobile Home Insurance:</i></b>	<b>(n=933)</b>		
Yes	97%		

*Source: 1999 AARP National Survey of Mobile Home Owners*

those with homes costing \$45,000 or more). Fewer than half (41%) said they were aware of how to contact the government officials who regulate the manufactured housing industry. Again, those most likely *not* to know how to make this contact are those with the least expensive homes (67%) compared to those with the most expensive ones (48%). Home owners age 50 and older reported greater awareness of how to contact government regulators (49% vs. 38% of those under age 50).

Homes were equally likely to be single wide and double wide (50% each). Those 50 and older owned double-wides more often than younger respondents (56% vs. 47%), and those with incomes greater than \$50,000 were far more likely to own double wides than other income groups (73% compared to just 34% of those earning under \$25,000 and 50% of those with incomes between \$25-\$50,000). Double wides were more often on private lots than single wides (79% vs. 58%). Newer homes (less than 2 years old) were more often double wides than homes purchased five to eight years ago (65% vs. 48%). Westerners disproportionately owned double wides (83%).

Most homes were located on private lots (69%) as compared to rental spaces (31%), but those with incomes of \$25,000 or less were more likely to have their homes on a rental space (38%) than those with incomes of \$25-\$50,000 (30%) or \$50,000+ (22%). Those in the Southeast and Southwest regions were also more likely to have homes on private lots (79% and 73%) compared to those in the Northeast (45%), Midwest (38%), and West (59%).

Eight in ten respondents (81%) reported that their home is installed on blocks with anchors or tie-downs, while 11% are on a permanent masonry foundation. Few (6%) are on blocks without anchors/tie-downs. Those who paid more for their homes (\$35,000+) are more likely to have them on permanent masonry foundations than those who paid less than \$35,000 (15% vs. 7%). In the Southeast and Southwest regions, homes are more often tied down (87% and 83%) than in the Northeast (57%) and West (54%).

Among the mobile home owners sampled, almost all of them (95%) received a warranty with the purchase of their homes. Only 3% did not. Homes which cost over \$35,000 were slightly more likely to be covered by warranty than those costing less than \$25,000 (97% vs. 91%). For 39% of those with warranties, the length of the warranty was 1 year; 2-5 years for 36% of them, and 6 or more years for 11%. Fourteen percent did not know the length of their warranty. The mean length of time of warranty coverage was 3.9 years. Older persons (age 50+) tended to have significantly longer average warranty coverage than those under 50 (4.9 years vs. 3.6 years).

Almost all reported that the warranty covered manufacturing defects (93%), while somewhat fewer reported that it covered defects caused by transportation (81%) and defects caused by installation (81%). Those with incomes under \$25,000 were less likely to be covered for any of the three types of defects than those with incomes between \$25-\$50,000 (88% vs. 95% for manufacturing defects, 77% vs. 83% for transportation, and 75% vs. 84% for installation). Longer warranty coverage (2 or more years) was also associated with coverage of installation damage (85% of those with 2-5 year warranties had installation coverage vs. 77% of those with 1-year warranties).

Ninety-seven percent of mobile home owners said they have home owners' insurance on their homes. Those whose homes cost less than \$35,000 were more often without insurance than those whose homes cost \$45,000 or more (4% vs. less than .5%). Those with the lowest incomes were most likely to be uninsured (6% vs. 2% of those in the \$25-\$50,000 income range and none of those above \$50,000).

Almost nine in ten respondents said that the dealer who sold them the mobile home is still in business (86%). Understandably, those with homes two or more years old said their dealer is no longer in business more often than those with newer homes (13% vs. 3%).

### **Problems Reported with Mobile Homes <sup>5</sup>**

Two approaches were implemented in the survey to explore construction and installation problems home owners may have experienced with their homes since purchase. First, a list of 12 general types of problems was read to respondents, who were asked if they had experienced any of them. This survey item also allowed respondents three opportunities to volunteer problems not on the list.

Second and subsequently, respondents were given three opportunities to describe, unaided, particular problems which were of most concern or most troublesome for them. For each of the unprompted problems mentioned, respondents were asked a series of questions including:

- How soon after purchase they became aware of the problem

---

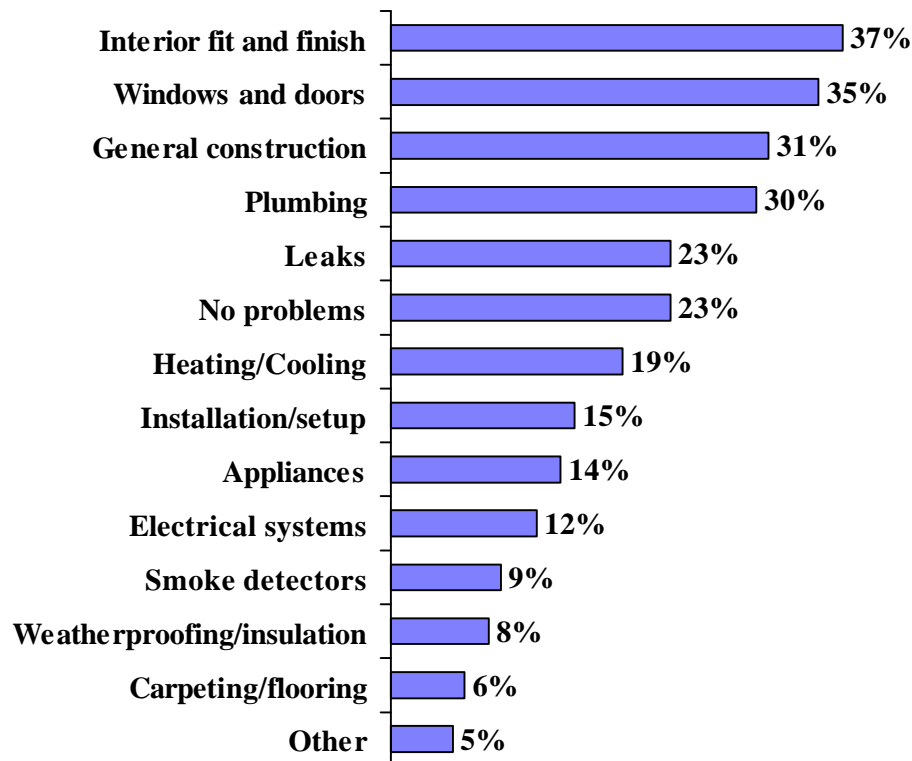
<sup>5</sup> The list of possible problems was derived from Part 3280 of the Federal Manufactured Home Construction and Safety Standards. Federal manufactured home construction and safety standards mean a reasonable standard for construction, design, and performance of a manufactured home which meets the needs of the public, including the need for quality, durability, and safety. [58 FR 55002, October 25, 1993.]

- If the problem was caused during manufacture, transportation, or installation
- Where they first went to resolve the problem
- Whether or not they attempted to use their warranty to resolve the problem and if so, whether or not they were successful
- If and how the problem was ultimately fixed or resolved
- How much they spent in out-of pocket costs to fix the problem
- How satisfied they were with the resolution of the problem

### ***All Problems***

Over three-quarters (77%) of mobile home owners reported at least one problem with the construction, installation, systems or appliances of their homes. Fifty-seven percent cited two or more problems on this list, and twenty-three percent reported no problems. Older home owners (50+) were more likely to report having had no problems than those under age 50 (35% vs. 18%). Also those with a warranty of six years or more were more likely to have reported no problems (39%) than those with warranties of one year (14%) or two-to-five years (22%).

**Figure 1. Reported Problems with Mobile Homes**  
(n=933 Home Owners)



*Q 12. I'm going to list some kinds of problems some people have had with their homes, and I'd like to know if you have had any of these types of problems. Have you had any problems with . . . ?*

Source: 1999 AARP National Survey of Mobile Home Owners

The most frequently mentioned problem home owners reported is interior fit and finish problems (mentioned by 37%), followed by problems or leaks with the fit of doors and windows (35%) and problems with construction, including cracks or separation of the walls (31%). (See Figure 1). Least frequent mentions were of faulty flooring or carpeting (6%) or of problems with insulation/weatherproofing (8%). Problems of improper installation or set-up of the home were mentioned by 15%.

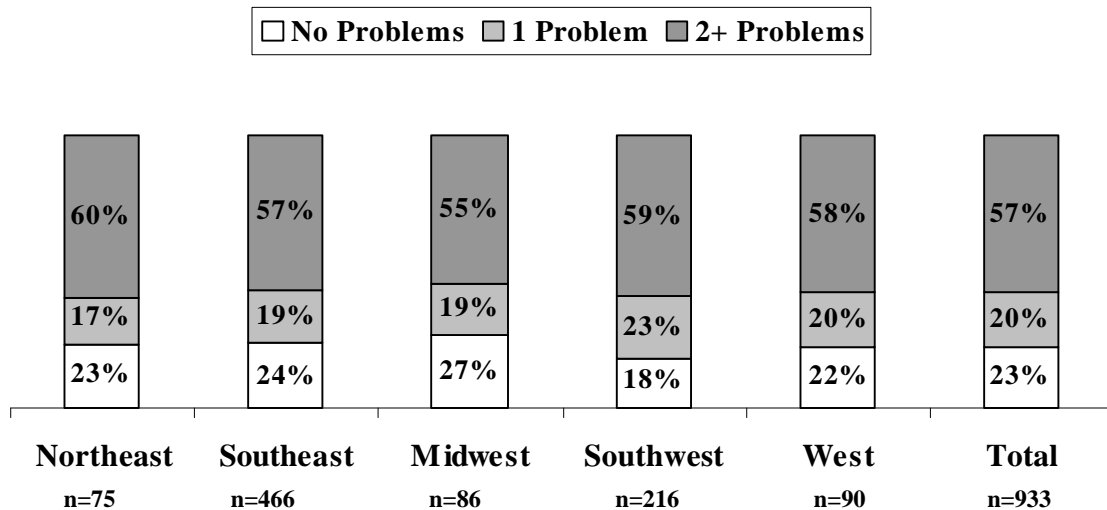
Those who paid less than \$25,000 for the home reported experiencing certain problems more often than those who paid \$45,000 or more: door and window fit (46% vs. 28%), leaks from roofs, ceilings or skylights (30% vs. 19%), and problems with smoke detectors (11% vs. 5%). Compared to those who paid \$45,000 or more for their homes, home owners whose home cost \$25-\$35,000 experienced more problems with door and window fit (38% vs. 28%), plumbing (38% vs. 28%), and smoke detectors (12% vs. 5%).

Those with more expensive homes (\$45,000+) experienced installation problems more frequently than those who paid less than \$25,000 (21% vs. 8%), as well as construction problems (36% vs. 25%).

A large majority of mobile home owners in every region of the country experienced problems with their new homes, as Figure 2 illustrates. Differences among regions are evident in incidence of several problem types: those in the West were far more likely to report construction problems (49%) than those in all other regions: the Northeast (33%), Southeast (29%), Southwest (27%), and Midwest (33%). In contrast, leaks from roofs, ceilings or skylights were reported much less often by those in the West (12%) compared to those in all other regions: Northeast (29%), Southeast (24%), Southwest (25%), and Midwest (22%). Interior fit/finish problems were reported more often in the Southwest (43%) than in the Midwest (30%).

Only a couple of types of problems appear more often in homes more than two years old compared with newer homes: leaks from roofs, ceilings or skylights, and smoke detector/fire safety problems. On the other hand, problems with installation were reported more frequently in homes less than five years old than those five or more years old (18% vs. 11%).

**Figure 2. Number of Problems Reported with Mobile Home (n=933 Home Owners)**



Q 12. I'm going to list some kinds of problems some people have had with their homes, and I'd like to know if you have had any of these types of problems. Have you had any problems with . . . ?

Source: 1999 AARP National Survey of Mobile Home Owners

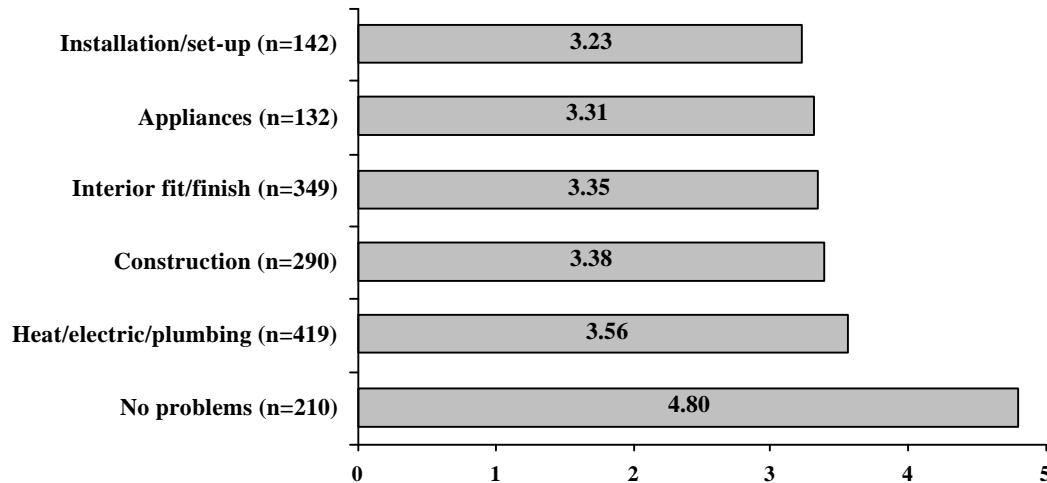
Home owners' satisfaction with the quality of their homes' construction averages 4.0 on a five-point scale where '1' is *very dissatisfied* and '5' is *very satisfied*. However, these average ratings vary significantly by whether or not a problem is reported, and the type of problem reported (Figure 3). While those who reported no problems with their homes were the most satisfied (4.8), those reporting installation or set-up problems gave the lowest satisfaction ratings (3.23). Those more satisfied tended to be 50 or older (score of 4.43 vs. 3.87 for those under 50), and they paid more than \$35,000 for their home (4.27 vs. 3.9 for those who paid \$25-\$35,000).

Considerable differences in satisfaction with construction also exist based on length of warranty: those with only one year of coverage are far more often dissatisfied with construction quality than those with two or more years coverage (mean satisfaction score of 3.75 vs. 4.17 of two-to-five year warranties and 4.44 of those with six or more years of coverage).



**Figure 3. Mean Score for Satisfaction with Construction Quality, by Problem Reported (n=933 Respondents)**

*(On a five-point scale where '1' is very dissatisfied and '5' is very satisfied)*



*11a. Overall, how satisfied are you with the quality of the construction of your mobile home? Would you say you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied?*

*Source: 1999 AARP National Survey of Mobile Home Owners*

Not surprisingly, there is also a strong association between number of problems reported and average satisfaction score: on a five-point scale where '1' is very dissatisfied and '5' is very satisfied, those reporting no problems had an average score of 4.8 compared to a score of 4.6 for those with one problem and 3.5 for those with 2 or more problems.

### ***Problems of Most Concern***

In this section of the survey, the 77% of home owners reporting problems (n=723) were asked to describe (on an open-ended basis) the problems they experienced with their homes which were of most concern or trouble to them. These home owners discussed a total of 944 problems. The survey allowed each of them to describe up to three problems, and 20% of all those surveyed discussed more than one problem as being particularly troublesome to them.

When asked for the most troublesome problems they have dealt with, home owners most frequently mentioned construction problems, both interior and exterior (27%), plumbing problems (26%), and the fit of doors and windows (22%). About 7% specifically mentioned problems with installation or set-up. Those with higher incomes (greater than \$50,000) reported more problems with faulty flooring than those with less than \$25,000 in income (18% vs. 9%), with installation (14% vs. 3%), and with other problems not specified above (18% vs. 11%).

Those in the West region reported more construction/workmanship problems (44%) than either home owners in the Southeast (25%), Midwest (25%) or the Southwest (23%). Heating/cooling problems were mentioned least often as problems of most concern in the West (4%) compared to the Northeast (19%), Southeast (12%), and Southwest (13%).

Additionally, those whose homes cost more than \$45,000 reported problems with installation more often than those with homes under \$35,000 (11% vs. 5%). This may be attributable to the fact that more expensive homes are usually larger and may present greater difficulty in joining during installation. Newer homes (less than two years old) also had installation problems more often than homes 5-8 years old (15% vs. 4%), while those in older homes (5-8 years old) more often had trouble with ceilings, roofs or skylights leaking (16% vs. 7%).

Those with one-year warranties noted problems with interior/exterior construction or workmanship significantly more often than those who have 2-5 year warranties (32% vs. 20%). This is also the case for faulty flooring (16% vs. 8%), and all other problems not itemized in the list (14% vs. 5%). Alternately, problems with installation were more frequent among those with longer warranties (6+ years) than those with shorter ones (17% vs. 5%).

### ***Dealing with Problems of Most Concern***

Again, a total of 723 home owners discussed 944 separate problems, and in this section of the report, percentages are based on number of problems (rather than respondents) unless otherwise indicated. For each type of problem, Table 3 shows the length of time home owners had the home before they became aware of the problem. Most of the problems developed within the first year of home ownership (61%), while 14% developed within the second year. In particular, 85% of the problems with set-up of the home developed in the first year, as did 64% of flooring or carpeting problems, 63% of construction problems, 62% of problem appliances, and 62% of electrical problems.

Problems with leaks and plumbing tended to develop somewhat later than other problems, with the average at 2.5 years and 2.2 years respectively, compared to under two years for most other problems.

**Cause of Problems.** For each problem, respondents were asked, to the best of their knowledge, if it was caused by manufacturing, transportation, or installation. For all problems reported, half were thought to be the result of manufacture, about one in five (19%) were thought to result from set-up or installation, and 7% were reportedly caused during transportation to the site. For about one-fourth of the problems reported (24%), the respondent did not know the source of the problem.

**Table 3. Length of Mobile Home Ownership Before Problem Noticed  
(Percents Based on Number of Problems)**

	Total (n=)	1 year (%)	2 years (%)	3-5 years (%)	6+ years (%)	DK (%)
<b>All problems.....</b>	<b>944*</b>	<b>61</b>	<b>14</b>	<b>14</b>	<b>5</b>	<b>7</b>
Setup/installation .....	48	85	4	4	2	4
Faulty floor/carpeting .....	91	64	12	14	3	7
Construction/workmanship .....	209	63	12	13	4	8
Appliances.....	37	62	14	16	3	5
Electrical .....	62	61	10	10	7	13
Windows/doors leak or fit.....	161	59	17	6	3	6
Heating/cooling system.....	86	59	19	14	6	2
Insulation/weatherproofing .....	16	56	6	13	13	13
Plumbing .....	199	54	14	20	6	7
Ceiling/roof damaged or leak.....	98	50	21	18	6	4
All others.....	79	61	13	5	9	13

*Q.13/14/15a. About how long had you had the home when you became aware of this problem?*

*\* Number of problems by type sums to more than 944 because some problems spanned more than one type.*

*Source: 1999 AARP National Survey of Mobile Home Owners*

**First Action to Resolve Problem.** Table 4 indicates, for each problem, where home owners *first* went to resolve the problem. For over half of all problems (53%), the home owners went back to the dealer who sold them the home; and for 13% of the problems, they went to the manufacturer with whom they had a warranty. For 16% of the problems, the owner made the repair himself/herself; and for 10% of the total problems reported, nothing was done to fix the problem.

**Table 4. Where Owner First Went To Resolve Problem  
(Percents Based on Number of Problems)**

	<b>Total (n=)</b>	<b>Dealer (%)</b>	<b>Manuf. Warranty (%)</b>	<b>Other Agencies (%)</b>	<b>Fixed Myself (%)</b>	<b>Did Nothing (%)</b>	<b>DK (%)</b>
<b>All problems.....</b>	<b>944*</b>	<b>53</b>	<b>13</b>	<b>6</b>	<b>16</b>	<b>10</b>	<b>1</b>
Setup/installation.....	48	81	10	2	4	2	0
Faulty floor/carpeting.....	91	63	11	2	10	14	0
Windows/doors fit or leak	161	57	11	4	16	11	1
Construction/workmanship.....	209	54	17	2	13	13	1
Electrical.....	62	52	16	3	15	16	0
Ceiling/roof damage or leak.....	98	50	15	5	26	2	2
Appliances.....	37	49	14	11	14	11	3
Heating/cooling system.....	86	49	15	20	9	1	6
Plumbing.....	199	44	14	7	27	7	2
Insulation/weatherproofing.....	16	44	0	6	19	31	0
All others.....	79	49	8	3	18	19	4

*Q13/14/15d. Where was the first place you went to resolve this problem?*

*\* Number of problems by type sums to more than 944 because some problems spanned more than one type.*

*Source: 1999 AARP National Survey of Mobile Home Owners*

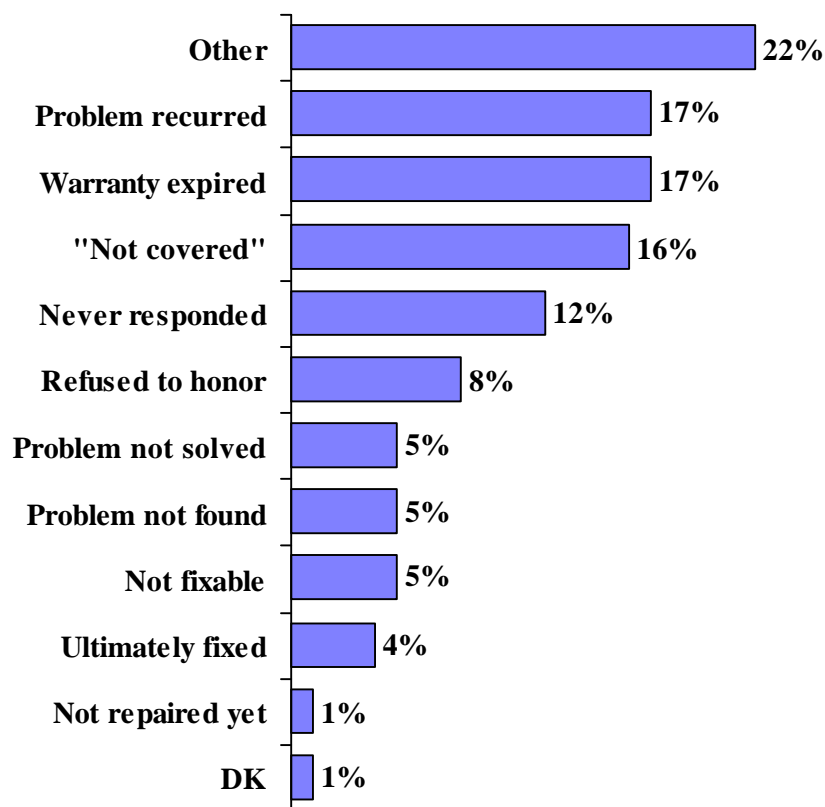
For problems with newer homes, home owners were more likely to go back to the dealer (75% of the homes less than two years old, 57% of those two to four years old, and just 41% of those five to eight years old). Those with warranty coverage of two or more years were more likely to attempt to use the warranty than those with one-year warranties (18% vs. 12%). People were more inclined to fix the problem themselves if their home was more than two years old (25% of the problems in homes five to eight years old and 11% in homes two to four years old vs. 2% of problems in newer homes). Younger households were more likely than older households to not have the problems fixed at all (11% vs. 6%).

Some differences exist in where the home owner first went to resolve the problem by specific problem type. They first approached the dealer with set-up or installation problems (81%) and faulty flooring/carpeting (63%) more often than they did for other problems. Compared to other problems, problems with weatherproofing (31%) and electrical problems (16%) were more often not fixed at all.

Problems which home owners were more likely to fix themselves include weatherproofing (19%); faulty/leaking ceiling, roof, or skylight (26%); and plumbing problems (27%).

**Use of Warranty.** Excluding problems about which nothing was done (n=94) and problems which the home owners themselves repaired (n=147), home owners with warranties attempted to use their warranties for about two-thirds (69%) of the remaining problems reported. Of the 469 problems for which the warranty was invoked, over half of the attempts were successful (59%), while 40% were not.

**Figure 4. Why Problem Was Not Fixed Under Warranty (n=186 Problems)**



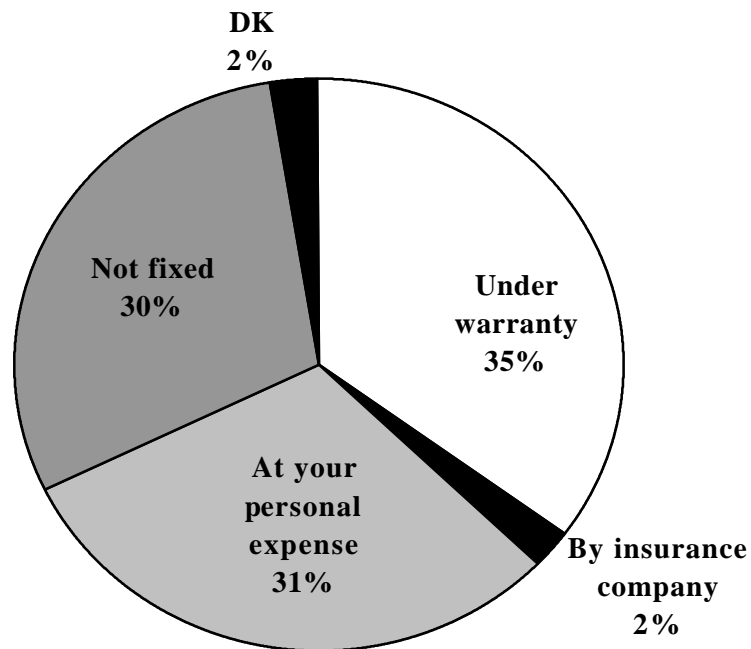
*Q. 13/14/15g. "Why were you unsuccessful in using the mobile home warranty?"*

*Source: 1999 AARP National Survey of Mobile Home Owners*

The reasons most often given for unsuccessful attempts to use the warranty (Figure 4) were that respondents simply did not get a response to their calls, or the dealer would not honor the warranty (21% for these two responses combined); the problem recurred or was not fixed properly the first time (17%); the warranty had expired (17%); or they were told the problems were not covered under the warranty (16%).

For 5% of the problems, home owners were told by the dealer/manufacturer that they could find nothing wrong, and for another 5%, they were told the problem was unable to be fixed. Respondents gave other miscellaneous reasons for 22% of the unsuccessful attempts to use the warranty.

**Figure 5. How Problem Was Ultimately Fixed (n=944 Problems)**



*Q13/14/15h. Was this problem ultimately fixed under warranty, by the insurance company, at your personal expense, or not fixed at all?*

*Source: 1999 AARP National Survey of Mobile Home Owners*

**Ultimate Resolution of Problem.** For all problems combined (944 problems reported), about a third were repaired under warranty (35%). For 31%, the home owner fixed the problem himself/herself (or at their own personal expense), and another 30% of the problems were not fixed at all. For 2% of the problems, the insurance company took care of the repair.

**Out of Pocket Repair Costs.** For all problems (n=944 problems), almost half (46%) had no out of pocket repair costs associated with them (this includes instances where nothing was done to fix the problem). Problems which incurred costs (54%) include those fixed at the owners' expense, out-of-pocket costs for

problems fixed under warranty or insurance, and problems which incurred costs because the problem was not fixed originally to the homeowners' satisfaction.

Table 5 shows the average amount home owners paid out-of-pocket for each type of problem (excluding those who paid nothing). Overall, the average spent on repairs for all problems combined was \$1,140. Not surprisingly, the most expensive problems to home owners were clearly construction problems or interior/exterior workmanship (mean=\$2,240) and insulation/weatherproofing problems (mean=\$2,200). Heating and cooling system repairs averaged \$1,220. Less expensive repairs were those for appliances (mean=\$420), plumbing (mean=\$540), and electrical problems (mean=\$550). Repairs made because of installation problems cost an average of \$750.

**Table 5 – Average Amount Spent To Fix Problem**  
(excluding \$00)

<b>All problems</b>	<b>(n=510*)</b>	<b>\$1,140</b>
Construction/workmanship	87	2,240
Insulation/weatherproofing	8	2,200
Heating/cooling system	62	1,220
Faulty floor/carpeting	36	1,150
Ceiling/roof/skylight	55	830
Setup/installation	23	750
Windows/doors fit or leak	74	600
Electrical	35	550
Plumbing	121	540
Appliances	21	420
All others	44	2,390

*Q.13/14/15i. Please estimate in dollars how much this problem cost you personally.*

*\* Number of problems by type sums to more than 510 because some problems spanned more than one type.*

*Source: 1999 AARP National Survey of Mobile Home Owners*

**Why Repairs Were Not Made/Problems Not Fixed.** For those problems that still exist and/or nothing has been done to fix them (n=283 remaining problems), the following reasons were given:

- Too busy to have the problem fixed (14% of problems).
- Cannot afford it right now (13% of problems).
- Problems could not be fixed, or the respondent was told it could not be fixed (13% of problems).
- Home owner was told there was nothing wrong, or they were ignored (13% of problems).
- Home owner did not want to fix it. Some felt that by fixing it, they were admitting that the problems were their own responsibility, so they elected not to fix them (11% of problems).
- The warranty had either run out or did not cover the problem (9% of the problems).
- Home owners felt the problem did not need to be fixed, it was due to normal wear and tear, or they planned to sell the home without fixing it (4%).
- Repairs were not made because the dealer went out of business (2%).
- Reasons other than those listed above (23% of problems).

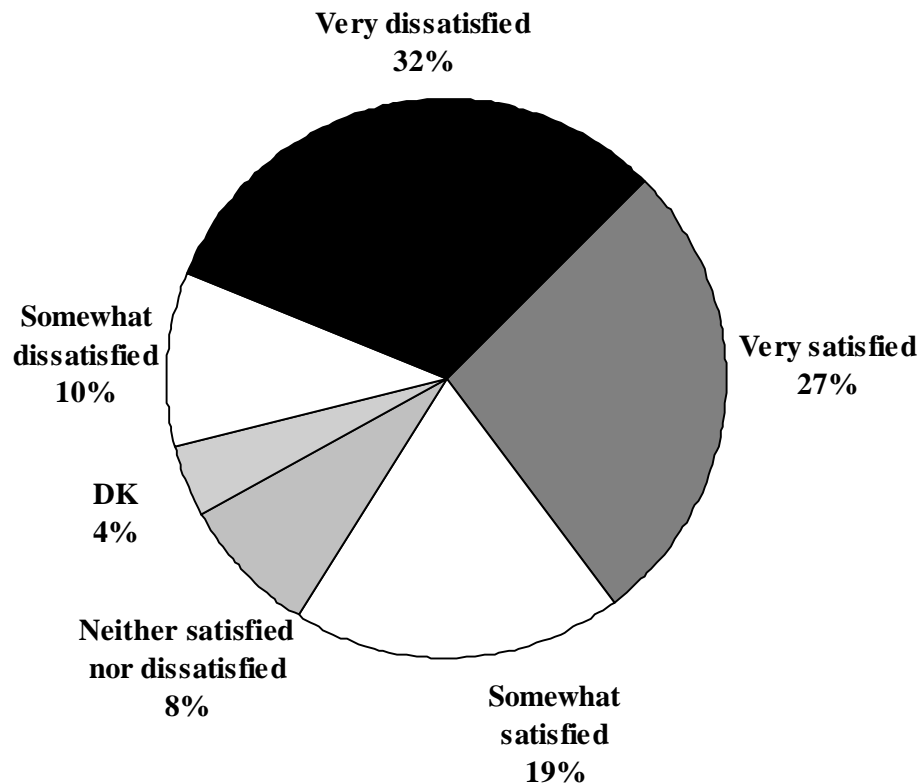
**Satisfaction with Resolution of Problems.** All those who reported a problem were asked how satisfied they were with how the problem was ultimately resolved. For all 944 problems discussed, only about one in four respondents were “very” satisfied with the resolution of their problems (27%), while about half (49%) of the problems had a less than satisfactory outcome. Home owners were “very” dissatisfied with 31% of the problem resolutions. The fact that only about one-quarter of home owners were *very* satisfied with the outcome of the problem suggests serious concerns about existing avenues for rectifying problems with mobile homes.

Compared to those with two-to-five year warranties, those with one-year warranties more often had problems that resulted in unsatisfactory outcomes (47% vs. 34% somewhat/very dissatisfied). Home owners age 50 and older (who hold significantly longer warranties than those under 50) more often had problems that



were resolved to their satisfaction than younger home owners (56% vs. 44% very/somewhat satisfied).

**Figure 6. Satisfaction with Problem Resolution  
(n=944 Problems)**



*Q13/14/15j. How satisfied were you with how the problem was resolved? Would you say you were very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied?*

*Source: 1999 AARP National Survey of Mobile Home Owners*

### ***Installation of Mobile Homes***

For most mobile home owners (87%), the dealer who sold them the home was responsible for installing the home at its original location, but 10% said that an independent contractor installed the home, and fewer than 1% installed it themselves. Those with incomes greater than \$50,000 (16%) and those with homes costing \$45,000 or more (18%) more often had an independent contractor install it than those with incomes of \$50,000 or less (10%) or homes of less than

\$45,000 (7%). Homes five to eight years old were somewhat more likely to be installed by the dealer than homes less than two years old (90% vs. 79%).

Just over half (53%) were very satisfied with the installation of their homes, and another 27% were somewhat satisfied. Twenty percent were less than satisfied. High satisfaction was greater for those with incomes under \$25,000 (60%, compared to 50% of those with higher incomes). Those whose houses cost the least (under \$25,000) were more often very satisfied than those whose houses cost \$45,000 or more (59% vs. 50%). Those with longer warranties (two-to-five years) were more often very or somewhat satisfied with installation than those who had only one-year warranties (84% vs. 76%).

Mobile home owners in the Southeast region gave lower installation satisfaction ratings than those in the Southwest (17% very/somewhat dissatisfied compared to 11% in the Southwest).

While problems with installation are discussed above in both the aided and open-ended problem segments of the survey, a final survey section gave home owners an additional opportunity to identify problems specifically with regard to installation which they had not already identified. This additional segment was included in the survey to assure that problems arising from installation of homes could be examined separately from problems resulting from manufacture.

As reported earlier, most mobile homes were installed on blocks or piers with anchors or tie-downs (81%), and 11% are on permanent foundations. In the aided series of questions earlier in the interview, 15% of mobile home owners said they experienced problems with incomplete or improper set-up, and set-up problems were more commonly reported for homes costing \$45,000 or more and also among homes less than five years old. It is possible that larger, more expensive homes (double wides) are more problematic to join during installation.

Problems with actual installations were cited by 7% as problems of *most* trouble or concern, while miscellaneous problems *resulting from* faulty installation accounted for one-fifth of problems of most concern to home owners. On average, these problems cost mobile home owners \$750 to repair.

In this final segment of the survey, a total of 77 respondents (8%) cited installation problems or problems that they said developed as a result of improper or incomplete installation which were not discussed earlier in the interviews (Table 6).

Most of the additional problems mentioned were construction-related ones (stress fractures, cracks, siding damage occurring from installation). Some mentioned problems with leveling and balancing of the home which created related problems (leaks, bent frames, gaps in walls, etc.).

**Table 6. Additional Installation Problems or Problems Resulting from Installation (n=77 Home Owners)**

<i>Reported Problem</i>	<i>% of Respondents</i>
Construction/cracks/workmanship	33%
Site not level/home not balanced correctly	19
Windows/doors damaged, leak, or fit poorly	11
Furnace/heating/venting/AC: not hooked up properly/leaking/not working	10
Floor/carpet/linoleum warped/damaged	9
Plumbing	7
Problem with lights/electric	4
Other	6

*Q18. Have you experienced any other problems, besides the ones we have already discussed, that you believe were caused specifically by the INSTALLATION of your mobile home at its original setup location?*

*Source: 1999 AARP National Survey of Mobile Home Owners*

## **Conclusions**

National Family Opinion's national research panel allowed the random selection of a large sample of mobile home households from a representative pool of these households to satisfy the requirements of the present survey. From this nationally representative sample of mobile home owners, NFO interviewed those who had purchased homes within the past eight years. This survey is thus a source of unique information about mobile home owners with homes that are the newest and theoretically the best-constructed to date. (See Appendix B).

Mobile home structural or installation problems appear to be pervasive, with only a few of them attributed by owners to simple everyday wear and tear. The owners of mobile homes experienced widespread problems in areas that are subjects of regulatory standards under current legislation. Additionally, although many of the

most troublesome problems emerged for home owners in the first year of ownership, while warranty coverage was presumably still in effect, the data suggest that there is a degree of difficulty in invoking warranties, for a variety of reasons. Moreover, those whose structural problems surfaced after warranties had expired had basically no recourse in resolving some very serious structural deficiencies, except to pay for expensive repairs or let the problem go unresolved. In this survey, nearly half of the problems which most concerned respondents entailed out-of-pocket costs for them averaging \$1,140 per problem.

Mobile home owners do not appear to be excessively critical of the structure of their homes. Satisfaction with construction does drop dramatically, however, when a problem appears, and even more when more than one problem is reported. Moreover, there is a core of home owners whose problems were so devastating that they readily admitted being very unhappy with their purchase. These problems tend less often to be problems with the home's systems (like plumbing or heating/cooling), but more often are major problems related to construction or installation, with homes sliding off foundations, or roofs/floors caving in.

Owning a mobile home has long been a way of gaining entree into a housing market that may be otherwise financially restrictive. However, efforts must be made to strike a balance between keeping this housing affordable for consumers while not compromising the quality and safety of the structures themselves.

## **Appendix A: Annotated Questionnaire**

39768

DATE: \_\_\_\_\_

INTERVIEWER: \_\_\_\_\_

Hello, I'm calling on behalf of Carol Adams of National Family Opinion. Have I reached the **(INSERT LAST NAME)** residence? **(IF CORRECT RESIDENCE, CONTINUE.**

**OTHERWISE, TERMINATE)** May I please speak to a person in your household who was responsible for the decision to purchase your current residence? **(WHEN PROPER RESPONDENT ON PHONE, REPEAT LEAD-IN AND CONTINUE) (IF RESPONDENT NOT AVAILABLE, ARRANGE A CALLBACK)**

Today I have a few questions to ask you about your current residence. Your participation will only take about 10-12 minutes. Your responses will be kept strictly confidential.

1. Please tell me what type of residence you are currently living in? **(READ LIST) (ACCEPT ONE RESPONSE ONLY)**

Mobile home (also known as manufactured housing) **(NOTE: IF UNCLEAR, TELL RESPONDENT: "We are using the terms "mobile home" and "manufactured housing" to mean the same thing. If you purchased such housing and installed it permanently on a foundation, it is still considered a mobile home or manufactured housing for the purposes of this survey")**.....1

Stationary home (manufactured on site), OR .....2 - **(TERMINATE)**

Other .....3 - **(TERMINATE)**

**(DO NOT READ)** DK/Refused .....4 - **(TERMINATE)**

2. Do you own or rent your current residence? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

- Own.....1
- Rent.....2 -  
**(TERMINATE)**
- DK/Refused .....3 -  
**(TERMINATE)**

3. Did you purchase your current residence new or used? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

- New .....1
- Used.....2 -  
**(TERMINATE)**
- DK/Refused .....3 -  
**(TERMINATE)**

4. What year did you purchase your current mobile home? **(ACCEPT ONE RESPONSE ONLY. IF RANGES GIVEN ASK: "Would you say that would be closer to \_\_\_\_\_ or \_\_\_\_\_?") (DK/REFUSED = 9998)**

# of year purchased: _____	- (TERMINATE IF EARLIER	THAN "1991")
	(n=933)	
1999 .....	2.5%	
1998 .....	11.5%	
1997 .....	14.3%	
1996 .....	17.7%	
1995 .....	13.9%	
1994 .....	14.0%	
1993 .....	9.5%	
1992 .....	8.3%	
1991 .....	8.1%	

5. Is your mobile home located . . . ? **(READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
On a private lot, OR.....	69.0%
A rental space.....	30.7%
<b>(DO NOT READ)</b> Don't Know/Refused .....	0.3%

6a. Is your mobile home installed . . . ? **(READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
On blocks or piers with anchors or tie-downs.....	80.7%
On blocks or piers without anchors/not tied down, OR.....	5.7%
<b>(DO NOT READ)</b> On blocks or piers, but don't know if anchored or tied down.....	1.0%
On a permanent masonry foundation .....	10.5%
<b>(DO NOT READ)</b> None of the above .....	1.2%
<b>(DO NOT READ)</b> Don't Know/Refused.....	1.0%

6b. How would you characterize your home type? Is it a . . . ? **(READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Single wide, OR.....	49.7%
Double wide or more.....	50.1%
<b>(DO NOT READ)</b> Don't Know/Refused.....	0.2%

7. Did you receive a warranty with the purchase of your mobile home? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Yes.....	95.0%
No.....	2.6% - <b>(SKIP TO QU. 10)</b>
Don't Know/Refused.....	2.5% - <b>(SKIP TO QU. 10)</b>



8. For how many years does/did the warranty cover your mobile home? **(ACCEPT ONE RESPONSE ONLY. IF RANGES GIVEN ASK: "Would you say that would be closer to \_\_\_\_\_ or \_\_\_\_\_?") (DK/REFUSED = 98)**

# of years: \_\_\_\_\_

(n=886)

1 year – 36.8%  
 2-5 years – 34.0%  
 6+ years – 10.4%

9. Did/Does your warranty cover . . . ? **(READ LIST) (ACCEPT MULTIPLES)**

	(n=886)
Manufacturing defects.....	92.9%
Defects caused by transportation .....	80.9%
Defects caused by installation.....	81.3%
<b>(DO NOT READ)</b> Don't Know/Refused.....	3.8%

10. Do you have home owners insurance on your mobile home? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Yes.....	97.1%
No.....	2.9%
Don't Know/Refused.....	0.0%

11a. Overall, how satisfied are you with the quality of the construction of your mobile home? Would you say you are . . . ? **(READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Very satisfied .....	45.8%
Somewhat satisfied.....	34.0%
Neither satisfied nor dissatisfied.....	3.1%
Somewhat dissatisfied, OR .....	12.0%
Very dissatisfied.....	4.7%
<b>(DO NOT READ)</b> Don't Know/Refused.....	0.4%

**11b.** Have you moved your home to another location since you purchased it? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Yes.....	4.7%
No.....	95.3%
<b>(DO NOT READ)</b> Don't Know/Refused.....	0.0%

**(NOTE: IF CODE 1 IN QUESTION 11b, THEN SKIP TO QUESTION 12b)**

**12a/b.** I'm going to list some kinds of problems some people have had with their homes, and I'd like to know if you have had any of these types of problems. Have you had any problems with . . . ? **(READ LIST WAITING FOR A "YES" OR "NO" RESPONSE TO EACH) (ACCEPT ONE RESPONSE ONLY FOR EACH)**

	<b>Yes</b>
	(n=933)
The construction (cracks in walls, separation) .....	31.1%
Leaks (from roofs, ceiling, skylights) .....	23.0%
Windows and doors, fit/ leaks.....	35.4%
Interior fit and finish or workmanship (cabinets, for example).....	37.4%
Insulation, weatherproofing .....	7.9%
Heating and cooling systems.....	18.9%
Appliances that came with the home.....	14.1%
Smoke detectors or fire safety .....	8.6%
Plumbing .....	30.1%
Electrical systems .....	12.3%
Installation or setup of mobile home.....	15.2%
Carpeting/flooring faulty/damaged .....	5.9%
Other (Specify): .....	4.5%
NO PROBLEM REPORTED .....	22.5%

**(NOTE: IF NO PROBLEMS IN QUESTION 12a OR 12b, THEN SKIP TO QUESTION 16, ELSE CONTINUE WITH QUESTION 13a)**

**13/14/15a.** Out of the problems you just mentioned, please describe the biggest problem you had with your home - that is, the problem that has caused you the most trouble or concern. **(KEYWORD) (CLARIFY VAGUE RESPONSES)**

**TYPE DIRECTLY INTO CRT**

	(n=723)
Construction/workmanship of interior/exterior.....	26.7%
Plumbing fixtures/plumbing problems/leaked .....	25.6%
Windows/doors/did not fit/leaked/needed replacing.....	21.7%
Ceiling/roof/skylight faulty/leaked.....	13.3%
Carpeting/flooring faulty/damaged/needed replacement.....	12.4%
Heating and cooling system problems.....	11.9%
Electrical problem .....	8.6%
Problems with/difficult to have setup/repair completed.....	6.6%
Appliances faulty/leaked/needed replacement.....	5.1%
Poor insulation/weatherproofing .....	2.2%
All others .....	10.4%
Nothing/don't know/no answer.....	2.6%

**13/14/15b.** About how long had you had the home when you became aware of this problem?  
**(ACCEPT ONE RESPONSE ONLY. IF RANGES GIVEN, ASK: "Would you say that would be closer to \_\_\_\_\_ or \_\_\_\_\_?") (DK/REFUSED) (NOTE: ACCEPT RESPONSE IN NUMBER OF YEARS)**

# of Years: \_\_\_\_\_

(n=944 problems)

1 year .....	60.9%
2 years.....	13.5%
3-5 years.....	14.0%
6+ years.....	5.1%

**13/14/15c.** To the best of your knowledge, was this problem caused . . . ? **(READ LIST)**  
**(ACCEPT ONE RESPONSE ONLY)**

	(n=944 problems)
During the manufacturing process.....	50.2%
During transportation to your site, OR .....	6.9%
During set-up or installation.....	18.6%
<b>(DO NOT READ)</b> Don't Know/Refused.....	24.3%

**13/14/15d.** Where was the first place you went to resolve this problem? **(DO NOT READ LIST)**  
**(ACCEPT ONE RESPONSE ONLY)**

	(n=944 problems)
Dealer who sold you the home .....	53.0%
Manufacturer/warranty service .....	13.2%
Appliance Manufacturer .....	3.0%
Installer.....	1.7%
Insurance company.....	1.1%
Government agency(ies).....	0.4%
Attorney .....	0.0%
Fixed it myself .....	15.6% - <b>(SKIP TO QU. 13i)</b>
Did nothing, problem still exists.....	10.0% - <b>(SKIP TO QU. 13i)</b>
Don't Know .....	1.5%
Refused .....	0.6%

**(NOTE: ASK QUESTION 13e, QUESTION 13f AND QUESTION 13g ONLY IF QUESTION 7=YES)**

**13/14/15e.** Did you attempt to use the mobile home's warranty to resolve the problem? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=676 problems)
Yes .....	69.4%
No.....	28.8% - <b>(SKIP TO QU. 13h)</b>
Don't Know/Refused.....	1.8% - <b>(SKIP TO QU. 13h)</b>

**13/14/15f.** Were you successful in using the mobile home's warranty to resolve the problem? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=469 problems)
Yes .....	58.6% - <b>(SKIP TO QU. 13h)</b>
No.....	39.7%
Don't Know/Refused.....	1.7% - <b>(SKIP TO QU. 13h)</b>

**13/14/15g.** Why were you unsuccessful in using the mobile home warranty? **(KEYWORD) (CLARIFY VAGUE RESPONSES) (NOTE: ACCEPT UP TO 3 DIFFERENT REASONS)**

**TYPE DIRECTLY INTO CRT**

	(n=186 problems)
Not repaired satisfactorily/problem reoccurred .....	17.2%
No longer under warranty/warranty had expired .....	17.2%
Was told problem not covered under warranty .....	15.6%
Did not respond/react to call.....	12.4%
Company/manufacturer/dealer refused to honor warranty/take care of problem .....	8.1%
Could not find problem/said nothing was wrong.....	5.4%
Problem not solved/fixed generally .....	5.4%
Not able to be fixed.....	4.8%
Problem solved/fixed .....	3.8%
Have not had time to repair it yet .....	1.1%

All others ..... 21.5%

Don't know/no answer ..... 0.5%

**13/14/15h. Was this problem ultimately fixed . . . ? (READ LIST) (ACCEPT MULTIPLE RESPONSES)**

(n=944 problems: Base re-computed to include those responding "did nothing" or "fixed it myself" to 12/14/15d)

Under warranty .....35%

By insurance company.....2%

At your personal expense.....31%

Not fixed at all.....30%

**(DO NOT READ)** Don't Know/Refused.....2%

**13/14/15i. Please estimate in dollars how much this problem cost you personally. (ACCEPT ONE RESPONSE ONLY. IF RANGES GIVEN, ASK: "Would you say that would be closer to \_\_\_\_ or \_\_\_\_?") (DK/REFUSED = 99998)**

# of dollars: \_\_\_\_\_

(n=944 problems)

\$0 ..... 46.3%

\$1-\$250 ..... 27.9%

\$251-\$500..... 9.0%

\$501-\$1,000..... 5.4%

\$1,001-\$5,000..... 4.9%

\$5,001+ ..... 1.3%

Don't know/refused ..... 5.3%

**13/14/15j. How satisfied were you with how the problem was resolved? Would you say you were . . . ? (READ LIST) (ACCEPT ONE RESPONSE ONLY)**

(n=944 problems)

Very satisfied .....27.3%

Somewhat satisfied..... 19.5%

Neither satisfied nor dissatisfied.....	8.2%
Somewhat dissatisfied, OR .....	10.0%
Very dissatisfied.....	31.0%
<b>(DO NOT READ)</b> DK/Refused .....	4.0%

**(NOTE: ASK Q. 3k IF CODE 4 IN Q. 13h OR CODE 9 IN Q. 13d)**

13/14/15K. **WHY WAS THIS PROBLEM NOT FIXED? (KEYWORD) (CLARIFY VAGUE RESPONSES) (PROBE UNTIL UNPRODUCTIVE)**

	(n=283 problems)
Too busy/have not got around to it yet .....	14.1%
Cannot afford right now/must pay it for myself .....	12.7%
Not able to fix/correct problem/problem reoccurred.....	12.0%
Do not want to fix/do not want to take responsibility .....	11.3%
Was told there was no problem/nothing wrong .....	7.1%
Warranty ran out.....	6.7%
Did not respond/was ignored .....	5.7%
Lack of quality workmanship/material.....	4.6%
Problem not solved/fixed, generally .....	2.8%
Not covered under warranty .....	2.5%
Dealer went out of business/moved.....	2.1%
Problem resolved.....	1.8%
Never found out what caused problem .....	1.8%
Felt it was not necessary to correct/fix problem.....	1.4%
Was told it could not be fixed.....	1.1%
Problem is normal wear and tear.....	1.1%
Going to sell mobile home without fixing it .....	1.1%
All other reasons .....	23.3%
Don't know/no answer .....	7.4%

16. Who was responsible for **INSTALLING** your mobile home at its original setup location?  
**(READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Dealer who sold you the home .....	86.7%
Independent contractor .....	10.0%
Installed it yourself, OR.....	0.6%
Someone else.....	1.6%
<b>(DO NOT READ)</b> Don't Know/Refused.....	1.1%

17. Overall, how satisfied were you with your original mobile home installation or setup?  
 Would you say you were . . .? **(READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Very satisfied .....	53.2%
Somewhat satisfied.....	27.1%
Neither satisfied nor dissatisfied.....	4.4%
Somewhat dissatisfied, OR .....	8.6%
Very dissatisfied.....	6.8%
<b>(DO NOT READ)</b> Don't Know/Refused.....	0.0%

18. Have you experienced any other problems, besides the ones we have already discussed,  
 that you believe were caused specifically by the **INSTALLATION** of your mobile home at  
 its original setup location? **(KEYWORD) (CLARIFY VAGUE RESPONSES) (ACCEPT  
 UP TO THREE RESPONSES)** (n=77)

Construction/cracks/workmanship .....	33%
Site not level/home not balanced correctly .....	19%
Windows/doors damaged/leak/fit poorly .....	11%
Furnace/heating/venting/AC: not hooked up properly, etc. ....	10%
Floor/carpet/linoleum warped/damaged .....	9%
Plumbing .....	7%
Problems with lights/electricity .....	4%
Other .....	6%



**19/20/21a. (FOR FIRST PROBLEM MENTIONED): Was this (INSERT PROBLEM) problem covered by a warranty? (DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=83 problems)
Yes.....	54.2%
No.....	36.1%
Don't Know/Refused.....	9.6%

**19/20/21b. Was this problem ultimately fixed . . . . ? (READ LIST) (ACCEPT MULTIPLES)**

	(n=83 problems)
Under warranty .....	36.1%
By an insurance company .....	2.4%
At your personal expense.....	12.0%
Not fixed at all.....	45.8%
<b>(DO NOT READ)</b> Don't Know/Refused.....	4.8%

**19/20/21c. Please estimate in dollars how much this problem cost you personally. (ACCEPT ONE RESPONSE ONLY. IF RANGES GIVEN, ASK: "Would you say that would be closer to \_\_\_\_\_ or \_\_\_\_\_?") (DK/REFUSED = 99998) (NOTE: ACCEPT RESPONSE IN NUMBER OF DOLLARS)**

	(n=83 problems)
\$0 .....	62.7%
\$1-\$250 .....	22.9%
\$251-\$500.....	4.8%
\$501-\$1,000.....	0.0%
\$1,001-\$5,000.....	7.2%
\$5,001+ .....	0.0%
Don't Know/Refused .....	2.4%

**(NOTE: ASK QUESTION 19d IF CODE 4 IN QUESTION 19b)**

**19/20/21d. Why was this problem not fixed? (KEYWORD) (CLARIFY VAGUE RESPONSES)  
(PROBE UNTIL UNPRODUCTIVE)**

**TYPE DIRECTLY INTO CRT**

	(n=38 problems)
Too busy/have not got around to it yet .....	18.4%
Cannot afford right now/must pay it for myself .....	18.4%
Not able to fix/correct problem/problem reoccurred.....	5.3%
Do not want to fix/do not want to take responsibility .....	7.9%
Was told there was no problem/nothing wrong .....	5.3%
Warranty ran out.....	2.6%
Problem not solved/fix, generally .....	5.3%
Not covered under warranty .....	5.3%
Dealer went out of business/moved.....	5.3%
Never found out what caused problem .....	5.3%
Felt it was not necessary to correct/fix problem.....	10.5%
All other reasons .....	23.7%
Don't know/no answer .....	2.6%

Now I have just a few more questions for statistical purposes.

**22. Just to keep our records up-to-date, may I have your age please? (REFUSED = 98)**

# of years: _____	(n=933)
18-29 years.....	21.4%
30-39 years.....	27.5%
40-49 years.....	19.8%
50-64 years.....	19.0%
65+ years.....	12.1%
No answer/refused.....	0.1%

**23.** Did you receive a consumer information manual or package from the manufacturer about the operation and installation of your mobile home when you bought it? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Yes .....	88.7%
No.....	8.0%
Don't Know/Refused.....	3.2%

**24.** Are you aware of how to contact the government officials who regulate the manufactured housing industry? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Yes .....	41.3%
No.....	56.8%
Don't Know/Refused.....	1.9%

**25a.** Do you remember what the original purchase price of your mobile home was? Was it . . . ? **(READ LIST) ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Under \$15,000 .....	2.4%
Between \$15,000 and \$25,000.....	22.1%
Between \$25,000 and \$35,000.....	31.2%
Between \$35,000 and \$45,000, OR.....	18.3%
More than \$45,000.....	24.9%

**(DO NOT READ)** Don't Know/Refused.....1.2% - **(SKIP TO QU. 26)**

**25b.** Did the original purchase price include setup on your original site? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=925)
Yes .....	95.0%
No.....	4.3%
Don't Know/Refused.....	0.6%

26. Is the retailer you bought your mobile home from still in business? **(DO NOT READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Yes.....	86.2%
No.....	10.3%
Don't Know/Refused.....	3.5%

27. Just for statistical purposes, stop me when I get to the category that includes your household's total income in 1998, before taxes. This includes wages, Social Security, pensions, and interest or dividends on savings and investments. Was it . . . ? **(READ LIST) (ACCEPT ONE RESPONSE ONLY)**

	(n=933)
Less than \$25,000.....	27.2%
\$25,000 to \$50,000, OR.....	52.1%
More than \$50,000.....	16.5%
<b>(DO NOT READ)</b> Don't Know/Refused.....	4.2%

28. **(RECORD SEX FROM VOICE):**

	(n=933)
Male .....	20.3%
Female .....	79.7%

Those are all of the questions I have this **(MORNING/AFTERNOON/EVENING)**. Thank you very much for your help on this study. **(TERMINATE)**

## **Appendix B: Methodology**

## Methodology

National Family Opinion Research (NFO) was commissioned by AARP to provide a nationally representative sample of mobile home owners. NFO Research, Atlanta Georgia, is a full service marketing research supplier utilizing a prerecruited household panel. The panel consists of over 550,000 households with 300,000 being nationally representative. The panel was deemed the most expeditious means of conducting a nationally representative survey of mobile home owners, whose numbers, though growing, still present time and cost restraints for national random sampling.

The sample for the AARP Mobile Home Study was developed in two stages.

**Stage 1.** A nationally representative initial sample (mobile home owners) of 3,500 households was selected. The sample was balanced to US Census quotas for head of household age (female or male), household income, household size, market size and geographic census region. These households were dialed at random to complete 106 CATI (Computer Assisted Telephone Interviews) interviews. Each household was required to meet certain criteria (mobile home owner, mobile home as current residence, mobile home purchased new and mobile home 8 years old or less) to be counted as a completed interview.

The number of households that did not qualify as recent purchasers was significantly higher than anticipated (qualifying incidence was only 13%), thus making cost and time efficiencies for data collection problematic. A new approach was designed, in which we sought to economically screen a larger pool of mobile home owners (balanced to exact manner as described above) and boost our incidence for the in-depth survey screener.

**Stage 2.** A nationally representative beginning sample (mobile home owners) of 15,000 households was selected and balanced in the same manner as stage 1. These households were contacted at random using an automated voice system. Households were asked screening questions (own mobile home purchased new in past 8 years) via computer and recorded their answers via touchtone telephone. This automated contact continued for two evenings. Upon completion of this process, households who met screening criteria (1,261) were telephoned again via live interviewer to complete the core interview (incidence was 78%). This stage yielded 827 completed interviews for a grand total of 933 completed interviews. The 933 completed interviews began as a nationally representative sample that was balanced by census region, household size, market size, age and income. Thus, the end sample reflects the total universe of households that own a mobile home that was purchased new during the last eight years.